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Interpreting arguments

Abstract
The aim of this paper is to develop and justify a specific methodology of interpreting arguments for judging their argumentative validity and adequacy, i.e. the aim is to provide a useful tool which may be used for a specific purpose. This does not exclude that there are or may be other useful methodologies for interpreting arguments which could serve for different purposes. The methodology exposed in the paper will not only be theoretically justified but also specified up to detailed rules which can be used in classroom for analyzing found scientific arguments.

1 What Is an Interpretation of a Text in General?

Arguments in the sense of argumentative acts (as opposed to the content of an argument) are speech acts or - if one takes speech acts to be smaller units confining them to the level of sentences - consist of speech acts. In the analytical tradition there exist two major approaches to the interpretation of speech acts. The first may be called the "*rationality presupposition approach*", is fostered e.g. by Davidson and Dennett (Davidson, 1963; 1974; 1980; Dennett, 1987), and claims that speech acts can be understood only if we presuppose that they are rational themselves or the expression of the agent's rationality. The second approach may be called the "*intention reconstruction approach*", is fostered e.g. by Grice and Meggle (e.g. Grice, 1957; 1968; 1969; 1989; Meggle, 1981) and states that understanding texts and speech acts consists in recognizing certain parts of the agent's communicative intentions. - Here I cannot dwell on a substantial discussion of the merits of these approaches. But some short arguments against the rationality approach and in favour of the intention reconstruction approach shall help to motivate the general guidelines (exposed below) for interpreting arguments.

A first big shortfall of the rationality presupposition approach is that there are many theories about what being rational amounts to. Some authors think of epistemic rationality only, others think of practical rationality in particular decision theory; but in both of these areas a wide variety of concurring or only supplementing standards are discussed: from logical coherence (defined in various ways) over respecting the probability calculus etc. up to the many definitions of 'knowledge' or from simple decision theoretic optimizing fulfilling the axioms of von Neumann and Morgenstern or various other axiom systems over nonlinear utility theory to philosophically more substantial criteria of prudential rationality. Firstly, until the followers of the rationality presupposition approach have not determined which of these many standards is essential for understanding speech acts their approach remains too vague. Secondly, even if one of these many rivaling conceptions will have been established to express in the best way what it means to be "rational" it is highly improbable that we already now are able to understand each other without knowing about the result of this discussion. - A second and even bigger shortfall of the rationality presupposition approach is that rationality is an ideal (and rationality theory in a wide sense is a normative theory) which often is not realized in practice; if it were always fulfilled the theory would be pointless as rationality theory.[1] This implies that if the rationality presupposition approach asks us to regard speech acts to be the result of rationality, firstly, the outcome of the interpretation cannot always be an understanding of this particular utterance and, secondly, it must be systematically leading astray: We are encouraged to see something which does not exist. One may take the occasion to construct something rational from the given utterance; but this is already creative and no understanding of something given and the aim of such an operation is unclear.

The intention reconstruction approach on the other hand takes a linguistic utterance's meaning to be a particular part of the agent's intention, namely some sort of communicative intention, and takes the intention to be formed according psychological decision laws. The specific communicative intention is identical with some representation of a state of affair, i.e. the proposition, plus the intention what to do about this representation: expressing one's belief, desiring to get realized the representation, asking if it is already realized etc. Because of the conventional representational function of sentences this intention can be straightforwardly expressed by the propositional part and the mood of the sentence. This implies that the intention reconstruction approach takes the agent's utterances as intelligent or stupid as they are. In simple cases the communicative intention is identical to the conventional meaning of the uttered sentence, in more complex cases these two things go apart, i.e. the intended meaning is different from the conventional meaning, and the communicative intention has to be inferred from the utterance, our knowledge about the agent and general knowledge about the formation of intentions. In the most complex cases an explaining interpretation has to be executed which tries to construct the best explanation of the utterance where this explanation includes the communicative intention as one of the causes of the utterance (cf. Lumer, 1992). For the interpretation of arguments this means: The explicit argument possibly is not identical with what the arguer wanted to express so that it may make sense to look for the latter (in very simple cases of this type of error the arguer only has confused the meaning of some word); the intended argument must neither be valid nor adequate because the arguer may have made epistemic or deliberative errors. And all this is what we usually experience when we try to understand and criticize given arguments. Therefore, the intention reconstruction approach seems to be much more realistic.

2 What Are Arguments?

Before turning to the interpretation of arguments let me briefly explain what I mean by "argument" in the sense of an argumentative utterance's meaning (precise definition: Lumer, 1990, sect. 2.4; 1991, sect. 6; 2000, sect. 4). A *valid argument*, as I use this expression, is a triple consisting of: 1. a set of judgements called the "*reasons*", 2. an indicator of argument like "therefore" or "hence", and 3. a further judgement, called the "*thesis*". The indicator indicates which judgements are the reasons and which judgement is the thesis argued for. The argument is based on an efficient epistemological principle, which is a general primary or secondary criterion for the truth or verisimilitude of (perhaps specific types of) propositions and which in epistemology has been proved to really guarantee the truth or verisimilitude of propositions. Such an efficient epistemological principle e.g. is the deductive principle: 'A proposition is true if it is logically implied by true propositions', or the genesis of knowledge principle: 'A proposition is true if it has been verified correctly'; or the interpretative epistemological principle: 'A proposition is true if it is part of the only possible explanation of a known fact' etc. The argument's reasons then truly affirm that the conditions of the principle are fulfilled in a specific way for the thesis in question. The validity mentioned in this definition is an *argumentative validity*, which goes beyond logical validity in several aspects: So nondeductive arguments may be argumentatively valid too, and for deductive arguments being argumentatively valid their reasons have to be true, etc. - A valid argument is *adequate for rationally convincing* an addressee of the thesis 1. if the addressee himself is rational, 2. if he knows the epistemological principle at least implicitly, 3. if he knows about the truth of the reasons, 4. if the argument is structured in a way that he can follow it etc. - An argumentatively valid and in the specific situation adequate argument is apt to convince in a rational manner in that it may guide the addressee's process of recognizing the truth of the thesis. Following the guidelines provided by this definition, one important part of a normative theory of argumentation then is to develop more specific criteria for the argumentative validity and adequacy. These criteria differ according to the epistemological principle on which the specific type of argument is based. In the Practical Theory of Argumentation some precisely defined criteria of this type have already been developed (Lumer, 1990, sects. 4.2; 4.4-4.6; 6.1.4; Lumer 1997, sect. 2.4).

3 The Aims of Interpreting Arguments

The theory of interpretation sketched in the first section is rather general and can be applied to any kind of linguistic utterances. Argumentative utterances are a very specific type of linguistic utterances though. In standard cases they are intended not only to say something meaningful but to provide an argument in the just defined sense which shall convince the addressee. And this argumentative intention is very important for the explaining interpretation of the text. In the interpretation one may e.g. argue like this: 'The arguer wanted to prove the thesis *p*; the second reason r_2 as it stands does not prove anything in this respect, whereas the very similar reason r_2' would perfectly provide the necessary proof; possibly the author has confused the meanings of "r_2" and "r_2'".

On one side the argumentative intention of the arguer makes it often easier to *understand* the text but on the other side it opens a completely new task for the interpretation of arguments, namely to take the argumentative claim seriously and to assess the argumentative validity and adequacy of the argument, i.e. if it proves the thesis. Such an assessment is not only an academic exercise because the interpreter himself may behave like an addressee, though a particular one, when assessing the argument: He scrutinizes (with the help of very precise and theoretically justified criteria) if the reasons prove the thesis, and if he finds out that the answer is 'yes' he probably will believe in the thesis. (If he then publishes this positive result this may amount to arguing for the thesis.) Assessing the argument can even be regarded as the *true* task of the interpretation of arguments - already presupposing that the text has been understood semantically. I do not want to assert that this is the only specific task of an interpretation of arguments but it certainly is a very important specific task. In the following I will speak only of interpretation of arguments with this aim, i.e. which shall make it possible to assess the argumentative validity and adequacy of the argument and which, finally, carry out this assessment.

The specific criteria for the argumentative validity and adequacy mentioned in the second section describe rather ideal forms of arguments only. This is because they have been designed in such a way that with warranty they fulfill the function of arguments, namely to be able to guide a process of acquiring knowledge. This leads to a certain gap between these ideals and the arguments as they can be found in written texts or oral speech though intuitively the latter arguments may be completely okay. They are not ideal in the defined sense because we do not think in this ideal way - from an incomplete set of reasons we jump to a conclusion and many persons have a good "feeling" for if with this jump unfulfilled presuppositions have been skipped - because of stylistic reasons, i.e. we do not want to write in such a sterile manner, etc. So there are some good reasons why arguments found in normal texts are not ideal, but on the other hand often it is very difficult to recognize if such arguments are valid. The most obvious way to fill this gap between normal and ideal arguments without renouncing the connection to the warranted way of leading to knowledge is to bring given arguments nearer to the ideal, i.e. to reinterpret or reconstruct them in such a way that the reconstructed arguments - in the best case - have the ideal form required by the criteria for argumentatively valid and adequate arguments so that, finally, these reconstructions can be assessed according to these criteria. This then would be a further specific task of argument interpretations. Executing this task, i.e. constructing an ideal version of the argument, apart from being an academic exercise, again can be functional for the interpreter's own acquiring justified belief about the thesis (and it can be functional for his arguing for it in a more precise way by publishing the interpretation).[2]

To summarize, the tasks of an interpretation of arguments are, firstly, to *understand* the semantic meaning of the argument, secondly, to *reconstruct* it, i.e. to bring it as near as possible to the ideal form of the criteria of argumentative validity and adequacy, and, finally, to *assess* their validity and adequacy according to these criteria. The further exposition of this paper will centre on the second step.

4 General Principles for the Interpretation of Arguments

What just has been said can be formulated a bit more precisely as a first principle:

Principle way of how the interpretation works: The initial or original (i.e. given) argument has to be transformed into a version which is as ideal as possible (called the "*reconstruction of the argument*") according to the following principles. The "ideal form of an argument" is determined by the criteria of argumentative validity and adequacy for ideal arguments. The reconstruction then has to be scrutinized if it fulfills these standards. If and only if the reconstruction fulfills the criteria the initial argument is argumentatively valid and adequate.

During the interpretation one has to do with the original argument as well as with the reconstruction and its parts. This may lead to confusion on the side of the interpreter as well as on the side of the addressees of the interpretation. Therefore, a second principle is straightforward:

Clarity: In the interpretation it must always be clear which part of the reconstruction stems from the author of the argument and which parts and why stem from the author of the interpretation.

Charity is often held to be a general principle of the interpretation of texts, this may even be a question of politeness. Be that as it may, in argumentative contexts a general reason for charity is that - even as an opponent - one cannot get rid of the truth or of a strong hypothesis only by a malevolent interpretation: A small modification of that what the malevolent interpreter takes to be the argument may be a perfectly good argument proving the thesis, and - taking people not as being stupid - this argument probably was what the arguer intended to put forward. But with respect to the specific type of argument interpretation under consideration there is further strong reason for charity. One main part of the interpretation is to bring the original argument in a form that is as ideal as possible. In a certain respect this ideal is extraneous to ordinary arguing, and it is not a mistake of the resulting arguments that they are not ideal in this particular way. Therefore, the interpreter who wants to have them in the ideal form has to be indulgent with them and *he* has to make the efforts for obtaining what he wants to get. So we can set up this principle:

Charity, benevolence: Make the reconstruction of the initial argument as strong as possible, i.e. so that an argumentatively valid and adequate argument for a thesis substantial in the respective context is created but without violating the other principles of interpretation!

Charity however has its limits. According to the intention reconstruction approach, the aim of the usual interpretation of texts is to reconstruct the communicative meaning *intended by the author*. And this with some modifications holds for the interpretation of arguments, too. Otherwise the reconstructed argument could no longer count as a reconstruction of the *arguer's* argument.

Authenticity: The reconstruction has still to be a reconstruction of the argument of the *original author*. Therefore, impute only such implicit arguments, types of inferences, argument schemes and steps to the author which he accepts!

Similar reasons hold for the following principle: The interpretation must not only be a reconstruction of what the arguer *may* think, it must be a reconstruction of what he *has said*. Limits of the idealization this time are given by the degree of efforts that may be expected from the addressee: Some idea to an argument is not yet an argument because the completion may be difficult or go in various directions so that the arguer himself should have completed the argument. The appertaining principle is this:

Immanence: No overinterpretation! The reconstruction has still to be a reconstruction of the original *argument*; i.e. alterations of this argument in the direction of an ideal argument have to respect limits which result from the amount of efforts that can be expected of the addressee of the argument. So missing parts of the argument have to be inferable from the given material; i.e. no substantial reasons may be added.

Sometimes interpretations have to cope with the problem of a plurality of possible reconstructions remaining after the already mentioned principles have been applied. In this case one should choose from them according to argumentative strength and simplicity.

Plurality, argumentative strength and simplicity: One interpretation can lead to different reconstructions. From these eventually invalid or inadequate or weak reconstructions have to be cancelled (but only so far that there remains at least one reconstruction). From the remaining arguments the most simple one is the *central* reconstruction of the argument.

5 Procedural Operationalization: The Steps of an Interpretation of Arguments

The principles developed so far are only general guidelines which should be observed in the interpretation. They say only little about how to proceed. In the appendix of this paper I have listed 14 steps of a possible operationalization of the ideas described so far. This operationalization is intended for a very detailed interpretation of rather complex and difficult arguments recorded in writing as we may find them e.g. in politics, science, philosophy etc., i.e. the operationalization is intended to represent the strongest instrument we may dispose of in this respect. (Hints to a simpler form of interpretation are given at the end.) The list has been used successfully in classroom interpretation of arguments.

The steps of this procedure (apart from the preparatory step 2) can be assigned to the three tasks of the interpretation of arguments (cf. sect. 3). Many steps (namely steps 1, 3, 4a, 4b, 5a, 5b, 5d, 6, 7, 8, 10, 12) aim at *understanding* the argumentative structure as it was intended by the arguer. A key position in this respect is given to the indicator of argument which helps to identify the thesis and the reasons. A second set of steps (namely steps 4c, 5c, 9, 11, 12, 13) aims at *transforming* the given argument into the ideal reconstruction: The phrasing has to be unified, parts have to be canceled, new parts have to be added etc. Finally, the assessment of the argumentative validity and adequacy (step 14) has to take place. Though the steps can be assigned to the three tasks these tasks cannot be fulfilled one after the other because the "logically" prior tasks often are already executed with a view to the next task: Understanding the original argument's structure is subject to the principle of charity, which implies that within limits one tries to find an argument which later on turns out to be valid; and the transformation into an ideal argument, of course, can be done only if tentative reconstructions are already assessed according to the criteria of validity and adequacy. This however does not lead to any vicious form of circularity; it is only a way of reducing the number of possible reconstructions at an earlier stage by excluding such versions which later on, because of their argumentative weakness, have to be cancelled anyway.

The list of steps and the procedure of a detailed interpretation are rather long. Unfortunately, interpreting arguments, in particular unclear ones, often is more laborious than inventing them.

Appendix: Steps of a Comprehensive Interpretation of Arguments

The following list of steps of interpretation is intended for guiding a comprehensive interpretation of a longer argument recorded in writing. This procedure of interpretation is rather exact, but expensive and long-winded. Therefore, if it is opportune one will use more simple procedures of interpretation.

1. *Confining the argument:* From where to where does the argument reach in a longer text? The length of an argument may vary from one line to a whole book. In the latter case subarguments have to be individuated.
2. *Numbering the sentences of the argument:* It is recommendable to use shortcuts for the parts of the argument. And the easiest way to do that is to simply assign numbers to the sentences sentence per sentence. If a sentence consists of several main phrases each of them could get a different number though. This numbering shall not be changed during the further course of the interpretation - otherwise one runs the risk of making a mess. If later on it will be necessary to assign numbers to *parts* of sentences the best way to do that is to add a further index to the original number of that sentence (e.g. third part of sentence 10 = 10.3). Sentences added by the interpreter get a different type of numbering (if one wants to insert these sentences at a certain place of the argumentative text, one can e.g. affix letters to the preceding sentence-number (additional argument behind sentence 10 so would be sentence 10a). If the place is irrelevant one can simply use letters or roman numbers or numbers higher than 100.
3. *a) Identify and b) mark the indicator(s) of argument*, e.g. with "IA"!
4. *a) Identify, b) mark and c) phrase formally correct the theses:* With the help of the indicator(s) of argument the thesis (theses) has (have) to be identified, marked (e.g. with "T1" etc.). In

addition these theses have to be phrased formally correct, i.e. as complete sentences, their pronouns substituted by names, implicatures and examples transformed into explicit text, different expression for singular terms and predicates referring to the same entities made uniform over the text etc.

5. *a) Identify, b) mark, c) phrase formally correct the manifest reasons and d) assign them to the appertaining thesis:* With the help of the indicator(s) of argument manifest reasons have to be identified and marked, e.g. as "R1" etc. These reasons then are phrased formally correct according to the same principles as already applied to the thesis (theses). Doing this one should take care that the whole way of expressing is unified altogether (for obviously synonymous expressions e.g. use only the most fitting one, but be careful if there is real synonymy). If the argument contains several theses, finally it has to be cleared with the help of the indicators of argument which reason shall sustain which argument.

   Each of the following steps possibly is only provisional, i.e. eventually they have to be revised later on. And the order of succession indicated here is not obligatory: Sometimes it is more convenient to do a certain step first thereby simplifying the following steps, or to execute one step only partially and to finish it some steps later on. Steps 4 and 5, too, eventually can be revised later on when the structure of the whole argument is seen through.

6. *In case of several theses clarify the relation and hierarchy between them:* Are the theses on the same level or is the argument under consideration complex with intermediate theses which function as reasons for a higher thesis? The highest thesis is marked particularly, e.g. by a "*".

7. *In case of several theses establish the structure of the argument:* From the results of steps 4a, 5d and 6 one tries to establish the complete structure of the argument. For getting a better overview this can be done in form of an argument tree. All the subarguments then first can be dealt with separately.

8. *Establish the argumentative function of all sentences:* Now one tries to establish the argumentative function of all sentences of the argument, in particular those which until now have not been inserted in the argument tree: Which of them are really further reasons, and which of them are only announcements of theses, explanations of the argument's structure, other explanations, repetitions etc.? In order to be sure of not having forgotten any sentence one may set up a list of all the sentences of the argument.

9. *Cancel superfluous sentences and parts of sentences:* Not all parts of the argument must be argumentatively relevant; e.g. repetitions, circumscribing explanations, merely illustrating examples, explanations of the argumentative structure are not. All these parts have to be canceled. Only theses, reasons and indicators of arguments shall remain. For a very extended argument a list of all these cancellations and of the remaining sentences shall be set up.

10. *Identify the type of argument:* Which type of argument is intended by the author, i.e. which epistemological principle does he rely on? For answering this question the following evidences are helpful: *Deductive arguments:* The predicates of the reasons show up again in the thesis; the indicator of argument often indicates the deductivity (e.g. "from this follows / can be inferred"). *Practical arguments:* The thesis is a value judgement (in justifications of actions though the thesis mostly is not made explicit, only the action is given; in such cases the thesis has to be completed to: 'this action is optimum'); a great part of the reasons are value judgements; another big part of the reasons are assertions about the consequences of the object of valuation. *Genesis of knowledge arguments:* The content of the reasons is a description of the origin of the knowledge about the thesis. *Interpreting arguments:* In the reasons among others an explanation of a certain fact is offered; the thesis' subject is an event or a state. - Establishing the intended type of argument is an important step for the further interpretation because with this step the respective ideal is fixed in the direction of which the argument has to be interpreted and against which finally the reconstruction has to be measured or evaluated.

11. *Rephrase sentences in their contents:* If not yet already done in steps 4c and 5d sentences shall be rephrased in such a way as to establish a uniform and completely explicit diction: Singular terms have to be made uniform in a convenient way (e.g. personal and demonstrative pronouns should be substituted by names); different expressions which shall represent the same predicate have to be standardized; things said implicitly have to be expressed explicitly (if a reason e.g. is presented in the form of an example or a metaphor a general sentence expressing their content in an abstract way has to be formulated); implicatures have to be expressed explicitely; usual periphrases have to be brought into a convenient form (e.g. "p is false" should be transformed into: "not p"). In addition, sentences which are too weak, too strong or too unprecise for the argumentative strategy presumedly intended by the author have to be corrected appropriately. Eventually the exact meaning and the logical syntax of the sentences must be clarified via a formalization. However the meaning has to be clarified so exactly only as this is necessary for their argumentative function. These reformulations have to be effected according to the principles of benevolence, authenticity and immanence and in view of the requirements of the respective type of argument. Particular attention has to be paid to reformulations of the thesis: If the thesis has become very strong this could make the argument invalid or inadequate. In such cases weakenings of the thesis have to be sought which still would lead to the arguer's aims.

12. *Eventually correct steps 4-6.*

13. *Adding missing reasons:* For inserting additional reasons the following principles hold: 1. Additional arguments have to be indispensable for the argumentative validity and adequacy of the ideal argument. (If the reconstruction yielded so far is already ideal additional reasons are superfluous; if additional reasons are indispensable they of course have to contribute to the validity and adequacy of the reconstructed argument.) 2. Authenticity has to be respected. 3. Immanence: Missing reasons have to be "inferable" from the explicit argument. In deductive arguments e.g. the predicates of the additional arguments have already to be found in the explicit reasons or in the thesis. In practical arguments of a pair of consequences and valuations at least the consequence has to be mentioned for being able to add its valuation. 4. Simplicity: In case of alternative additions decide according the principle of simplicity. - Adding missing reasons in complex arguments is the most difficult step. Because of the high number of requirements even for short arguments often many trials have to be done before this step can be finished.

14. *Checking the validity and adequacy of the resulting reconstruction:* Though the preceding steps have been designed in a way that, if this possible under the described limitations, a valid and adequate reconstruction is brought into being - so that a final checking of the argument may seem to be superfluous. Nonetheless it is advisable, finally, to check systematically if all the conditions for a valid and adequate argument are fulfilled.

A simplified interpretation procedure:

In a still rather thorough but, as compared to the comprehensive interpretation, considerably simplified interpretation one can proceed as follows: After a thorough reading one writes down the argument immediately in a rather precise formulation like the interpreter himself would have formulated the argument in the most ideal form. I.e., with respect to the written record, one jumps immediately to step 11 of a detailed interpretation; the steps 1, 3a, 4a, 5a, 5d, 8, 10 and eventually 6, 7, 9 nonetheless have to be done intellectually even in this simplified procedure. With respect to adding missing reasons (step 13) one may confine oneself to provide the most important reasons. Even during checking the validity and adequacy (step 14) one will confine oneself to check the most important conditions.

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Notes

1 In empirical decision theory many systematic violations of the rules of subjective expected utility theory have been discovered (overview: Camerer, 1995), whereby according to many people, these rules represent what it means to be practically rational.

2 Interpreting argumentative *discourses* which aim at resolving conflicts of opinion (cf. Eemeren et al., 1993) may be different in this respect: At least the academic interpreter ususally is not a party in the conflict, and the conflict may have already been resolved. Then some sort of ideal reconstruction of such a discourse will remain merely an academic exercise.