

# “Conductive” argumentation in the UK fracking debate

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From a critical rationalist perspective, I look at a fragment of the debate on shale gas exploration in the UK in order to make a proposal on the nature and representation of “conductive” argumentation, arguing it should not be viewed as a single argument, but in relation to deliberation as genre. There is no “conductive argumentation”, only various possible outcomes of deliberation, seen as critical testing of (alternative) proposals.

KEYWORDS: argument scheme, conductive argumentation, critical rationalism, decision-making, deliberation, fracking, practical reasoning, shale gas

## 1. INTRODUCTION

The literature on “conductive argumentation” is by now fairly extensive, including Wellman’s (1971) original statement of the problem, Govier’s (1999; 2010; 2011) crucial contributions, Blair and Johnson’s (2011) edited collection, as well as other significant developments (Hitchcock, 2013) and useful critical reviews (van Laar, 2013; Paglieri, 2013). According to these sources, a typical illustration of “conductive” argumentation is a “pro/con” or “balance-of-considerations” argument, in which both reasons in favour and reasons against are (convergently and defeasibly) supporting a conclusion, for example a practical conclusion – the agent ought to do A. Conductive arguments are taken to be single arguments (in favour of one conclusion) with two kinds of premises, positively and negatively relevant to the conclusion, with the reasons in favour outweighing the reasons against (called “counterconsiderations”). It has been suggested that, in addition to the pro and con sets of reasons, there should also be a specific premise that expresses the result of the process of weighing reasons, an OB (on-balance) premise (Hansen, 2011).

My proposal is to define “conductive” (pro/con) argumentation in favour of a practical-normative conclusion (the Agent ought to do A) in relation to deliberation as genre, and represent it as a possible configuration of the “deliberation scheme” I have developed in other publications (Fairclough, 2016; Fairclough, 2017). I suggest that there is no such thing as “conductive argument”, and that speaking about pro/con argumentation as a type of argument is possibly a category mistake. In order to understand what is involved in pro/con argumentation, a change of perspective or level is needed, from the level of simple argument schemes to the level of genre, the level at which various kinds of argument schemes are interrelated in pursuit of a higher-order function, e.g. rational decision-making. By focusing on deliberation, what is usually called “conductive” argumentation appears to be one of two main possible configurations or outcomes of a deliberative process, the one where a pro-conclusion can still be maintained, in spite of the existence of reasons against, because the reasons against are not strong enough to refute it, and the reasons in favour “outweigh” the reasons against.

I advance this proposal from a critical rationalist logic of inquiry (Miller, 1994; 2006; 2013; 2014), seeing deliberation as the critical testing of alternative proposals for action, designed to enable rational decision-making. Critical testing of alternative proposals, resulting in the normative judgment that proposal  $A_n$  is not recommended (and ought to be discarded), but other proposals can be provisionally maintained, may be followed by choice of a “better” alternative among those proposals that have survived criticism and a decision to adopt that alternative. I propose two crucial distinctions: (a) between *counterconsiderations* (CCs) and *critical objections* (COs), arguing that, unlike CCs, COs can rebut a proposal; (b) between the concepts of *outweighing* and *overriding* reasons, which I see as occurring at different temporal stages in a deliberative process. Only if there are no *overriding* reasons against doing A, does it make sense for deliberating agents to move on to *weighing* the pros and the cons.

The deliberation scheme I am suggesting (Figures 1-3) basically involves an argument from goals, circumstances and means-goal relations (tentatively supporting the conclusion in favour of proposal A); an argument from positive consequences (also tentatively supporting that conclusion), and an argument from negative consequences, which can conclusively rebut the hypothesis that A is the right course of action when the potential undesirable consequences are unacceptable. Deliberation typically starts with one or more agents having a stated goal G (or several) in a set of circumstances C (including “problems”), and an open question (what should be done?), in response to which agents will propose a course of action A (or several), intended

to transform their current circumstances into the future state-of-affairs corresponding to their goals (Fairclough & Fairclough, 2012). Based on all the knowledge available, the agents might conjecture that they ought to do  $A_1$  (or  $A_2$  or  $A_3...$ ) to achieve  $G$ , in the circumstances. In order to decide rationally, the agents should subject each of these alternatives (hypotheses, conjectures) to critical testing, i.e. should try to expose potential negative consequences of each, and evaluate them as to their acceptability. Deciding to adopt proposal  $A_n$  will be reasonable if the conjecture (hypothesis) that  $A_n$  is the right course of action has been subjected to thorough critical testing in light of all the knowledge available and has withstood all attempts to find critical objections against it. A critical objection is an overriding reason why the action should not be performed. *Unacceptable* consequences (e.g. unacceptable impacts or risks of a course of action) are critical objections against a proposal and can conclusively rebut it. The purpose of critical testing is (1) to eliminate unreasonable proposals by examining their potential consequences; (2) to enable non-arbitrary choice of a better proposal, if several reasonable proposals have withstood criticism.

Normatively speaking, the underlying logic of deliberation (and of practical pro/con argumentation) is a logic of inquiry, not advocacy or justification: arguers do not know in advance which proposal is recommended, but should endeavour to find out, by trying to find reasons against each, discarding some on this basis and then comparing the remaining ones against each other. The fact that no critical objections may have been uncovered does not mean that there are no counterconsiderations, no reasons against that proposal at all, nor does it mean that no critical objections are likely to be uncovered in the future. Counterconsiderations (I suggest) are reasons against the proposal that can be outweighed by the reasons in favour. Critical objections, by contrast, are reasons against the proposal that cannot be outweighed in this way, but in fact override the reasons in favour. What is a mere CC to someone may be a CO to someone else. The inconvenience of a very early start to catch an early flight may be a CC to one person, for whom the cheaper cost of that flight outweighs the disadvantages, but may be a CO to someone else, for whom the inconvenience overrides whatever arguments in favour there may be.

## 2. ARGUING FOR AND AGAINST SHALE GAS EXPLORATION

I will test my conception of conductive argumentation against a few examples taken from the controversy on shale gas exploration in the UK, specifically from the debate that took place in the Lancashire County Council (LCC) on whether to approve the applications for hydraulic

fracturing submitted by oil-and-gas drilling company Cuadrilla.<sup>1</sup> Following extensive deliberation over several days (23-29 June 2015) by the LCC Development Control Committee, including speeches against and in favour of the proposal by members of the public, the applications were rejected on account of *unacceptable impacts*. In rejecting the applications, councillors voted against the views of their own planning officers, who had recommended approval. Here is the Planning Officer's presentation – in an abbreviated form combining summary and direct quotation:

According to all the evidence and expert opinion, the objections raised by the opponents are “not sustainable” (“cannot be supported”). It would therefore be “unreasonable” to delay making a decision. “Whilst there would be some negative impacts” (traffic, noise, dust, visual impact, loss of agricultural land), “most particularly for those living in the closest proximity to the site, they would be for a temporary period” and “could be minimized by the use of conditions”. “It is therefore concluded that there would not be any unacceptable impacts associated with the proposal” on traffic, air quality, visual and noise grounds, and to refuse the application on such grounds “would be unsustainable”. Furthermore, the Environment Agency has concluded that the risks of water and soil contamination are “very low”. Consequently, “refusing the application in view of the risks to surface or ground water contamination ... would be unsustainable”. All risks can be controlled by the “permitting process” and “regulatory regime” in place. If approved, the development would achieve important goals (“would establish the presence and viability of exploiting an indigenous resource ... which could contribute to the national energy needs, maintaining a diverse energy supply, and would bring some local benefits to the area in terms of employment and contributions to the local economy”). “It would not be acceptable to dismiss such exploration where it would not have an unacceptable impact that could not be adequately controlled and meet the policies of national guidance and the development plan.” “It is considered that the proposal complies with the national guidance and the policy of the development plan” and all other relevant legislation, except SP2 & EP11 of the Fylde Local Plan (seeing as it constitutes “industrial development in the countryside”). However, “there is sufficient justification to override these two policies” in this case; “little weight should be attached to [them]... and more weight should be attached to the policies of minerals and waste”. “So, in conclusion, overall, after extensive consultations and assessment of the proposals in light of the responses, representations, and most particularly and importantly against the policies of the development plan for the area, I am of the view that the

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<sup>1</sup> This is a corpus of approximately 130,000 words, transcribed from the video recordings of the 4 days of deliberations by Phillip Norris (UCLAN).

principle of the development is acceptable or can be made acceptable by the use of conditions...". "I therefore recommend that... planning permission be granted subject to the conditions set out in the report...".

This is a conductive argument in which objections, mainly in the form of "impacts", are acknowledged (using the same argumentative indicator to express a concessive relation: "*whilst* there would be emissions..."/ "*whilst* [the drill] would still be visually apparent..."/ "*whilst* it is acknowledged that these operations would be noisy..."/ "*whilst* there would be some negative impacts..."), but are not considered serious enough to rebut the proposal, seeing as they can be "minimized" or "made acceptable by the use of conditions". As for risks, they are said to be very low, by implication manageable, therefore not unacceptable either. Regarding conflict with existing legislation, it is considered that the application complies with all relevant national and local legislation, save two local policies, which can be "overridden". In other words, although, in principle, laws provide non-overridable reasons against proposals which go against them (e.g. local people's *rights* or government's *obligations* must not be violated), this particular conflict is not unacceptable and does not suggest the proposal should be discarded. (For another perspective on pro/con argumentation over shale gas extraction, see Lewinski 2016).

I have elsewhere argued that the most significant perspective in light of which proposals are to be tested is a consequentialist one (Fairclough & Fairclough, 2012; Fairclough, 2016): would the consequences of a proposal, if adopted, be acceptable or not? The term "consequence" is used here broadly to refer to several types of states-of-affairs:

- the *goals* of the proposed action (as intended results or end-states): for example, Cuadrilla's immediate goal is to have their application approved, in order to move on to exploration and commercial exploitation, for the long-term stated goal of achieving energy security for the UK.
- the *risks* involved, as potential unintended and undesirable consequences, e.g. water and soil contamination;
- *impacts* on the natural environment, known to occur in the process of achieving the goals, e.g. the coming into existence of a drilling rig of a certain height, situated on a fracking pad of a certain size;
- *impacts* on the institutional, social world, e.g. the coming into existence of a situation in which the rights of the local population are being infringed.

Impacts are different from risks. Impacts are *known* (not merely probable or possible) consequences: if agents want to achieve their goals, certain impacts will be unavoidable. By contrast, risks may or may not materialize. A visual impact on the landscape is an unavoidable impact if the goal is to exploit shale gas; causing an earthquake by drilling is a risk. In the case of risk, proposals with potentially unacceptable consequences may nevertheless be allowed to stand, if the risks can be “managed” or “controlled”. One way of managing risks is by being able to avoid them via a Plan B, an alternative course of action that agents can switch to if necessary; another is by transferring them to another party (e.g. by insuring against them in an acceptable way) (Miller, 2013). Agents may also choose to take the risk, if it is not possible or desirable to abandon the proposal. If the risk is accepted, then it is rational to try to minimize or optimize it, so as to reduce the probability and/or severity of the potential loss.

Overall, in the LCC debate, the argument scheme underlying argumentation against the proposal was mainly argumentation from negative consequence, where the negative consequences were deemed to be unacceptable (critical objections). By contrast, the supporters of the proposal tended to argue from desirable goals (e.g. energy security) and other alleged positive consequences. Since the undesirable consequences could not be overlooked altogether, the supporters’ arguments tended to be of the pro/con type: impacts and risks were acknowledged, but were not considered serious enough to challenge the proposal, being allegedly mitigated and controlled in an acceptable way.

### 3. DELIBERATION AS CRITICAL TESTING OF PROPOSALS: POSSIBLE OUTCOMES

According to van Eemeren (2010, pp. 138-143), deliberation is a genre, at a higher level of abstraction than activity types. I suggest that argumentation in deliberative activity types can be succinctly represented as follows (Figure 1), where the conclusion of the practical argument from goals and circumstances (centre) is tested by a pragmatic argument from negative consequence (left). The pragmatic argument from negative consequence can potentially rebut the practical proposal (conclusion) itself if the consequences are deemed to be critical objections. To say that the conclusion “Agent ought to do A” is rebutted means that the opposite conclusion follows instead. For example, from the critic’s perspective, the (unintended) consequences of proposal A can be such that A had better not be performed, even if the goal can be achieved by doing A. If this is the case, a critical objection to A has been exposed, and the hypothesis that the agent ought to do A has been rebutted (refuted, falsified). However, if the negative

consequences, while undesirable, are not unacceptable, and do not therefore constitute critical objections against A – this could be because there is some “Plan B” or mitigating strategy in place, or because they can be traded off against positive consequences (outweighed by them) – then the conclusion in favour of A may still stand. Practical claims can also be tentatively supported by arguments from positive consequence (right-hand side). Positive consequences include desirable side effects that are not explicitly intended (are not goals that agents start from), but can be predicted to occur. Figure 1 is a development of the scheme proposed in Fairclough & Fairclough (2012), connecting two argument schemes, the practical argument from goals and the pragmatic arguments from positive and negative consequence. For convenience, only one goal, only one negative and only positive consequence are represented; there may be several of each, convergently supporting one conclusion or another.

Let us assume that three alternative proposals are tested,  $A_1$ ,  $A_2$ ,  $A_3$ , that can all presumably deliver a set of goals and possibly other positive consequences. Let us also assume that these goals have withstood critical questioning (they are not unacceptable) and the agent wants to achieve them. There is, potentially, a defeasible inference (from each of these sets of premises) to the conclusions *Proposal  $A_1$ , or  $A_2$ , or  $A_3$  is recommended*. Let us also assume that, by testing  $A_1$  (Figure 1), it is found that, in addition to various positive consequences and possibly some counter-considerations,  $A_1$  has a range of unacceptable consequences, e.g. unacceptable risks or impacts. As critical objections, these will conclusively rebut  $A_1$  (so that the argument on the left-hand side of Figure 1 can be advanced), overriding whatever reasons in favour there may be (achievement of goals and other positive consequences). Thus, it can no longer follow, not even tentatively, that  $A_1$  is recommended, because it conclusively follows that  $A_1$  is not recommended, seeing as there are COs to  $A_1$ .

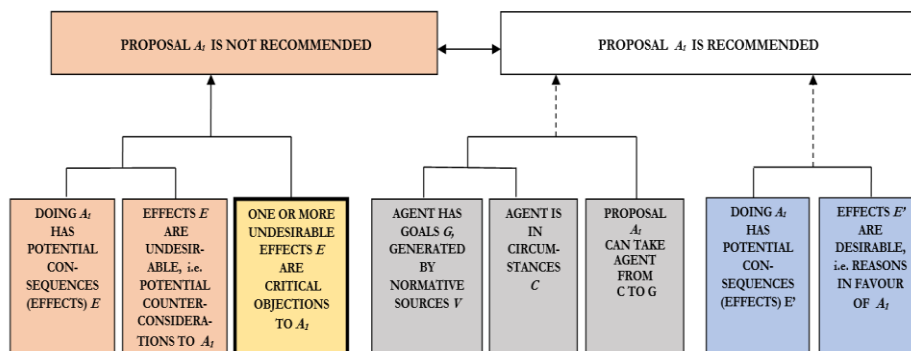


Figure 1. Proposal  $A_1$  is rebutted in light of critical objections

Let us now suppose that  $A_2$  is being tested (Figure 2).  $A_2$  can also deliver the goals and other positive consequences, and no critical objections come to light, which means it does not follow that  $A_2$  is not recommended (i.e. that potential inference, left-hand side, is now being undercut). Proposal  $A_2$  has therefore passed the critical test and can be provisionally maintained. If  $A_1$  and  $A_2$  were the only alternatives, then  $A_2$  would be chosen at this stage, because, unlike  $A_1$ ,  $A_2$  has no critical objections against it. If the potential conclusion on the left does not obtain (if it is not the case that  $A_2$  should not be performed – I have left the conclusion box blank, to suggest this), then what is left of the deliberation scheme is what is commonly called a “conductive” argument which says: in spite of various counterconsiderations (in principle, reasons against  $A_2$ ), and seeing that there are no overriding reasons against  $A_2$ , but a number of reasons in favour (e.g. it will achieve the goals and other desirable effects), and also seeing that there is no better alternative,  $A_2$  is the right course of action to achieve the goals.

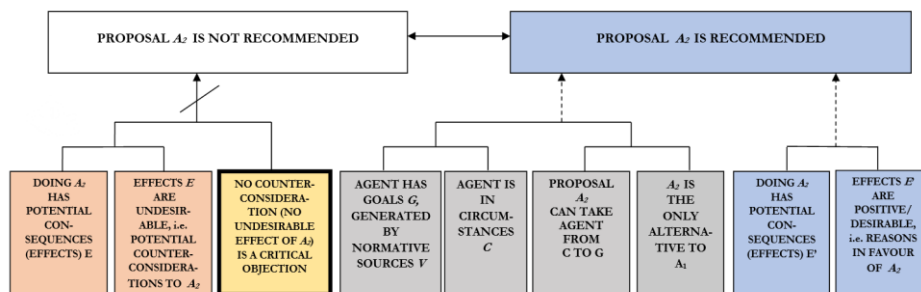


Figure 2. Proposal  $A_2$  has survived criticism (no COs, only reasons in favour and CCs): a “conductive” argument in favour of  $A_2$  is possible, if  $A_2$  is the only reasonable alternative.

The negatively relevant reasons (undesirable consequences), which – had they been COs – would have supported the conclusion that  $A_2$  is not recommended, can thus be incorporated into the arguer’s case as counter-considerations (Figure 2). Unlike CCs, COs cannot be integrated into a conductive argument. Whenever there are COs (Figure 1), the potential conductive argument in favour of  $A_1$  collapses into a deductive argument conclusively supporting the conclusion that  $A_1$  is not recommended.

If more than one proposal passes the test, it is rational to choose one that is preferable from whatever perspective is important to the agents in the context. For example, for the opponents of fracking, the proposal to drill for shale gas in Lancashire was unreasonable, yet other proposals – for renewable energy sources – passed the critical test.



Among renewables, all considered reasonable, some people might prefer solar, others wind or tidal energy, based on various criteria (cost, predictability of supply, etc.), weighed against each other in various ways. Essentially, in my view, the metaphor of *weighing* applies only at a later stage in the deliberation process, only in relation to proposals that have been found to be reasonable (i.e. without unacceptable consequences). Unacceptable consequences do not outweigh, but *override* the reasons in favour.<sup>2</sup>

The situation where more than one alternative has survived criticism is represented in Figure 3, where  $A_2$  is finally chosen because it has been found preferable to  $A_3$ , though both are reasonable courses of action.

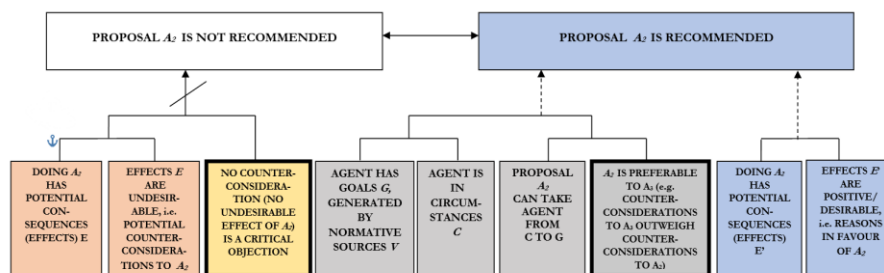


Figure 3: Proposal  $A_2$  has survived criticism (no COs, only reasons in favour and CCs): a “conductive” argument in favour of  $A_2$  is possible if  $A_2$  is preferable to other reasonable alternatives.

The premises highlighted in bold in each figure are the equivalent of the OB (on-balance) premise, and come in two kinds: a premise expressing the absence of overriding reasons against doing  $A_2$  (no CC to  $A_2$  is a CO), and a premise expressing the preferability of  $A_2$  over  $A_3$ .

To recapitulate, all the alternative proposals put forward in response to the question “what should we do?” need to first pass the critical test of the deductive argument from negative consequence (left side of diagram). If one or more critical objections come to light, then it follows that the proposal is not recommended. Some proposals will be discarded at that stage, but some will pass the test and be allowed to stand, thus ending up on the right-hand side, tentatively supported (in light of the goals). To say that a proposal is recommended – i.e. asserting

<sup>2</sup> If the critical testing process yields no reasonable alternatives, and all available courses of action have unacceptable consequences, yet a decision has to be made, the metaphor of weighing may also apply to the choice among *unreasonable* proposals, in order to choose not a *better* but a *less bad* alternative.

the conclusion on the right-hand side of the deliberation scheme – is to say that there are reasons in favour but, essentially, that *there are no serious reasons against (i.e. no critical objections)*. In addition, it is to say either that the proposal in question is *the only reasonable alternative*, or that, among reasonable alternatives, it is *preferable to other reasonable alternatives* (e.g. it has fewer counterconsiderations, or more benefits, or both). (It is assumed here that the goals are acceptable and the agent wants to achieve them).

There can be conclusive (deductive) arguments against a proposal but no conclusive arguments in favour of a proposal: any argument in favour can be defeated by new information, emerging feedback, etc. (Fairclough & Fairclough, 2012; Fairclough, 2015; 2016). A proposal that, for an arguer, has withstood critical testing, together with the set of pro/con reasons that are positively/negatively relevant to it, will take the form of a so-called “conductive” argument in favour of that proposal. Figure 2 represents the situation when a proposal has passed the critical test, seeing as *no counterconsideration is a critical objection*. If this is indeed the case, then the conclusion in favour will be (defeasibly) supported, in light of the goals to be achieved, *because the conclusion against is not supported*, and the counterconsiderations are outweighed by the reasons in favour. If, however, this is not the case, i.e. if one or more reasons against are critical objections (Figure 1, left), then the potential “conductive” argument in favour of that proposal disintegrates, collapsing into a deductive argument against it.

As reasons against a practical conclusion, critical objections must be kept distinct from counterconsiderations. For every proposal there will be reasons against, however minor, but not every reason against a proposal is a critical objection. Unacceptable consequences, as critical objections, can rebut a proposal, conclusively indicating that it would be unreasonable to go ahead with it. Counterconsiderations can incline the balance towards one reasonable proposal or another, once the unreasonable ones have been weeded out. The point at which reasons against, taken to be counterconsiderations, may (singly or collectively) turn into critical objections, or at which merely undesirable (negative) consequences become *unacceptable* consequences, is a matter for deliberating agents to decide for themselves.<sup>3</sup>

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<sup>3</sup> I have retained both the words “practical” and “pragmatic” because this is how the two schemes are discussed in the literature: Walton (2006; 2007) calls the argument from goals a “practical” argument, while van Eemeren (2010) calls the argument from consequence a “pragmatic” argument. These schemes cannot be conflated and are both operative in deliberative practice. In my account, the argument from consequence is used to test the conclusion of the argument from goals. In other words, the argument from consequence has a critical function, while the argument from goals has a motivational function.

#### 4. CONCLUSION

On a critical rationalist view, practical reasoning can be modelled as a critical procedure that filters out those conclusions (and corresponding decisions) that do not pass the critical test of whether the intended or unintended consequences are acceptable. Proposals are tested in light of their consequences. For any alternative A, it is in principle possible to find not only counterconsiderations but critical objections: this is why *the two opposite conclusions should always be represented, and conductive argumentation is not a single argument*, in my view, but one of two possible main outcomes of a deliberative process, understood as a process of critical testing of alternative proposals for achieving a goal.

What appears to be a “conductive” argument is a particular argumentative configuration that may (or may not) appear in the temporal unfolding of a deliberative process. A proposal that has withstood critical testing (i.e. the con reasons are not COs but CCs), together with the sets reasons that are positively/negatively relevant to it, will take the form of a so-called “conductive” argument in favour of that proposal. Whenever critical objections do come to light in the course of deliberation, the potential “conductive” argument tentatively supporting A will collapse into a deductive argument in support of not doing A. Thus, “conductive” argumentation attempting to justify doing A materializes, or emerges as an actual pro/con argument, only in those situations when the reasons against doing A are taken to be mere counterconsiderations, not critical objections. As Figure 2 suggests, “conductive” argumentation is that particular situation in which the conclusion that A should not be performed, *always possible in principle, does not follow (the inference to that conclusion is undercut), because none of the con reasons are strong enough to warrant that conclusion*. In other words, there are no overriding reasons against A, only reasons in favour and counterconsiderations, the latter are outweighed by the former, so an argument in favour of doing A can be tentatively put forward.

The two main configurations are presented in Figures 1 and 2, with Figure 3 being a variation of Figure 2, when more than one reasonable proposal has passed the test and they are now weighed against each other in order to choose one. The premises that fulfill the role of the OB premise (Hansen, 2011) are represented in bold, in each figure. Whenever there are no critical objections against a course of action, it does not follow that the agent should not do  $A_n$  (the inference to *Proposal  $A_n$  is not recommended* is undercut, as there are no overriding reasons why  $A_n$  should not be performed). Nor does it, nevertheless, follow (however defeasibly) that the agent should do  $A_n$ , unless, in addition to not having any unacceptable consequences,  $A_n$  is

the only course of action that will deliver the goals or is preferable to other reasonable alternatives. This is where “weighing” comes into the picture: to say that  $A_2$  is preferable to  $A_3$ , among reasonable alternatives (and therefore recommended), is to say that the reasons (CCs) against  $A_2$  have been outweighed by the reasons (CCs) against  $A_3$ , or that the reasons in favour of  $A_2$  outweigh those in favour of  $A_3$  (or both:  $A_2$  has comparatively fewer disadvantages and more advantages than  $A_3$ , though neither would be an unreasonable course of action). Or, to say that  $A_2$  is recommended means that these two premises (in bold, in Figure 3) obtain: no CC to  $A_2$  is a CO, and  $A_2$  is in some sense preferable to its alternatives. These premises (in addition to whatever reasons in favour there are) are spread out across the various simple interrelated argument schemes that model deliberative activity types, which supports my claim that “conductive” argumentation must be analyzed at the “higher” level of genre, not as a type of argument.

To conclude, a conductive argument is *not* a single argument with pro and con reasons, but a particular argumentative configuration or outcome of a process of critical testing, where two opposite conclusions (“Do A” and “Do not do A”) are always possible, and whichever becomes actualized for any given alternative depends on how that alternative survives critical testing. “Do not do A” follows conclusively when there are critical objections, in spite of there being reasons in favour (i.e. in such cases, “Do A” is rebutted, and the pro reasons are overridden). “Do A” follows defeasibly when there are no critical objections, only reasons in favour and counterconsiderations (e.g. merely undesirable, but not unacceptable consequences), and that particular alternative has fared comparatively better than others in the process of weighing reasons (e.g. its disadvantages are comparatively smaller, or its gains are comparatively superior to those of others, including doing nothing, etc.). If there are no overriding reasons against doing A, the potential inference to “Do not do A” is undercut, the “Do A” alternative can stand (however tentatively), and the arguer’s argument may take the form of “conductive” argument saying: in spite of such-and-such counter-considerations, doing A is recommended.

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