

ISSA Proceedings 2014 - The Very Idea Of Ethical Arguments

Abstract: If non-cognitivism is true, an ethical argument cannot be a sequence of propositions as traditionally understood. I take steps towards developing an account of ethical argument that, as far as it goes, is, I believe, compatible with a particular version of non-cognitivism, namely expressivism.

Keywords: attitudinal consistency, attitudinal relevance, attitudinal validity, cogency, expressivism, non-cognitivism, propositionalism.

1. Introduction

I begin with an account of non-cognitivism:

According to non-cognitivism, there are no moral facts or truths.... Moral judgements don't attempt to, and don't ever, state facts. Their purpose isn't to describe any sort of moral reality. Instead, they serve as expressive vehicles, primarily giving vent to our emotions, prescribing courses of action, or expressing our non-cognitive commitments. As such, they aren't the sort of things fit to be considered either true or false. (Shafer-Landau, 2003, p. 18)

[F]or... non-cognitivists, there is nothing that can make moral judgments true - no moral facts or moral reality that they could possibly correctly represent, nothing they are true of (ibid., p. 20, note 8).

Starting from the idea that there is no moral reality that agents are trying to appreciate or depict in their moral judgements, non-cognitivists have analyzed such judgements as the expression of non-cognitive states (ibid., p. 153).

This last point is worth emphasizing. Non-cognitivists don't start with the claim that moral judgments are expressive vehicles; rather, their expressive analysis of moral judgments is their alternative to the view that the purpose of moral judgments is to describe some sort of moral reality, and is motivated by their metaphysical claim that there is no such reality.

If, as non-cognitivism holds, moral judgments (or ethical judgments - I will use these terms interchangeably) are neither true nor false, then they aren't propositions as traditionally understood, for as traditionally understood a proposition is either true or false, and this is the view I will take here.

If ethical judgments aren't propositions, then ethical *arguments* aren't arguments in what Woods, Irvine, and Walton (2004) call "the narrow sense," namely "sequences of propositions, one of which is the argument's conclusion, the rest of which are the argument's premisses" (p. 2). There are more than a few textbooks which take arguments as such to be propositional. If arguments *as such* are propositional, then ethical arguments are impossible if noncognitivism is true. On one view, this is a problem for textbooks that take arguments as such to be propositional; on another view, it's a problem for non-cognitivism.

The philosopher Michael Smith takes it to be a problem for non-cognitivism. In a critique of the non-cognitivism of moral irrealists (who deny that there are belief-independent moral truths), he says that "the whole business of moral argument and moral reflection only makes sense on the assumption that moral judgments *are* truth-assessable" (Smith, 1993, p. 403). Now it certainly seems that moral judgments are truth-assessable, for it makes sense to say of a moral judgment such as 'slavery is wrong' that it is *true* that slavery is wrong, or that it is *false* that slavery is wrong. Thus, the philosopher Simon Blackburn, who is a highly sophisticated non-cognitivist, speaks of what he calls "the propositional grammar of ethics" (Blackburn, 1985, p. 6). If moral judgments don't express propositions, then their propositional grammar is misleading. Suppose it is misleading, and that non-cognitivism is true. Are ethical arguments nevertheless possible? In this paper, I will develop an account of ethical argument that, as far as it will go, is, in my view, compatible with what I will take to be a particular version of non-cognitivism, namely expressivism.

2. *Expressivism and propositionalism*

According to Parfit (2011), moral expressivists hold that "[w]hen we claim that some act is wrong, we are not intending to say something true, but are expressing our disapproving attitude toward such acts" (p. 380). In more general terms, expressivism, as I will understand it, holds that the utterance of a moral judgment is the expression of an attitude.**[i]** (I will make this characterization more precise below.) Further, since expressivism (as I understand it) is a version of non-cognitivism, its analysis of (the utterance of) moral judgments is motivated by the (non-cognitivist) claim that there are no moral facts and no moral reality that moral judgments purport to describe.

I will follow Alex Grzankowski (2012) in taking attitudes to be intentional mental states and in taking a mental state (or other phenomenon) to be intentional "if

(and only if) it is about something” (p. 4). Some, if not all, attitudes are propositional. Propositional attitudes are intentional mental states which have propositions for their objects (ibid., p. 5).

According to Grzankowski, “theorists interested in intentional states have focused almost exclusively on [propositional attitudes], some even explicitly maintaining that all intentional states are propositional attitudes” (ibid., p. 1). If attitudes are intentional mental states, and if all intentional states are propositional attitudes, then all attitudes are propositional; if this is the case, and if the (sincere) utterance of a moral judgment is the expression of an attitude, then the object of the attitude expressed is a proposition. But expressivists (qua non-cognitivists) will say (and here I make more precise my initial characterization of expressivism) that the attitude expressed in the sincere utterance of a moral judgment is neither true nor false, and so its object is not a proposition as traditionally understood. Accordingly, expressivists must either hold that not all attitudes are propositional, or grant that all attitudes are propositional but claim that the object of a propositional attitude, though it must be a proposition, need not be a proposition as traditionally understood. I won’t consider the second of these options, but I will say something about the first.

If not all attitudes are propositional, then some attitudes are intentional states whose objects are not propositions. Thus, to take an example of Grzankowski’s, if liking is a non-propositional attitude, and “if a subject likes Sally ... the object of his attitude is not a proposition concerning Sally, nor does his standing in a liking relation to Sally depend upon a propositional attitude” (ibid., p. 5).

The view that, on the contrary, all attitudes *are* propositional, Grzankowski calls propositionalism. Propositionalists hold that “the most fundamental objects of the attitudes are propositions” (ibid., pp. 2-3). Grzankowski distinguishes two versions of propositionalism. Version A holds that “[f]or every attitudinal relation between a subject and a non-propositional object, there is a propositional attitude or attitudes (of that subject’s) in terms of which it can be analysed” (ibid., p. 7). Version B holds that “[f]or every attitudinal relation between a subject and a non-propositional object, there are propositional attitudes (of that subject’s) upon which it supervenes” (ibid.).

Grzankowski challenges both versions of propositionalism. He argues that “there are attitudes that relate individuals to non-propositional objects and do so not in virtue of relating them to propositions” (ibid., p. 1). Examples of such attitudes “include loving, liking, hating, and fearing, though there are probably many

more" (ibid.). Expressivists will say that the sincere utterance by a subject of a positive (negative) moral evaluation of a non-propositional object expresses a positive (negative) attitude (of the subject's) towards the object. For expressivists who think that not all attitudes are propositional (and I will mean all and only such expressivists when I speak of expressivists hereafter) the philosophical issue (following Grzankowski) is whether, for every such attitudinal relation between a subject and a non-propositional object, (a) there is a propositional attitude (of that subject's) in terms of which the relation can be analyzed, or (b) there are propositional attitudes (of that subject's) upon which the relation supervenes.

Expressivists must reject (a), for it is tantamount to analyzing away (positive and negative) non-propositional attitudes (cf. Grzankowski, 2012, p. 10).

What about (b)? It is a special case of Grzankowski's second version of propositionalism. He explains that on this version, for S to V y, where 'V' is a psychological verb such as 'like' or 'fear' and "'y' is a non-that-clause noun phrase" (ibid., p. 6), S's bearing "some or other propositional attitude relation to a proposition concerning y ... is sufficient for his V-ing y" (ibid., p. 8). Grzankowski argues that "propositionalists cannot meet this sufficiency requirement" (ibid., p. 10). No doubt "Jim wouldn't like Jackie if he didn't think she existed," but his thinking she exists obviously isn't sufficient for his liking of her. Nor, as counterexamples will show, is his believing "that Jackie is nice," or his liking "that Jackie is kind" (ibid., p. 11). A similar strategy is available to expressivists. Suppose that S disapproves of factory farming. Presumably she wouldn't do so if she didn't believe that factory farming is practised, but this belief isn't sufficient for her disapproval. Nor would be her believing that factory farming is cruel: she might not disapprove of cruelty, or she might but nevertheless approve of factory farming all things considered. (Here and below I take 'cruel' to mean 'causing pain or suffering'; cf. *The New Oxford Dictionary of English*, 1998.)

Suppose, however, that S does believe that factory farming is cruel, and for this reason disapproves of it. Then her non-propositional attitude of disapproving of factory farming is a consequence of her having a propositional attitude. It is also a consequence of her believing (dispositionally if not occurrently) that her belief that factory farming is cruel is a reason for her to disapprove of it. Is the latter belief sufficient for her disapproval? Not necessarily: she might believe that she has reason to disapprove of factory farming but not do so - or so an expressivist might elect to argue. But suppose that S's believing that her belief that factory

farming is cruel is a reason for her to disapprove of it is sufficient for her disapproval. Then it is possible for a subject to be “in a non-propositional attitude in virtue of being in a propositional attitude state (or states)” (Grzankowski, 2012, p. 8). Does it follow that a moral judgment the sincere utterance of which by a subject is the expression of such a non-propositional attitude (of the subject’s) is a true-or-false proposition? Expressivists can argue that this does not follow. For (i) it does not follow (expressivists can argue) that there are “moral facts or [a] moral reality that [such a moral judgment] could possibly correctly represent, [something it] could be true of” (Shafer-Landau, 2003, p. 20, note 8). (ii) Nor does it follow that in uttering such a judgment a subject would be “trying, but failing, to describe” something (ibid., p. 20). Expressivists can argue for (i) because it is their denial of there being a moral reality that motivates their interpretation of (the utterance of) a moral judgment, not their interpretation of (the utterance of) a moral judgment that motivates their denial of there being a moral reality (cf. ibid., p. 153). They can argue for (ii) because they are not error theorists: they do not hold that moral judgments have truth-values but, because there are no moral facts, are false. (cf. Brink, 1999, p. 588).

3. *Towards an expressivist account of ethical argument*

I will take an argument to be an *ethical* argument just in case it has an ethical conclusion. On a different view, an argument is an ethical argument just in case it has an ethical conclusion and at least one ethical premise. On the view I’m taking, an ethical argument may have one or more ethical premises, but this isn’t necessary for it to be an ethical argument. Consider the following argument:

Argument (1):

Factory farming is morally reprehensible because it causes animals to suffer.

This argument apparently depends upon a claim to the effect that a human practice which causes animals to suffer is morally reprehensible. A claim to this effect may be considered to be a tacit premise of the argument, or it may be considered to be a background assumption relative to which the stated premise is positively relevant to the conclusion. The view that an argument is an ethical argument just in case it has an ethical conclusion leaves open both of these interpretations.

An ethical conclusion, or an ethical premise, is an ethical sentence. The ethical sentences with which I will be concerned will be what I will call *simple* ethical

sentences. A simple ethical sentence, I wish to stipulate, is a sentence that has, or is analyzable as having, exactly one ethical predicate, in the grammatical sense, which it predicates of exactly one term. A sentence of this sort evaluates the extension of the term of which its ethical predicate is predicated. I will refer to the thing(s) comprising this term's extension as *the object(s) evaluated by the sentence*. The sentence 'cruel practices are wrong' is a simple ethical sentence in my stipulated sense. It predicates the grammatical ethical predicate 'are wrong' of the term 'cruel practices,' whose extension comprises all such practices. The sentence evaluates cruel practices, and so, in my usage, such practices are the objects it evaluates. I would add that all this remains true, *mutatis mutandis*, if the sentence's ethical predicate is taken to be its *logical* predicate, namely 'wrong.'

Expressivists are not at liberty to take an ethical argument, as here defined, to be a sequence of propositions, but they can take an ethical argument to be a sequence of sentences, one of which is the argument's conclusion, the rest of which are the argument's premises and are put forward as reasons for accepting the ethical sentence that is the argument's conclusion.

When may a person be said by an expressivist to *accept* an ethical sentence? Here is a possible answer. A person, S, accepts ethical sentence E, at time t, just in case at time t S holds towards the object(s) evaluated by E an attitude of the type that, on an expressivist interpretation, would (defeasibly) be taken to be expressed by an utterance of E. ('Defeasibly,' because, for one thing, an utterance of an ethical sentence might be insincere.) Suppose, then, that an expressivist takes this to be what it is for a person to accept an ethical sentence, and also takes an ethical argument to be one in which the premises are put forward as reasons for accepting the ethical sentence that is the argument's conclusion. Then she may say (and I think should say) that the premises of an ethical argument are put forward as reasons for holding an attitude of the type that, on an expressivist interpretation, would (defeasibly) be taken to be expressed by an utterance of that sentence.

Consider again the argument that factory farming is morally reprehensible because it causes animals to suffer. The arguer treats the premise that factory farming causes animals to suffer as a *reason* for accepting the conclusion that factory farming is morally reprehensible. Expressivists can say that for the arguer to treat the premise as a reason for accepting the conclusion is for her to have a

certain attitude towards the fact (as the arguer takes it to be) that factory farming causes animals to suffer: it is for the arguer to be unfavourably disposed towards this feature of factory farming. The arguer might express this attitude propositionally by saying that this feature of factory farming (namely, the fact that it causes animals to suffer) *matters* - it's morally relevant; more specifically, it counts *against* factory farming.

This is an ethical attitude. Can expressivists say that ethical attitudes admit of justification? I believe they can, and that their best option would be to accept a reflective-equilibrium account of ethical justification - an account that accommodates the expressivist thesis that (sincere) utterances of ethical judgments express attitudes. On such an account, the test for justification will be how well a person's ethical attitudes fit with one another and with her related non-ethical beliefs. A *good* fit will require consistency, and so a reflective-equilibrium expressivist will require an account of attitudinal consistency. Here is such an account. An attitude pair is consistent if there is a possible world in which both attitudes are fulfilled at the same time, and inconsistent otherwise. Thus, the attitude of favouring execution for murder is consistent with the attitude of opposing execution for manslaughter because there is a possible world in which execution is the punishment for murder but not for manslaughter. In contrast, the attitude of opposing execution for murder is inconsistent with the attitude of favouring Felix's execution for murder because there is no possible world in which there are no executions for murder and Felix is executed for murder. There is more to be said about what a reflective-equilibrium expressivism would look like, or could look like, but I won't say more about this here. Instead, I will apply the account of attitudinal consistency that I have just presented to the following argument.

Argument (2)

1. All cruel practices are wrong.
2. Factory farming is a cruel practice.

Therefore,

3. Factory farming is wrong.

Assume that at time t S accepts 1 and therefore has a negative attitude towards all cruel practices; more specifically, let us suppose, S disapproves of such practices. S also accepts 2, and 2 is true. But S rejects 3: his attitude towards factory farming is one of non-disapproval, but not one of indifference; rather, he

approves of factory farming.

On these assumptions, at time t S disapproves of all cruel practices but approves of a particular practice which he believes, correctly, is cruel. Is there a possible world in which these attitudes are both fulfilled? This depends on whether there is a possible world in which factory farming is practised but is not cruel. Suppose that it is conceptually impossible for factory farming not to be cruel; then premise 2 is necessarily true, and there is no possible world in which factory farming is practised but is not cruel. On this assumption, there is no possible world in which there are no cruel practices but there is a practice of factory farming, and so there is no possible world in which the attitude of disapproving of all cruel practices and the attitude of approving the practice of factory farming are both fulfilled. Thus, if S were to accept the premises of Argument (2) but reject the conclusion because he approved of factory farming, then, if premise 2 is necessarily true, there would be an inconsistency in his attitudes. If S accepts the premises of Argument (2), and if premise 2 is necessarily true, then S cannot, on pain of attitudinal inconsistency, reject the conclusion if he does so because he approves of factory farming.

4. *The account continued*

4.1 *Attitudinal validity*

The preceding example shows that it is possible for an expressivist to have a concept of what might be called attitudinal validity. Such a concept might be defined as follows for an ethical argument with at least one ethical premise (as well as an ethical conclusion) and with at least one true-or-false non-ethical premise and no non-ethical premise that is neither true nor false. Such an argument is attitudinally valid for S at time t if at time t S cannot, on pain of attitudinal inconsistency, both accept the argument's premises and reject the conclusion. This condition is satisfied if and only if S 's rejection of the conclusion would be a consequence of his having an attitude inconsistent with an attitude his holding of which explains his acceptance of the (or an) ethical premise of the argument.

Let us apply this account of attitudinal validity to Argument (2). If at time t S were to reject the argument's conclusion because he approved of factory farming, this attitude of his would be inconsistent with an attitude (disapproval of all cruel practices) his holding of which explains (on our previous assumptions) his acceptance of the argument's ethical premise (all cruel practices are wrong).

Thus, S could not, on pain of attitudinal inconsistency, both accept the argument's premises and reject the conclusion, and so the argument is attitudinally valid for S at time t. But the attitudinal inconsistency would arise only given our assumption that the argument's non-ethical premise (factory farming is a cruel practice) is a necessary truth, and this fact prompts the following question: for an ethical argument to be attitudinally valid for a subject at a time, must it have at least one true-or-false non-ethical premise that is necessarily true? The answer is no. Consider the following argument:

Argument (3)

1. Execution for a conviction of murder is always wrong.
 2. Felix has been executed for a conviction of murder.
- Therefore,
3. Felix's execution was wrong.

Assume that at time t S accepts 1: she disapproves of execution for a murder conviction. She also accepts 2, and 2 is true. Suppose that S were to reject 3 because she approves of Felix's having been executed for his murder conviction. A world in which this attitude is fulfilled is one in which Felix has been convicted of murder and executed. A world in which the attitude of disapproving execution for a murder conviction is fulfilled is one in which there are no such executions (and never have been). Since there is no possible world in which these attitudes are co-fulfilled, they are inconsistent. Thus, S could not, on pain of attitudinal inconsistency, accept the premises of Argument (3) but reject the conclusion if her rejection of the conclusion were a consequence of her approving of Felix's having been executed for his murder conviction. Thus, Argument (3) is attitudinally valid for S at time t. This analysis assumes the truth of premise 2, but premise 2 is not a necessary truth. Thus, for an ethical argument to be attitudinally valid for a subject at a time, it need not have at least one true-or-false non-ethical premise that is necessarily true.

In the preceding discussion, I have assumed the possibility of a person's rejecting the conclusion of some ethical argument (with an ethical premise) because he holds an attitude inconsistent with an attitude his holding of which explains his (assumed) acceptance of the ethical premise. But is this a possibility - logically speaking? Could it be, for example, that at time t a person disapproves of all cruel practices, yet approves of a particular practice which he believes, correctly, to be cruel? Suppose it could not. Then it would not be possible for S at time t both to

accept the premises of Argument (2) and also to reject the conclusion as a consequence of his having an attitude inconsistent with an attitude his holding of which explains his acceptance of the argument's ethical premise; hence, on my proffered account of attitudinal validity, Argument (2) would be attitudinally valid for S a time t. And likewise in any such case.

4.2 *Attitudinal relevance*

An expressivist account of ethical argument will require an account of when the premise(s) of an ethical argument are (positively) relevant to the conclusion. Plainly, this will not be an account of (positive) propositional relevance; rather, it will be an account of what I will call (positive) attitudinal relevance. I will give such an account in a moment. First, however, recall our earlier stipulation that S accepts ethical sentence E at time t just in case S holds towards the object(s) evaluated by E an attitude of the type that, on an expressivist interpretation, would (defeasibly) be taken to be expressed by an utterance of E (e.g., an attitude of disapproval).

Now let 'E' be an ethical sentence and let 'P' be a true-or-false non-ethical sentence. If S accepts E at time t, she then has a certain attitude towards the object(s) evaluated by E. If she has this attitude because she believes P, then for her P is positively attitudinally relevant to E. An expressivist might add that if S accepts E and believes that she does so because she believes P, then she regards (her belief that) P as her reason for accepting E.

Consider, for example, the following sentences: (1) Factory farming is cruel. (2) Factory farming is wrong. For an expressivist, a sincere utterance of 2 would be the expression of a negative attitude towards factory farming. If S accepts 2 she has such an attitude, and if she believes 1 and accepts 2 because she believes 1, then for her 1 is positively attitudinally relevant to 2.

Next, consider Argument (2) once again:

1. All cruel practices are wrong.
2. Factory farming is a cruel practice.

Therefore,

3. Factory farming is wrong.

On the present account of attitudinal relevance, for S at time t the premises of Argument (2) are jointly positively attitudinally relevant to the conclusion if S

accepts the conclusion because she accepts premise 1 and believes premise 2.

To take the account a step further, consider the following example:

Argument (4):

1. Life imprisonment for murder is a more effective deterrent than the death penalty.
 2. The death penalty has resulted in the execution of wrongly convicted persons.
- Therefore,
3. Life imprisonment for murder is morally preferable to the death penalty.

Counter considerations to 3:

- a. Life imprisonment for murder is much more costly than the death penalty.
- b. The death penalty is a better fit for the crime of murder than the death penalty.

S accepts premises 1 and 2 as true (possibly after doing some research). Each inclines him to some degree to favour life imprisonment for murder more than the death penalty. Thus, for S each is positively attitudinally relevant to 3, since he would hold this attitude if he accepted 3 and did so because (or partly because) he accepted 1 and 2. S also accepts as true counterconsideration (a), and for him it is negatively attitudinally relevant to 3 because it makes him less inclined to favour life imprisonment for murder over the death penalty (and thus to accept 3) than he would be given just (his acceptance of) premises 1 and 2. S doesn't accept counterconsideration (b) but for him it is nevertheless negatively attitudinally relevant to 3 because he believes that if he did accept (b) he would be still less inclined, and perhaps on balance disinclined, to favour life imprisonment for murder over the death penalty. Upon reflection, he accepts 3 because he accepts premises 1 and 2 as true and because for him (I shall assume) they outweigh counterconsiderations (a) and (b).

4.3 Cogency

An expressivist account of ethical argument will, I shall suppose, include an account of what it is for an ethical argument to be cogent. Here I will suggest an expressivist account of cogency (just) for what I will call a Type 1 ethical argument, namely an ethical argument with at least one ethical premise and at least one true-or-false non-ethical premise and no non-ethical premise that is neither true nor false. A Type 1 ethical argument is cogent for S at time t if at time t:

- (a) S is justified in accepting the argument's ethical premise(s);
 - (b) S is epistemically justified in accepting as true the argument's non-ethical premise(s);
- and either
- (c) the argument is attitudinally valid for S
- or
- (d) for S, his acceptance of the premises would be sufficient, but not conclusive, reason for him to accept the conclusion.

Condition (a): S is justified in accepting the argument's ethical premise(s) at time t if, for each such premise, he is justified by a reflective equilibrium test in holding an attitude of the type that, on an expressivist interpretation, would (defeasibly) be taken to be expressed by an utterance of the premise.

Condition (d) is satisfied at time t if and only if (i) were S to accept the conclusion at time t he would do so because he accepted the premises (in which case for him the premises would be positively attitudinally relevant to the conclusion) or because he accepted the premises and for him they were not outweighed at time t by any counterconsiderations then known to him; and (ii) the argument is not attitudinally valid for S at time t (so that for him his acceptance of the premises would not be conclusive reason to accept the conclusion).

5. *Conclusion*

I have said nothing about the vexed problem of how, or whether, "expressivists can make sense of sameness of meaning [of an ethical sentence] in asserted and unasserted contexts" (Shafer-Landau 2003, pp. 23-4). (An example of the latter would be the occurrence of an ethical sentence as the antecedent/consequent of a conditional sentence.) Nor have I said anything about the no less vexed problem of how, or whether, expressivists can differentiate between the attitudes expressed in ethical utterances of, for example, the following forms: 'x is right,' 'x is permissible,' 'x is supererogatory.' (Cf. *ibid.*, pp. 24-25). In these and no doubt other respects, my proffered expressivist account of ethical argument is incomplete. Moreover, I do not claim that, even just as far as it goes, it is an adequate account of ethical argument. My interest, rather, is in whether, as far as it goes, it is compatible with expressivism, hence an account that expressivists are free to give, and I believe it is.

Acknowledgements

I am indebted to Geoff Goddu and David Hitchcock, whose very helpful comments on the version of this paper that I presented at the ISSA 2014 conference led me to rethink and revise the account I gave therein of attitudinal consistency and the account I gave of attitudinal validity. In light of a further comment by David Hitchcock, I also revised my account of when a person may be said by an expressivist to accept an ethical sentence.

NOTE

i. I take prescriptivism to be a different version of non-cognitivism. Prescriptivism holds that moral judgments have a prescriptive meaning and a descriptive meaning, and that in virtue of their prescriptive meaning they prescribe or guide conduct. Prescriptivists can allow that prescriptions express attitudes, and expressivists can allow that attitudes can be expressed in the form of prescriptions, so there can be common ground between prescriptivists and expressivists

REFERENCES

- Blackburn, S. (1985). Errors and the phenomenology of value. In T. Honderich (Ed.), *Morality and Objectivity. A Tribute to J.L. Mackie* (pp. 1-20). London; Boston: Routledge & Kegan Paul.
- Brink, D. (1999). Moral realism. In R. Audi (Ed.), *The Cambridge Dictionary of Philosophy*. Cambridge: Cambridge University Press.
- Grzankowski, A. (2012). Not all attitudes are propositional. *European Journal of Philosophy*, 1-18. Wiley Online Library: doi/10.1111/j.1468-0378.2012.00534.x.
- Parfit, D. (2011). *On what matters*, Vol. 2. Oxford: Oxford University Press.
- Shafer-Landau, R. (2003). *Moral Realism: A Defence*. Oxford: Clarendon Press.
- Smith, M. (1993). Realism. In P. Singer (Ed.), *A Companion to Ethics* (pp. 399-410). Oxford: Blackwell Publishers Ltd.
- Woods, J., Irvine, A., & Walton, D. (2004). *Argument: critical thinking, logic, and the fallacies*. Toronto: Pearson/Prentice Hall.
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ISSA Proceedings 2014 - The Synthetic Function Of Doxastic Dialectics

Abstract: Regarding the synthetic function of doxastic dialectics, the present investigation will approach a single aspect: the metaphysical transubstantiation. We intend to explain, in personal terms, this idea which was introduced by P. Grice (1991) and to which we have briefly made reference several times. Grice's idea supports our hermeneutic argument: the semantic nature of belief, crystallized by the dialectical mechanism of controversy, acquires persuasive prestige owing to a paradigmatic transfer: from a discursive paradigm to an axiological one. The demonstration will develop the thesis according to which belief has a self-referential dimension.

1. General remarks

1.1. Remarks regarding doxastic dialectics

At the beginning of our exploration of doxastic (/belief) field (Amel, 1999), we took for granted the cognitive autonomy of an alternative to epistemic truth, that of doxastic truth, which we call the *persuasive truth***[i]**. In contrast with the epistemic truth, which represents the logical determination of *episteme*, the doxastic truth represents the ontological density of *doxa*, intelligibly perceived in its meaning. We should emphasize the following two aspects: a. regarding the field of investigation - in our opinion, doxastic dialectics does not refer to the pre-epistemic stage of truth, but is limited to the field of supersensible reality (the 'reality' of values), a cognition meaning-oriented; b. regarding participants' *bona fide* - the condition, in virtue of which doxastic dialectics develops its investigations, excludes the premise that notices a *cleavage of justification*, as A.Kasher calls it**[ii]** (1986), namely, excludes any kind of contextually distorted utterance of belief.

The remarks regarding doxastic dialectics are selected from our previous studies about the respective issue (Amel 1999, 2008, 2009, 2011, 2013, 2014):

1. Doxastic dialectics is the exclusive procedure that establishes the fundamentals of axiology.
2. Generally speaking, the dialectical study of persuasive truth is a kind of

semantic logic, trying to explain how to determine the doxastic meaning.

3. The semantic logic compatible with the doxastic field is based on a rational procedure that follows, in hermeneutical terms, the process of *understanding* (the meaning), not *knowing* (the truth).

4. From the philosophical point of view, the rationality of the meaning investigation is pursued dialectically in both senses of the concept of 'dialectics':

a. 'dialectics' as *antithetic* reasoning, challenging the subjects' cognitive intentionality;

b. 'dialectics' as a *formative* process, during which the pragmatic subjectivity gets phenomenological dimension.

1.2. *The goal of the present investigation*

1. The investigation has in focus the *synthetic mechanism of doxastic/belief dialectics*.

In the first study about doxastic dialectics (Amel, 1999), we have mentioned three theoretical functions of doxastic (/belief) dialectics: the dissociative, the justificatory and the synthetic function.

2. Having in view the subjective and rhetorical involvement of the persuasive truth, we find profitable to approach the 'rationality' of doxastic thinking in phenomenological terms. With Husserl, *belief is a thetic act*, namely a 'speech act' in consciousness. Phenomenology acknowledges the cognitive priority of belief (Husserl, 1931: 301), a definition that supports our dissociative approach. From cognitive point of view, the dissociative function proves its importance, because it establishes cognitive intervals between *belief* - an idea posited in consciousness, *doxa* - the conceptual representation of the respective idea of value in reason, and *opinion* - corresponding to the discursive, namely the contingent form of belief. In our previous studies the attention was especially focused on the mechanism of decidability in doxastic dialectics, by demonstrating that the justificatory procedure requires operations on the three levels mentioned above.

3. The present investigation, which has in focus only the synthetic mechanism of doxastic/belief dialectics, will approach a single aspect: the *metaphysical transubstantiation*. We intend to explain, in personal terms, this idea which was mentioned by P. Grice (1991) and to which we have briefly made reference several times. Initially, the concept of *metaphysical transubstantiation* gave us the possibility to offer a general explanation of the *dialectical* mechanism of *doxa*. Grice's idea supported our hermeneutical argument: the semantic nature of the

'truth' of beliefs, structured by antithetic rationality, gets persuasive prestige owing to a paradigmatic transfer: from a pragmatic paradigm to an axiological one. Due to the phenomenological perspective in which our enterprise approaches the doxastic dialectics, the concept of metaphysical transubstantiation will be treated inside the laboratory of the hermeneutical synthesis, which is the human consciousness. The metaphysical transubstantiation becomes the explanatory key of the meaning enquiry of beliefs, by revealing the rationality of the hermeneutical mechanism.

4. For a comprehensive understanding of the doxastic rationality, our demonstration will develop the thesis in conformity with which *belief has a self-referential dimension*. During doxastic dialectics, subjectivity acquires cognitive dimension, progressively becoming conscious of it. In phenomenological terms, subjectivity represents the *origin* of the thinking activity. It holds the power of translating the sensitive matters into intelligible ones. The beliefs' contents, experienced and assumed by the subject/the speaker in his consciousness, represent thetic acts (acts in consciousness). The reference to the metaphysical transubstantiation supports the phenomenological explanation of the MORAL OBJECT[**iii**]. During the doxastic dialectics beliefs acquire 'objectivity'. If Grice's concept regarding metaphysical transubstantiation is conceived 'in extenso', the cognitive dialectics - meaning oriented - goes through more than one operation of cognitive synthesis. The self-referentiality of belief is finally crystallized in the form of the MORAL SUBJECT (=self-consciousness), ontologically reoriented.

5. The deep logic of belief dialectics explains the dynamics of self cognition.

2. *The beliefs' structure of forces*

2.1. *Belief as a speech act*

Looking backwards, to reach the origin of the force of belief, we discover the "pragmatic dimension" of beliefs/ opinions, in conformity with which we are entitled to say that beliefs have performative force. Two aspects are important to be mentioned: one regarding the subject who expresses his beliefs (/utters his opinions), and another regarding the dialog partner to whom the belief is confessed. In the pre-epistemic stage, the function of dialectics is to demonstrate that the affirmations contained by the subjects' beliefs are correct.

(1)

I think/ my impression is this child is well developed for his age.

When beliefs refer to a supersensible reality (the substance of values), a normal

subject is extremely careful to justify his position as a locutor, and to explain the partner and to himself what reason he has to affirm a certain opinion about a moral reality. He is ready to offer explanations that could support his utterance.

(2)

- (I believe) this boy is very wise: Do you know what he once said to me? Errando discitur!

- He knows Latin?

- I am wondering less he is using Latin aphorisms - to give himself airs -, but it is astonishing to see a child reflecting about his own behavior, trying to improve it ... etc.

The self-referentiality of the utterance that contains a belief is explained by the subjective dimension of beliefs. We plead for an interpretative power of subjective thinking which is governed by both pragmatic and introspective rationality. A rational speaker, conscious of the Principle of Uncertainty characterizing doxastic thinking, becomes responsible for what he says. The speaker is a problematizing subject. His thinking, antithetically[iv] developed, engenders a self-reflective attitude. His words are oriented towards his own mind in order to measure the extension of the meaning he intends to formulate. As we have already mentioned: with Husserl, belief is a thetic act, namely a 'speech act' in consciousness. The dissociative function of dialectics stimulates the subjective reflection.

(3)

- This child knows very well what he wants: he has personality.

- You think personality means to be voluntary, self-willed or obstinate ?

- I have said: he knows what he wants.

- In my opinion, personality means to have power of discernment.

- You mean moral personality, but there are people who have pragmatic personality.

In an axiological dispute, the subject's cognitive intention is stimulated by the partner's discursive position, helping him to clarify his own thoughts. The 'ideal reality' of axiology becomes the object of a moral reflection, during which consciousness assumes the sense of this 'reality' by self-reference. We call the respective cognitive act - moral reflection, an inner experience, deprived from ethical involvement. The original power of self-reflection becomes performative: *cogito ergo sum ergo loquor*. That is our definition of *belief* (see Amel, 1999). The

premise of the self-referentiality of beliefs motivates the conclusion that beliefs, as acts in consciousness, assure the original burst of language[**v**].

It is insufficient to say: 'beliefs' affirm that and that'. The subject's self-referentiality engenders the subject's will to manifest himself and to 'impose' the meanings of his words on the dialogue partner. *Any belief has the intention to utter a verdict*, which means that beliefs have the illocutionary force to institute reality, a reality that should be followed or avoided. The illocutionary force of expressive acts is not contested, but their validity is. While during epistemic dialectics the Principle of Rationality requires proofs which can validate the referential route of a verdict, during doxastic dialectics interlocutors appeal to semantic/ hermeneutic proofs, an enterprise which is not deprived of rationality. Hermeneutics can justify the subjective authority to promote a sense by four such proofs: original, paradigmatic, normative, generative[**vi**]. In our prior studies about doxastic dialectics, we have developed some of them.

2.2. *Dialectical proofs within doxastic cognition*

a. The *original proof* is given by the *self-referentiality* of the belief-speech act. 'To assume a sense' in consciousness means to promote a sense - by the 'authority' of being experienced in one's own mind.

b. The *paradigmatic proof* is given the moment the principle of Uncertainty calls upon a Principle of Transcendence, when the self-reference of belief is raised to a categorical position, able to prepare its conceptualization. The doxastic conceptualization is a synthetic (or constitutive) operation, having a justificatory target. By arriving at this stage, the role of dialectics is to raise the dispute up to the metalanguage level (see the above example: 1 vs. 2, 3), in order to consolidate the paradigmatic grounds of believing by or in axiological categories. During this process the MORAL OBJECT may find its determination:

(4)

- What do you mean by *being wise*, with reference to a child? What do you precisely mean by *wisdom*?

The moral object becomes the *doxa's a posteriori referent*. The interval engendered by the dissociative function of dialectics between *doxa* and *belief* is temporarily recovered, due to the validity of paradigmatic proofs; but their validity is only probable. Doxastic dialectics is a creative not a regulative process.

It is language dependent, and the *persuasive truth* remains a question of permanent meaning inquiry[vii].

c. The *normative proof* was less mentioned by us in our previous studies regarding doxastic dialectics. All the hermeneutic investigations that support the logic of doxa, namely that of the 'persuasive truth' of values, are normatively oriented. Categorical proofs extend hermeneutics by many associative operations, including even an inquiry of *Zeitgeist*. At this stage, doxastic dialectics tries to consolidate the axiological hierarchy, universally valid.

d. What we mean by *generative proof* will be explained in the following chapter.

3. *Metaphysical transubstantiation*

3.1. *Grice's argument*

Grice's idea concerning the metaphysical transubstantiation is an argument in favor of the *metaphysical objectivity* of values (Grice 1991: 35). It represents the procedure for the redistribution, but not the invention, of properties. For example – properties accidentally meant for *humans* become essential properties of a new psychological type called *persons* (cf. idem, 114).

Grice's argument concerning the metaphysical transubstantiation corresponds to what we define as being the *paradigmatical proof*, an argument regarding the axiological consciousness of a (speaking) subject. The way Grice demonstrates the objectivity of values is equivalent to our interpretation of the MORAL OBJECT, a transfer from a pragmatic quality into a phenomenological dimension of belief. Because belief is a cognitive act in consciousness, self-referentiality gets rational authority, able to validate the grounding arguments of value[viii]. Our *original* and *paradigmatic arguments* represent the objectifying terms of belief, and they drive dialectics toward its semiotic stage. The process could be equated to Grice's *finalist* arguments. From this perspective, his demand for absolute values becomes rational. See the stages of metaphysical defense, established by Grice:

1. (There are) cases in which a value concept ... is attached originally, or *directly* to a given bearer;
2. If the concept of value is to be authentic and not merely 'Pickwiking' in character, then it is required that it be supported by a kind of finality which extends beyond the 'overlap' with a mechanistically substitutable finality;
3. That metaphysical house-room found for the notion of absolute value is a *rational demand* (cf. Grice, 1991:116-117).

3.2. *The two levels of metaphysical transubstantiation*

With Grice – who is looking for a proof that could support the objectivity of value – the metaphysical transubstantiation represents the transfer from *humans* to *persons*. In our interpretation, the relevance of that proof is *moral*, by its power to objectify the inner sense of human consciousness.

The ‘persuasive truth’ of supersensible reality could not be proved other way than by making it intelligible in the form of a conceptual synthesis. From a phenomenological point of view, the cognitive synthesis passes through two levels of metaphysical transubstantiation: conceptual (an axiological category) and semiotic. Actually, there is more than one operation of transubstantiation: the axiological/ moral sense → the sense of the self → the sense of *human condition* → the *existential* sense, culminating by a semiotic expression. From a comprehensive perspective about belief, the target of doxastic dialectics is not limited to the stage when the moral content is *objectified*. The MORAL OBJECT is transubstantiated into a MORAL SUBJECT (=the self-consciousness), which represents the becoming reality/ object of the *self*. *The deep logic of belief dialectics explains the dynamics of self cognition*. The rationality of this type of cognition, which examines a dynamic ‘object’, is given by a *generative proof*. Therefore, in this subchapter we shall extend the explanation in this direction.

a. The *metaphysical transubstantiation* opens two dialectical movements, such as we have mentioned at the beginning of our commentary: one, trying to establish the clear conceptual definition of axiological ideas, and another, during which the formative impulse of consciousness is triggered. In both these directions, the subjects crystallize in their consciousness the conditions for a better evidence of self-referentiality. The synthesis of the *moral objects* (axiological ideas), could be considered, in Grice’s terms, a *rational demand*, in conformity with which the subjectivity becomes a *moral person*.

The major difficulty in bringing paradigmatical proof begins when the metaphysical transubstantiation acquires phenomenological dimension. This is the moment when the categorical sense of a value is acquired by subject’s consciousness. The paradigmatical proof is a dilemmatic moment. The moment of doxa’s conceptualization opens the “inner infinity of the dialogue”, as Gadamer said, actually a metadialogue. During the metadialogue, the dialogue partners try to settle the semantic difference between similar concepts, having in view that each of them is relevant for a different level of consciousness (psychological vs.

spiritual; temperamental vs. spiritual etc.)

(5)

What is the difference between *pride* and *dignity*?

What is the difference between the *polemic inflammation* and the *intellectual passion*?

Etc.

The correct conceptualization of doxa is hindered by frequent hesitations with reference to particular situations. In the collective mentality these metadialogues are considered 'semantic exercises', but actually they are phenomenological tests. Due to the conceptual oppositions displayed during doxastic dialectics, the subjects' moral reflection establishes level oppositions - in usual terms called "values hierarchy" -, helping to crystallize the structure of the *self*. The subject, in his hermeneutical inquiry, should be prepared to avoid social prejudices, which are very 'persuasive', because otherwise the hermeneutical effort would be deprived of moral relevance.

(6)

In the Romanian public mentality, deeply infused by a specific skepticism, called *bășcălie* (a kind of Engl. *tongue in cheek*), a self-controlled responsible person is qualified as an idiot, a conformist fellow.

Doxa, as a concept, represents the linguistic shape of the supersensible object of value, the *idea* that this concept should name. Frequently, doxastic concepts are mistakenly defined, even mixed up with *dogma*, because of a lack of clear distinction between philosophy and ideology. For a correct definition of the value ideas, doxastic dialectics opens its large field of debates, all trying to consolidate the moral and spiritual representation of life[**ix**].

b. Generally speaking, the metaphysical transubstantiation has spiritual fundamentals. Subjectivity is a moral agent, having the power to spiritualize the life people live in. The effort to establish the clear inventory of abstract concepts has more than a "logical" target, that of offering authoritative arguments for individual definitions.

(7)

When we are listening to Beethoven's 5th Symphony, the following question may be asked: Does it express a *Teutonic/ heroic feeling* or does it open a

metaphysical/sublime vision? The real question regards the two opposite concepts, the meaning of which is developed in mind.

The formative structure of consciousness is intentionally SELF-oriented. The MORAL OBJECTs become the inner objects of reference, due to which the MORAL SUBJECT finds its structural fundamentals and acquires objectivity. The world of the Ego is in continuous extension. The moral becoming is looking for a *sense/* a direction in life. There is a natural tendency to get an answer to the big existential mystery, a cognitive process that includes the art / the entire human creation into it. The art productions are considered the *generative proof* of believing, the highest step of understanding, inside which the consciousness is crystallized in a symbolic vision. The figurative meanings associated to each name of contiguous objects represent only the beginning. The human language reflects this tendency:

(8)

Bridge, door or window, circle, light and darkness, different animals etc.

These examples are part of long series of symbols to which the mythical thinking makes reference. Subjectivity is cognitively troubled to decode the language of life, as the poet said: to read the world and to understand it. *“To read the world”* by inventing scenarios, allegories, cryptograms, etc., means to find an interpretative language that has *generative power*, due to which doxa extends its moral dimension. The human “second play” is the symbolic form which concentrates the idea of the human condition and in which the contiguous first game (= the everyday life) reveals its meaning.

The formative power of subjectivity was largely debated by art criticism. Cassirer’s *Philosophy of Symbolic Forms* offers the best argument of what we define as the *semiotic transubstantiation* of axiological universe. The Romanian philosopher, Gabriel Liiceanu, begins his complex analysis of the semiotic nature of art productions with a definition of the *symbol* in the same terms we have explained the metaphysical transubstantiation. “Each general consideration regarding symbolic productions is compelled to consider the double foundation of symbolic work in the human mind: *the need to visualize the abstract and the need to transcend the visible*” (2005, 7). In the same book, we have found an argument regarding the objectifying function of the symbolic forms. The artist, by his introspection, is able to instantiate the inner perception. G.Liiceanu, based on the book of Börsch-Supan/Jähmig, *Gaspar David Friedrich*, München, 1973, p.14, says:

(9)

The problem in these pictures isn't what the characters, hypnotized by the horizon, actually see, but what we see, looking at them. And we see what Friedrich says: 'The look which transpierces the profoundness of the landscape is turning back towards the inner self' (of the person who is looking, and whom we see from behind) (p.190).

A superficial explanation may say that the metaphysical transubstantiation leading to symbolic forms is due to a linguistic transfer: from a referential (literal) language to a semiotic (figurative) one. From cognitive point of view, the symbolic forms wrap up the beliefs in such a way that the deep vision receives ontological substance. The synthetic power of symbolic forms has several degrees of concentration, in conformity with the subject's cognitive clear-sightedness. The most important thing that occurs during the semiotic transubstantiation is the creative effort to reach the level of exemplariness. The metaphysical transubstantiation is part of a subjective dynamics, governed by the same principle of rationality which, during the epistemic process of the *creation of theoretical models*, affirms: the 'theoretical model' should be consistent (in our terms "relevant"), *exhaustive* ("comprehensive") and *simple* ("concise").

It is the moment to remind what L. Hjelmslev said (1947:11) referring to the goal of a scientific theory: "*The aim of a theory* is to elaborate a procedure in conformity with the principles of the theory ... The description shall be *free of contradiction* (self-consistent), *exhaustive*, and as *simple* as possible." (p.11)

The *generative proofs* offer the authority or stand under the authority of an interpretative key - a doxastic archetype. The semiotic force of a doxastic archetype is the result of a gradual synthesis operated within the moral contents.

4. Conclusion

The synthetic function of *doxastic dialectics*, more than the other two -dissociative and justificatory, assures the *ontological fundamentals* of ethics and aesthetics. The moral sense represents an immanent condition of beliefs, their ontological density. A comprehensive view about Grice's concept allows us to see in the process of the *metaphysical transubstantiation* the formative will of subjectivity to get an integrated vision of life. The inner necessity of the Ego to crystallize its *self* represents the cognitive challenge of man's consciousness. In creating a virtual image of human condition, the subjectivity has the power to project, in conceptual

and semiotic forms, a 'reality' of a second degree.

4.1. *Belief as a reason to adopt a certain attitude (social or metaphysical)*

This seems to be a pragmatic axiom. If we reopen the commentary about the beliefs' structure of forces, the 'rationality' of the projecting power of beliefs becomes obvious (a *persuasive truth*).

(10)

"I believe in the power of ideas to change things"

(M.Dascal's saying, in G.Scarafile, 2010: 18).

From philosophical perspective, Marcelo Dascal's saying and many similar formulations emphasize the point where beliefs and behavior are connected: *I believe (my belief is): ideas (beliefs) have force.*

The transubstantiation of the pragmatic sense into the moral sense/object represents only the beginning of a complex synthesis of the *moral subject* (=the 'object' of self consciousness). The competence of subjectivity to establish a clear definition of values and their hierarchical disposition is part of the becoming process of the self. The *final cause* of self consciousness is to be able to refer to oneself as being a *categorical* instance looking for a *sense* in life, for a direction, for a correct, *ethical* action.

The opposition *moral object vs. moral subject*, presented above, is not identical with Grice's opposition *human vs. person*, but represents a cognitive extension of Grice's *rational demand*. The cognitive gain, offered by the synthetic function during the double *metaphysical transubstantiation*, emphasizes the power of subjectivity to be the 'point' of an active articulation of thinking. One should not neglect that the synthetic function of doxastic dialectics has normative consequences. After a serious confrontation between generative and normative proofs, the MORAL SUBJECT acquires ethical legitimacy. Whether this legitimacy is disputable or not is another theoretical/ philosophical problem.

4.2. *To read the world and to understand it*

This is an intuitive remark of spontaneous hermeneutics. With this formulation we are in the neighborhood of the Heideggerian hermeneutics, which was the point of departure of the approach we have chosen regarding doxastic dialectics.

Our argumentation in favor of a progressive abstraction of doxa, encourages the

idea that the laic hermeneutics of beliefs is a 'rational' way to follow the persuasive truth. An interesting similarity between the laic hermeneutics of doxa - developed by us through several metaphysical transubstantiations - and the hermeneutics of sacred texts supports the same conclusion. See the way the Judaic hermeneutics explains the meaning of the sacred texts:

The Judaic hermeneutics of *Torah* (the *Bible*) establishes four methods of interpretation, all united under the acronym *pardas*: *pshat* - plain (interpretation), *remez* - allusive (a kind of 'intertextuality'), *drush* - homiletic and *sod* - esoteric[x].

NOTES

i. The conceptual power of the syntagm persuasive truth hit us while reading Parmenide's Poem (I, 28-30): "You must hear about all things, both the still heart of persuasive truth, and the opinions of mortals, in which there is no true conviction."

ii. "There is a cleavage of justification. The speaker may be asked both for the grounds of his belief, that what he has asserted does hold, and for the reasons he has had for saying what he believes to be the case." (Kasher 1986: 286). See also Amel (1994). Pragmatic reasons (such as the cleavage of justification), and especially phenomenological ones determine us to mention the theoretical importance of the dissociative function of doxastic dialectics (Amel, 1999) (see further on).

iii. This is the moment of intersection between pragmatics and phenomenology. Due to this intersection, the philosopher establishes the point where the argumentative intentionality is related to cognitive intentionality (see here the phenomenological concept of intentionality: "It belongs as a general feature to the essence of every actual cogito to be a consciousness of something" Husserl, 1931:119) The inner experience of meaning becomes a rational entity - an OBJECT - for/in consciousness.

iv. The antithetic thinking is a structural function of both rationality and perception. See Gadamer's remark about Socrates' art of conversing: "an exercise of thinking in opposites" (1980: 93). See also the eloquent title of Jacqueline Sudaka-Benazéraf's book about Paul Klee's illustrations to Voltaire's writings, *Car le blanc seul n'est rien*.

v. "Language is the house of Being/ Die Sprache ist das Haus des Sein" (See Heidegger, *Humanismus*, 1957: 24; 1959:166). Cf. Heidegger (1976: 313): „Im

Denken das Sein zur Sprache kommt. Die Sprache ist das Haus des Seins. In ihrer Behausung wohnt der Mensch.”

vi. In this theoretical context, generative is meant in Chomskian and not Aristotelian sense (See the Aristotelian four causes of a phenomenon: generative, formative, final and material).

vii. “There is a productive ambiguity, the multiplicity of interrelated aspects of meaning, which articulate the field of knowing” (Gadamer, 1980: 111). See also: Gadamer’s interest regarding the Platonic turn to discourse (idem), Gadamer’s affirmation “le dialogue en tant que démarche herméneutique” (1976: 229), and Gadamer’s general idea about the “inner infinity of the dialogue”.

viii. The cognitive power of self-referentiality can be proved by Heidegger’s affirmation regarding the foundational position of subjectivity: “Die Subiectivität ist die wesenhafte Gesetzlichkeit der Gründe, welche die Möglichkeit eines Gegenstandes zu reichen kann“ (1977: 137).

ix. “Inevitably, a doxastic philosopher is a prisoner of language. The provisional scheme of interpretation (when opinions are delivered) cannot overcome the argumentative ability of the thinker, and, consequently, the “persuasive truth” is frequently obscured by preconceived meanings that are associated to basic concepts“ (Amel, 1999: 11). See also: Gadamer’s philosophy concerning the hermeneutical circle (1976, 1977).

x. HaRav Menahem Hacoheh, Introduction, (1996: 5). See also: “What is common to all the faces of Torah is their beauty, which gratifies those who want to enjoy the fruits of the tree of knowledge and breathe the flavor of the pardes of Torah” (idem).

REFERENCES

- Amel, R. (1994). Relevance and justification. *Semiotica*, 102, 1/2, 71-88.
- Amel, R. (1999). Doxastic Dialectic. The Persuasive Truth. *Revue Roumaine de Linguistique*, XLIV (1-4), 3-12.
- Amel, R. (2008). Sign Systems - Reference Systems. *Kodicas/ Code*, 31 (1-2), 59-68.
- Amel, R. (2009). To Use Signs vs. to Invent Signs. In Eero Tarasti (Ed.), *Communication: Understanding/ Misunderstanding. Proceedings of the IASS/AIS* (I, pp.33-43). Tartu: Greif.
- Amel, R. (2011). The Probable and the problem. In F.H.van Eemeren, B.J.Garsen, J.A.Blair and C.A.Willard (Eds.), *Proceedings of the Seventh International Conference ISSA*, (pp.9-17). Amsterdam: Sic Sat.

- Amel, R. (2013). *Listening and the well-tempered Controversy (With reference to intercultural exchange)*. At the XXII World Congress of Philosophy (International Association for the Study of Controversies), 4-10 August 2013, Athens.
- Amel, R. (2014). Speaker's Meaning. With Reference to Marcelo Dascal's Book Mashav Ha-Ruah. In Riesenfeld Dana & Scarafile Giovanni (Eds.), *Perspectives on Theory of Controversies and the Ethics of Communication*, (pp.101-112). Springer: Berlin.
- Gadamer, H-G. (1976). *Vérité et méthode* (Etienne Sacre, Trans.). Paris: Editions du Seuil.
- Gadamer, H.-G. (1977). Vom Zirkel des Verstehens. In *Kleine Schriften, IV*. Tübingen: J.C.B. Mohr.
- Gadamer, H.-G. (1980). *Dialogue and Dialectic. Eight Hermeneutical Studies in Plato* (P.Christopher Smith, Trans.). New Haven & London: Yale University Press.
- Grice, P. (1991). *The Conception of Value*. Oxford: Clarendon.
- Hacohen, HaRav Menahem. (1996). *Torat Am (The Bible for everybody; interpretations)*, Tel Aviv: Modan.
- Heidegger, M. (1957). *Der Satz vom Grund*. Tübingen: Neske Verlag.
- Heidegger, M. (1959). *Unterwegs zur Sprache*. Tübingen: Neske Verlag.
- Heidegger, M. (1976). *Brief über den Humanismus, Gesamtausgabe, Band 9*, pp.313-369. Frankfurt: Vittorio Klostermann.
- Heidegger, M. (1977, 1992). *Der Satz vom Grund. Gesamtausgabe, vol.10*. Frankfurt am Main: Vittorio Klostermann.
- Hjelmslev, L. (1963). *Prolegomena to a Theory of Language* (Fr. J. Whitfield, Trans.). Madison: University of Wisconsin Press.
- Husserl, Ed. (1931). *Ideas: General Introduction to Pure Phenomenology* (W.R.Boyce Gibson, Trans.). London: Georg Allen.
- Kasher, A. (1986). Justification of speech, acts and speech acts. In *Semantic Theories and Natural Language, E.Lepore & B.Richards* (Eds.) 283-305. New York: Academic Press.
- Liiceanu, G. (2005). *Om și Simbol (Man and Symbol)*. Interpretări ale simbolului în teoria artei și filozofia culturii. București: Humanitas.
- Scarafile, G. (2010). (Ed.) *A Crua palavra. Conversation with Marcelo Dascal*. Raleigh: Lulu Press.
- Sudaka-Bénazéraf, J. (2008). *Car le blanc seul n'est rien. Paul Klee illustrateur de Voltaire*. Neuchâtel : Ides et Calende.

ISSA Proceedings 2014 - What Could Virtue Contribute To Argumentation?

Abstract: In this paper[i] I argue that a virtue approach to argumentation would not commit the ad hominem fallacy provided that the object study of our theory is well delimited. A theory of argumentative virtue should not focus on argument appraisal, but on those traits that make an individual achieve excellence in argumentative practices. Within this framework, argumentation theory could study argumentative behaviour in a broader sense, especially from an ethical point of view.

Keywords: ad hominem, arguers, ethics, informal logic, pragma-dialectics, virtue.

1. Introduction

A virtue approach, characteristic of ancient ethical theories, such as Plato's, Aristotle's and the Stoics', is agent-based instead of act-based; it does not assess the moral value of isolated actions performed by an individual, but focuses instead on the character and traits of an individual that make her either virtuous or vicious. Within this paradigm, the crucial question is not "What should I do in this situation?" but "What kind of person should I be?".

Virtue ethics revived in the second half of the 20th century, attracting interest to the notion of virtue from within other fields than ethics. The most remarkable success is the case of virtue epistemology. Arguably, several of the virtues proposed in virtue epistemology - such as *intellectual humility*, *intellectual perseverance* and, most conspicuously, *fairness in argument evaluation* (Zagzebski, 1996, p. 114) - are not only epistemic but also intellectual in a broad sense, and thus it should come as no surprise that this approach has finally caught the attention of argumentation theorists.

The idea of developing a virtue approach to argumentation was proposed by Andrew Aberdein (2014, 2010, 2007) and Daniel Cohen (2013, 2009). Cohen has

stressed the importance of the social and ethical dimensions of argumentation and he has warned against the mistake of focusing too narrowly on arguments as products and arguing as a procedure. His idea of the “admirable conduct of arguers” involves much more than logic and dialectic, it “ought to stem from virtues, inculcated habits of mind” (2013, p. 482). Aberdein, on the other hand, has addressed in detail an obvious objection that could be raised against a virtue approach to argumentation: Would not any agent-based appraisal of argumentation commit the *ad hominem* fallacy?

In this paper I argue that the discussion about whether a virtue approach to argumentation could deal appropriately with *argument* appraisal is misleading. As I will show, the discussion misses the point of what a virtue approach really has to offer. A virtue approach should consider the importance of arguers themselves. In my view, a virtue argumentation theory could provide us important insights only insofar as we stop focusing narrowly on arguments. I will argue that a virtue approach to argumentation is not only possible but also desirable, provided that we have a clear understanding of what it involves.

2. *What's the point of a virtue approach?*

When Aberdein (2010) proposed the development of a virtue theory of argumentation, he identified several difficulties that such an approach would have to tackle. A major problem is the accusation that a virtue approach to argumentation would commit the *ad hominem* fallacy. A virtue approach to argumentation would involve the assessment of arguments on the basis of the arguer's traits, and that sounds pretty much like the definition of *ad hominem* argument. The question, then, has been whether the appraisal provided by a virtue argumentation theory would be an instance of legitimate or illegitimate *ad hominem*.

Aberdein correctly argues that, although in the past all *ad hominem* arguments were considered fallacious without distinction, most argumentation theorists accept nowadays that many instances of this kind of argument are actually legitimate. How could we distinguish between those instances of *ad hominem* argument that are legitimate and those that are not? The answer, according to Aberdein, is provided precisely by virtue argumentation theory (2010, p. 171):

Virtue theory may contribute a simple solution: negative ethotic argument is a legitimate move precisely when it is used to draw attention to argumentational

vice. (Similarly, positive ethotic argument would be legitimate precisely when it referred to argumentational virtue.)

Ethotic arguments – that is, ad hominem arguments, those whose reasons refer to the *ethos* of the arguer – are therefore legitimate provided that they point to the arguer’s argumentational virtues and vices. This seems like a plausible solution. However, this view has been challenged by Tracy Howell and Justine Kingsbury (2013). They concede that, in certain circumstances, an individual’s character may be relevant in deciding whether to believe what he says, and thus that there are legitimate ad hominem arguments. But they point out that legitimate ad hominem arguments are those that provide reasons not to believe a *claim*, and that ad hominem arguments that provide reasons to reject an argument are never legitimate (p. 26).

Howell and Kingsbury’s criticism draws our attention to an important distinction. It explains why the ad hominem problem appears to be such a great obstacle to developing a virtue approach to argumentation, whereas it has not been so for virtue ethics and virtue epistemology. Two levels can be differentiated in which ad hominem arguments may take place.**[ii]** In the first level, which we could call *practical* or *argumentative*, an arguer puts forward an ad hominem argument in order to support or undermine the acceptability of a claim; that is, an individual argues for or against a given standpoint. In the second level, which can be called *theoretical* or *meta-argumentative* – although not only theorists but also the arguers themselves may operate in this level – the ad hominem argument is used for the purpose of showing the soundness or unsoundness of another argument.

Admittedly, argumentation theorists who argue for the legitimacy of (at least a subset of) ad hominem arguments tend to focus on those arguments that aim to undermine the credibility of witnesses or experts in order to show that their claims should not be believed *merely* because they say so. But, as Howell and Kingsbury say (p. 26):

Legitimate ad hominem arguments provide reasons to doubt the truth of a claim on the basis of facts about the person making it. It is commonly supposed that it is never reasonable to reject an argument on the basis of such facts, however.

Nonetheless, Aberdein (2014) presents several examples of arguments in which facts about the arguer are used as reasons to doubt the soundness of other

arguments, and that are arguable legitimate instances of ad hominem arguments. I will not discuss those examples here. The overview given above of the debate about the legitimacy of a virtue approach to argumentation suffices, for my purpose here is to argue that the terms of this debate are misleading. The kind of virtue approach to argumentation that is assumed in this discussion is not, in my view, what we should seek.

I regard virtue approaches as having the agent – his or her character – not only as its grounds or basis, but also as its *main interest*. We could gain some insight into this question by taking a look at other virtue approaches. Virtue ethics has provided a greater insight into the nature of character, virtue, and education, than into which actions are right and which ones are wrong. As for virtue epistemology, although it has admittedly provided a certain kind of analysis of knowledge and beliefs, it is the subject's epistemic virtues the area on which it has actually cast light. Hence, why not take an interest also in arguers themselves? This is the motivation that, in my view, should lead to a virtue approach to argumentation. Virtue argumentation theory should be a *theory of arguers*.

Bowell and Kingsbury argue that “virtue argumentation theory does not offer a plausible alternative to a more standard agent-neutral account of good argument” (2013, p. 23). They may be right; the appraisal of arguments and the study of the soundness of arguments may well be a task which is most accurately and efficiently performed by act-based theories. I agree with Aberdeen that there are some instances of ad hominem arguments – meta-argumentative, or arguments of the kind that provide reasons to believe that another argument is unsound – that are legitimate. However, the examples provided by Aberdeen still leave us very little ground for a virtue theory of argumentation. It seems that we do not have at our disposal the theoretical resources which are necessary for the development of a complete virtue theory of the soundness of arguments.

A virtue approach, therefore, might be of little use for assessing the soundness of arguments. However, in my view, that is not the appropriate task for a virtue theory of argumentation. As I envisage it, a virtue approach would have many more benefits, of which the appraisal of arguments is probably the least significant. If we move from our current focus on arguments to an interest in arguers, this would have the benefit of allowing us to undertake a broader and richer study of argumentation. As I will show in the next section, such study could

provide important ethical and educational insights for argumentation theory.

3. *Argumentation in a broad sense: ethical insights*

We, as arguers, produce much more than just arguments understood as logical-epistemic units. There is much more to assess than merely the soundness of arguments. When we argue, we communicate in a certain way, we use some words and not others, we are respectful or disrespectful, we are willing to change our mind or stubbornly protect our beliefs, we make our interlocutor feel free to express herself or we intimidate her. Furthermore, we can argue too much or too little, at an opportune or at an inopportune moment.

All these are examples of behaviours that take place in the context of argumentative discussions and *depend on the arguer's character*. These are precisely the kind of issues that a virtue theory of argumentation could (and should) address. The study of argumentation is not just about soundness, and argumentation is not merely a way to propagate true beliefs or reduce false beliefs. Argumentation is, first and foremost, a social activity of a special kind; it is, as Daniel Cohen put it, "a way of participating in the community" (2013, p. 475).

As in any other social activity, the behaviour of the participants can serve to promote or to damage those values and practices we most appreciate, not only inherently argumentative values such as *reasonableness* (Eemeren and Grootendorst, 2004) or *honesty*, but also social values in a broader sense, such as *equality, fairness, or democracy*. Hence, an arguer will be considered virtuous not only when the arguments she puts forward are sound and her interventions comply with the procedural rules of a model of good argumentation - such as the pragma-dialectical model -, but also when she behaves in every respect in a way that promotes good social practices and increases others' welfare.

There lies the importance of a virtue approach to argumentation. The soundness of an argument is doubtless an important topic, but it is not enough to grasp all the implications of the practice of argumentation. An approach that addresses the issues related to the arguer's *behaviour*, which ultimately depends on the arguer's *character*, would be able to address these needs.

If we are interested in analysing that kind of features of argumentation, then we should obviously take into account the ethical implications of argumentation. The

necessity of an ethical approach to argumentation has already been stressed by Vasco Correia (2012, p. 225): “The point to be made here is that arguments may be correct from a logical and dialectic perspective and nonetheless ‘unfair’ and tendentious.”

Correia stresses the great value of a virtue approach to prevent bias in argumentation, a key issue with which logical and dialectical approaches cannot deal accurately. Moreover, a virtue approach could have practical benefits (pp. 233-234):

The advantage of developing argumentational virtues, by contrast with the intentional effort to be impartial, is that these virtues tend to become a sort of “second nature” [...] that allows us to reason in fair terms almost effortlessly, without a conscious and persistent effort to remain impartial.

Let me illustrate the kind of insights that an ethical approach could provide with an example, taken from the 2005 film *Thank you for smoking*. In the following scene, Nick Naylor, protagonist of the film, is speaking with an elementary school student:

Kid: *My Mommy says smoking kills.*

Nick Naylor: *Oh, is your Mommy a doctor?*

Kid: *No.*

Nick Naylor: *A scientific researcher of some kind?*

Kid: *No.*

Nick Naylor: *Well, then she’s hardly a credible expert, is she?*

Both by informal logic standards and by pragma-dialectic standards, Naylor’s intervention seems pretty good. With his accurate questions, he succeeds in rebutting the kid’s argument, which is admittedly very weak, without violating any of the rules for a critical discussion nor any of the “ten commandments” for reasonable discussants (Eemeren and Grootendorst, 2004). The questions that Naylor asks in fact refer to one of the critical questions that have been proposed by informal logic for assessing arguments from authority: given an expert *E* and a proposition *A*, “Is *E* an expert in the field that *A* is in?” (Walton 2006, p. 88). This example shows that Nick Naylor is no doubt a skillful arguer and knows how to apply the principles of informal logic.

Nevertheless, I believe there is *something* wrong with Naylor’s interventions. I

find at least two major problems with Naylor's intervention:

(1) Naylor is a well-informed adult, and as such he surely knows that there is a considerable amount of evidence which supports the kid's standpoint - that smoking kills. Naylor is not defending any standpoint, he is merely calling into question the kid's argument. Nevertheless, Naylor should have pointed out to the kid, as a matter of honesty, that there are better arguments supporting her position than the one she produced.

(2) By rebutting the kid's argument, Naylor is undermining her confidence in the belief that smoking kills. Given the way Naylor puts his counter-argument - and the kid's early age -, the lesson that she will probably learn is not that, although she has a point, her argument should be improved, but simply that smoking does not cause death. And this, from an ethical point of view, is problematic to say the least.

These problems show exactly the kind of issues into which a virtue argumentation theory could give us an insight. I hope this example suffices to show that a virtue approach would provide a different perspective from those of informal logic and pragma-dialectics. Although such an approach is unlikely to prove useful for appraising the soundness of arguments, it would allow us to find solutions to problems which most of us could not even see before.

In order to allow for analyses like this one, we need to adopt an ethical point of view, and, as the following example will show, in a properly understood virtue approach the ethical issues arise naturally. However, in order to achieve this enterprise, we first need to abandon our narrow focus on arguments as independent entities.

4. Example of an agent-based approach

Wayne Brockriede (1972) sketched a brief analysis of three types of arguers that seems to me like the perfect example of an agent-based approach. He drew an analogy between arguers and romantic partners, classifying arguers into three types. Brockriede's metaphor is all the more adequate for my purposes because he classified arguers according, not to the kind of arguments they put forward, but to their behaviour. The three kinds of arguers are:

(1) *The rapist*: He wants to maintain a position of superiority. His main goal is to force assent, to conquer by the force of the argument.

(2) *The seducer*: He operates through charm or deceit. The seducer tries to charm his victim into assent by using tricks and fallacies.

(3) *The lover*: He acknowledges the other person as a person and wants power parity. The lover asks for free assent and criticism, and he is willing to risk his very self in the discussion.

Brockriede concluded that the (p. 9):

argument has another function as important as any intellectual creation of the "truth" of a situation, and that is the personal function of influencing the fulfillment and growth of the selves of the people in the transaction.

Brockriede's metaphor strikes me as very insightful and relevant to the defence of a virtue approach to argumentation for one reason: although the author does not state it explicitly, the paper implies that both rapists and lovers *put forward sound arguments*. It's not the soundness of their arguments what differentiates them but their *character* and *behaviour*. This entails that an act-based approach - such as informal logic - would not be apt to distinguish between both types of behaviour; all it can do accurately is identify seducers, who do make use of tricks and fallacies. The difference between rapists and lovers does not lie in the kind of arguments they produce but in whether they treat the other as a peer or as an inferior being, whether or not they are willing to accept criticism - even to ask for it - and question their core beliefs, whether they see the practice of argumentation as an opportunity to grow or as an opportunity to conquer. For this reason, Brockriede says (p. 1):

I maintain that the nature of the people who argue, in all their humanness, is itself an inherent variable in understanding, evaluating, and predicting the processes and outcomes of an argument.

Of course, I am not arguing for the adoption of Brockriede's classification in particular. The importance of that classification lies actually in two assumptions that support it. First, an agent-based approach has, by its very nature, ethical implications. Ethical analyses fit comfortably in - and arise naturally from - any virtue theory. Second, an act-based approach, one focused on evaluating the argument, cannot be enough. We need a virtue approach for a complete and thorough understanding of the argumentative practice and its ethical implications.

5. Conclusion

The ongoing debate on the feasibility of a virtue approach to argumentation has focused on whether such an approach would be a useful tool for argument appraisal. Given a specific argument, the question is whether a virtue theory of argumentation could provide an assessment of its soundness. However, as I have argued, we must admit that this is not the task that a virtue approach is designed to do. Informal logic is focused on the study and assessment of arguments, and a virtue approach should not be developed just to undertake the very same task. Instead, a virtue approach would give us the opportunity to adopt a different point of view, without which the study of argumentation cannot be considered complete.

As stated in the introduction, the crucial question for a virtue approach is not “What is the right thing to do in this situation?” but rather “What kind of person should I be?”. The motivation for developing a virtue approach is precisely this question: “What kind of arguer should I be?” Being a virtuous arguer involves much more than just producing sound arguments, it involves things that go beyond the scope of informal logic and pragma-dialectics, and the ethical implications of the argumentative practice are among these things. That is what makes a virtue approach to argumentation interesting and necessary.

A virtue theory of argumentation will not come just to keep talking about soundness. Instead, it will provide insights into the argumentative practice that we were lacking, and perhaps could not even notice before.

NOTES

- i. Supported by Research Project FFI2011-23125, funded by the Spanish Ministry of Economy and Competitiveness.
- ii. Paula Olmos called my attention to these two levels of discourse.

References

- Aberdein, A. (2007). Virtue argumentation. In F. H. van Eemeren, J. A. Blair, C. A. Willard, and B. Garssen (Eds.), *Proceedings of the Sixth Conference of the International Society for the Study of Argumentation* (pp. 15-19). Amsterdam: SicSat.
- Aberdein, A. (2010). Virtue in argument. *Argumentation*, 24(2), 165-179.
- Aberdein, A. (2014). In defence of virtue: the legitimacy of agent-based argument appraisal. *Informal Logic*, 34(1), 77-93.

Bowell, T. and J. Kingsbury (2013). Virtue and argument: taking character into account. *Informal Logic*, 33(1), 22-32.

Brockriede, W. (1972). Arguers as lovers. *Philosophy and Rhetoric*, 5(1), 1-11.

Cohen, D. H. (2009). *Keeping an open mind and having a sense of proportion as virtues in argumentation*. *Cogency*, 1(2), 49-64.

Cohen, D. H. (2013). Virtue, in context. *Informal Logic*, 33(4), 471-485.

Correia, V. (2012). The ethics of argumentation. *Informal Logic*, 32(2), 222-241.

Eemeren, F. H. v. and R. Grootendorst (2004). *A systematic theory of argumentation*. New York: Cambridge University Press.

Walton, D. (2006). *Fundamentals of critical argumentation*. Cambridge: Cambridge University Press.²

Zagzebski, L. T. (1996). *Virtues of the Mind*. New York: Cambridge University Press.

ISSA Proceedings 2014 - Don't Drink That Water!: The Role Of Counter-Intuitive Science In Conspiracy Arguments

Abstract: In this essay, we focus on one of the most persistent examples of the 'intuitive validation of conspiracy' type of argument—the conspiracy theory that claims that fluoridating public water supplies is an attack on public safety. We argue that the controversy surrounding water fluoridation highlights the potential for conspiracy proponents to supplant complicated phenomena with intuitive observational data used to support the opposite of the scientific consensus.

Keywords: conspiracy theories, counter-intuitive arguments, water fluoridation

1. Introduction

How could President Kennedy's head move backward if he was shot from behind? How could the American flag wave on the moon if there was no atmosphere to

move it? How could the Twin Towers have collapsed on 9/11 at the speed of free fall if there were no bombs in the buildings? Although these three conspiracy theories span decades of history and locations to the moon and back, they all share a common argumentative feature: they rely on intuition to argue against the scientific explanations for the complicated phenomena involved. In this essay, we focus on one of the most persistent examples of this ‘intuitive validation of conspiracy’ type of argument - the conspiracy theory that claims that fluoridating public water supplies is an attack on public safety. We argue that the controversy surrounding water fluoridation highlights the potential for conspiracy proponents to supplant complicated phenomena with intuitive observational data used to support the opposite of the scientific consensus.

2. Counter-intuitive science: the challenge of complicated explanations for a complicated world

According to the Oxford English Dictionary, the primary definition for intuition is “the action of looking upon or into; contemplation; inspection; a sight or view” (intuition, 2014). Although that definition helps highlight the importance of observation for intuition, the entry includes another definition that demonstrates the strategic advantage of deploying intuition-based arguments in a public controversy. The alternate definition for intuition is, “The immediate apprehension of an object by the mind without the intervention of any reasoning process” (intuition, 2014). Appeals to ‘knowing’ the world without the intervention of any reasoning process are antithetical to the basic tenets of the scientific method which prioritize a rigorous process of reasoning, not the immediate apprehension of an object.

History is replete with examples of the tension between intuition and science. Indeed, some of the most famous scientific discoveries were initially rejected because they defied the intuition of the day. For instance, the notions that the Earth is round and that it orbits the Sun not only defied appeals to intuition but also generated immense public controversy (Whitehouse, 2009). There have been numerous scholarly works dedicated to explaining the history of scientific findings that are counter-intuitive including Julian Havil’s *Impossible?: Surprising Solutions to Counterintuitive Conundrums* which chronicles paradox after paradox which have counterintuitive solutions that often defy public and scholarly acceptance (Havil, 2008). Our argument here is that conspiracy theories are a special type of argumentative discourse that exploits the tension between

intuition and science to generate and sustain public controversies. This pattern of discourse can result in substantial changes to public policy in favor of intuition rather than science. We will now turn to controversy surrounding water fluoridation as an example of this argumentative strategy in action.

2.1 The water fluoridation controversy: a case study in counter-intuitive science

On January 25, 1945, the City of Grand Rapids, Michigan, began a public health intervention to prevent cavities and tooth decay by adding fluoride to its public water supply. The experiment was based on a set of medical research findings that had started in 1901 by a dentist named Dr. Frederick McKay who was initially interested in helping diagnose and solve a medical condition that comes from consuming too much fluoride called fluorosis (The Story of Fluoridation, 2014). In the process of studying the condition, Dr. McKay with the help of other dentists, discovered that one of the positive benefits of consuming fluoride was that it reduced the likelihood that people would experience cavities and tooth decay. The key question became: "How much fluoride should a person consume to gain the medical benefits without risking the negative health implications that come with fluorosis?" A group of researchers, including the head of the Dental Hygiene Unit at the United States National Institute of Health, came to the conclusion that a fluoride level of 1.0 parts per million was a safe amount of fluoride to add to the water supply (The Story of Fluoridation, 2014).

With the research in hand, the City Commission of Grand Rapids voted to become the first city in the world to add fluoride to the public water supply to help prevent cavities and tooth decay. Over the next 15 years, researchers tracked the cavities and tooth decay present in the city's residents, including 30,000 school children. The results were astonishing. The children born after fluoridation had 60% fewer cavities and the treatment also reduced permanent adult tooth decay by 35% (American Dental Association Council on Access, 2005). The results were so impressive that cities across the United States started adding fluoride to their public water sources. Today, nearly 170 million people drink from public water systems that are fluoridated (American Dental Association Council on Access, 2005). According to the National Cancer Institute:

fluoride can prevent and even reverse tooth decay by inhibiting bacteria that produce acid in the mouth and by enhancing remineralization, the process through which tooth enamel is "rebuilt" after it begins to decay. (National Cancer Institute, 2012)

The success of the public health intervention is also, in part, due to the relative costs involved. According to the American Dental Association, for most cities, it costs only 50 cents a person per year to fluoridate the water supply and “every \$1 invested in water fluoridation saves \$38 in dental treatment costs” (American Dental Association Council on Access, 2005).

After evaluating both the effectiveness of the intervention and the relative costs involved, the United States Centers for Disease Control and Prevention declared that water fluoridation was one of the “Ten Great Public Health Achievements” of the 20th century (Center for Disease Control, 1999). In addition to that impressive designation, fluoridation has also received the endorsement of 95 major medical organizations including the Academy of General Dentistry, American Association for the Advancement of Science, American Association for Dental Research, American Association of Community Dental Programs, American Association of Dental Schools, the American Dental Association, the Centers for Disease Control, and the National Cancer Institute (Barrett, 2002). One might think that the historic success of the intervention and the widespread medical endorsement of the practice would make this treatment one of the least controversial public health decisions that a local government could confront. After all, unlike public smoking bans, prohibitions on the use of trans fats, or even restrictions on the size of soft drinks, there are no major corporate interests negatively affected by the practice of fluoridation. In fact, the very people that would reap the greatest economic benefit from an increase in cavities and tooth decay, dentists, are among the most vocal proponents of fluoridation.

While our assessment of the motivations involved may be persuasive, the more complicated truth is that fluoridation has been and continues to be one of the most controversial public health interventions of the past 60 years. In just the past two years, approximately 68 cities across the globe have decided to abandon fluoridation including major American population centers like Portland, Oregon (Communities Which Have Rejected Fluoridation Since 1990, 2012). How, then, has it been possible for a practice that is so widely accepted and praised in the scientific community to become so controversial and ultimately to be rejected by communities across the globe? We believe that part of the problem rests in the argumentative obstacles surrounding the counter-intuitive nature of the science. Namely, how could it possibly be good for us to consume a toxic substance that is often scraped from industrial waste and then added to our public water supplies?

In the next section we analyze how conspiracy proponents have crafted arguments based on intuition to help convince local governments that the complicated nature of the scientific explanations for the phenomena is in reality a cover-up for the fact that fluoride is a direct attack on the public health of their communities.

3. Defeating fluoridation with appeals to intuition

As is the case with most conspiracy theories, there is no single author or text that is the sole authority on the subject. Instead, conspiracy arguments circulate through a variety of discourse communities. As a result, our analysis cannot account for every conspiracy argument that has been lodged against fluoridation. There are, for example, arguments that fluoridation was used by the Nazis in the concentration camps; that fluoridation was a clever way to deal with the industrial waste from our nuclear weapons program; and that the fact that the government hired the godfather of public relations, Edward Bernays, to create a pro-fluoridation public health campaign proves that the goals were nefarious from the start. Although some of these arguments also include appeals based on intuition, we have focused our presentation today on the arguments that fluoridation is an attack on the public health of the population.

Our review of the conspiracy arguments reveals three sets of objections to the safety of fluoridation that are rooted in appeals to intuition. First, conspiracy theorists attack fluoridation by amplifying the worst case scenarios associated with consuming too much fluoride. Upon initial inspection, this argument makes intuitive sense. After all, Dr. McKay's original research was an attempt to diagnose and cure the molten teeth of communities in Colorado that were consuming too much fluoride and suffering from fluorosis. Rather than engaging in the complicated science of determining what the appropriate level of fluoride consumption is, conspiracy theorists argue that these worst case scenarios are *ipso facto* proof that there is no safe level of fluoride in the water. For example, most of the anti-fluoride conspiracy theorists point to an infamous industrial accident in 1943 when a DuPont factory spilled a massive amount of fluoride into the local environment. According to the conspiracy theorists, the fluoride spill resulted in the death of poultry, sickened horses, destroyed a peach crop, produced high levels of fluoride in the blood of the local people, and resulted in "cows [that] became so crippled they could only crawl on their bellies to graze" (Water, n.d.). We are not attempting to defend the DuPont spill, but we do think

that it is important to point out that objecting to the practice of controlled fluoridation because of an uncontrolled industrial accident that had nothing to do with fluoridating the public water supply is a tenuous argument at best.

We do not deny that arguments based on the worst case scenarios of mass fluorosis have an intuitive appeal, but the more complicated scientific method explains why these types of arguments are dangerous for the public decision-making process. There are scientific debates over the appropriate amount of fluoridation. Some argue that over time people have started consuming more fluoride from sources outside of the public water supply - namely toothpaste which includes a greater amount of fluoride today than in 1945. The refusal of the conspiracy proponents to engage the scientific discussion and instead to focus on the worst case scenarios as a justification for doing away with all fluoridation is an appeal to the public and government officials to make impulsive decisions based on intuition rather than to engage in the complex deliberation that comes with assessing scientific risk.

The second set of arguments based on intuition focuses on alternative uses of fluoride to amplify the public's belief in the toxic nature of the substance. For example, one conspiracy theorist writes, "...sodium fluoride is a dangerous poison and has been a primary active ingredient in a wide variety of insecticides and fungicides" (Tracey, 2012). There are other conspiracy websites that list the major manufacturing companies and their products with captions that emphasize how ridiculous it would be for a parent to feed those products to their children. Once again the intuitive appeal is unscientific but persuasive: why would you put something into your body that is so damaging that it is used to kill other organisms?

The answer, of course, is that the science associated with fluoride and proper dosing is more complicated than that disturbing description suggests. At face value, not every active ingredient in a pesticide is the ingredient that is actually doing the killing. Whitney Crenshaw, a professor at Colorado State University, does not even list fluoride in his review of the major active ingredients used in pesticides and insecticides (Crenshaw, 2013). More importantly, fluoride is a *naturally* occurring mineral that is found in different levels of almost all water sources. The fact that it is used in a variety of other ways does not in itself demonstrate that the mineral is dangerous. In fact, the practice of fluoridation often involves *removing* excess fluoride from the public water supply to make sure

that it is at safe levels. The conspiracy theorists' intuitive arguments rest on an apparently self-evident appeal that the more natural the water is, the healthier it will be without any discussion of the fact that the fluoride discovered in the people of Colorado came from the natural water supply they were using and not from some industrial additive. The complicated truth is that when a local government votes to end the process of fluoridation it may, in fact, be increasing its residents' consumption of fluoride.

The third set of intuition-based arguments acknowledges the naturally occurring nature of fluoride, but challenge the practice of fluoridation because it involves purchasing sodium fluoride from major industries. These conspiracy theorists are obsessed with pointing out that sodium fluoride is a byproduct of major industrial processes and those industrial manufacturers are making money from an industrial byproduct that they would otherwise have to pay to dispose of properly. They argue that since these industries benefit from selling their industrial waste to public water utilities they are invested in skewing the health data and/or covering up the true health effects. Here is an example of one of these arguments:

fluoride is a toxic byproduct in the manufacture of nuclear arms, aluminum, cement, steel, and phosphates. Millions of tons of this poison are produced every year. Imagine the cost of containing and disposing of those mountains of waste every year. It's in the billions. But what if lobbyists from these industries could present "scientific studies" paid for by the industries, and provide for a continual stream of media presentations about the health benefits of fluoride, and create unimaginably lucrative positions for "research" and "education" within the American Dental Association and the AMA, and do all these things in a consistent and unending way, year after year? What are the economic advantages of that? Simple: instead of paying money to dispose of toxic waste, money could now be made by selling fluoride to the water companies of the nation. They'll use the public water supply as a sewer for industrial wastes. And now with these new billions added instead of subtracted, there's plenty to go around, for everyone involved. Out of the Red, into the Black. Somewhere Machiavelli smiles. (Water, n.d.)

This argument involves an intuitive appeal to public perceptions of industrial waste and the motivations of large corporations. The simplistic narrative, however, that since fluoride is purchased from corporations then those corporations must be directly involved in skewing the scientific data is overly

reductionist at best. Assuming that municipalities want to fluoridate their water supplies, it would be far more expensive to engage in the process of creating fluoride solely for the purpose of fluoridating the water supply rather than using the industrial byproduct. The assumption that the American Dental Association and the 95 other health organizations that have endorsed fluoridation are all in league with big business is a classic conspiracy argument, but loses its persuasiveness when the audience moves beyond the initial shock of its intuitive appeal and into the pragmatic reality of the difficulty in covering up such a conspiracy. Although it is difficult for many people to accept, it is possible that a 'win win' situation involving major corporations and local governments is, in fact, also in the best interest of the public at large.

4. Conclusion: training advocates to argue against conspiracy intuition appeals

The world is confronting a greater and greater number of controversies surrounding complex scientific phenomena. As the controversies grow, conspiracy theorists have successfully inserted themselves into the public deliberation process. From global warming to vaccines to peak oil, conspiracy theorists have used arguments based on intuition to disrupt and short circuit deliberation involving complex science. A recent study conducted by a group of social scientists at the University of Chicago found that 49% of respondents believe at least one conspiracy related to medicine (Oliver & Wood, 2014). It further found that 37% of the respondents agreed, "The Food and Drug Administration is deliberately preventing the public from getting natural cures for cancer and other diseases because of pressure from drug companies" (Oliver & Wood, 2014). We believe that there is no way around the fact that the people responsible for explaining and defending the more complex scientific explanations for societal practices need training in how to argue against appeals based on intuition.

Analyzing the public discourse surrounding the conspiracy over fluoridation reveals three areas of argument studies that advocates would benefit from understanding. First, we believe that advocates need to master the science of the controversy while focusing on translating that science into arguments relevant for public deliberation. Scientists are often very careful in a public setting. They are more likely to use hedging statements and talk in terms of risk. Both practices are helpful for the scholarly study of a phenomenon, but, with rare exception, they do not translate well into public deliberation. In other words, scientists are so careful about drawing conclusions that their arguments appear weaker when contrasted

to the powerful pathos appeals that accompany the objections based on claims rooted in intuition. The fact that the anti-fluoride arguments are based on intuition makes them more accessible and thus more appealing to the audience.

Second, we believe advocates need to be prepared to argue by analogy. Relying on scientists as public advocates is helpful, but they are often reluctant to engage in a discussion of analogous scientific controversies because it is beyond their area of expertise. In the water fluoridation controversy, for instance, there are too few advocates for fluoridation prepared to argue based on the analogy to chlorine which is a substance that is also toxic if consumed in an extreme amount, but that few people can deny has helped prevent a widespread set of diseases. The conspiracy proponents who insist that fluoridation is simply not natural and therefore a threat to public health will struggle to explain how public water utilities should deal with cholera, typhoid fever, and hepatitis all of which have been remedied through chlorination (Water Quality and Health Council, 2003). To argue from an analogy, however, requires the advocate to be prepared to speak to issues beyond their immediate expertise.

Finally, we believe advocates need to construct stronger defenses of the scientific consensus. The global warming controversy and the fluoridation controversy share the rhetorical dilemma that the scientific community does not really consider either of them to be a legitimate controversy. There are, of course, a small number of scientists who resist the consensus and therefore are venerated by conspiracy theorists. If, however, a local government official is listening to a presentation on a complicated scientific phenomenon that has reserved scientists on one side and passionate arguments from intuition on the other side, the advocates of science need to be articulate about the advantages of *preferring* the scientific consensus in public policy. This goal is a difficult task that is growing more difficult by the day as interpretations of science become more politicized. Failure to defend the institution of science encourages crucial policy decisions to be based on “The immediate apprehension of an object by the mind without the intervention of any reasoning process.”

In conclusion, we want public advocates to continue to fight the good fight on crucial scientific controversies. In fact, by following our three recommendations we hope advocates will learn to fight the *better* fight. It is work that is often very challenging and comes with all of the sets of difficulties associated with debating strong-willed conspiracy proponents. As communities continue to struggle with

complex scientific phenomena, there will be more opportunities for conspiracy theorists to engage in public controversies so we hope that advocates of science will take the conspiracy arguments seriously. It is easy to mock them for their inadequate treatment of science, but mocking cannot deny the fact that these appeals to intuition have succeeded in 68 cities around the globe.

References

- American Dental Association Council on Access, P. A. (2005). *Fluoridation Facts*. American Dental Association .
- Barrett, S. (2002, August 28). Organizations That Support Fluoridation. Retrieved from Dental Watch : <http://www.dentalwatch.org/fl/orgs.html>
- Center for Disease Control . (1999, 4 2). Ten Great Public Health Achievements — United States, 1900-1999. Retrieved from Morbidity and Mortality Weekly Report : <http://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm>
- Communities Which Have Rejected Fluoridation Since 1990. (2012). Retrieved from Fluoride Action Network: <http://fluoridealert.org/content/communities/>
- Crenshaw, W. (2013). Classes of Pesticides Used in Landscape/Nurseries Pest Management. In C. S. University, *IPM of Midwest Landscapes: Tactics and Tools for IPM* (pp. 42-44). The University of Minnesota .
- Havil, J. (2008). *Impossible?: surprising solutions to counterintuitive conundrums*. Princeton, N.J.: Princeton University Press.
- intuition. (2014, September). Retrieved from Oxford English Dictionary: <http://www.oed.com/view/Entry/98794?redirectedFrom=intuition#eid>
- National Cancer Institute . (2012, 2 21). Fluoridated Water. Retrieved from National Cancer Institute at the National Institute of Health: <http://www.cancer.gov/cancertopics/factsheet/Risk/fluoridated-water>
- Oliver, E., & Wood, T. (2014). *Medical Conspiracy Theories and Health Behaviors in the United States*. *JAMA Internal Medicine*, 817-818.
- The Story of Fluoridation. (2014, February 26). Retrieved from National Institute of Dental and Craniofacial Research : <http://www.nidcr.nih.gov/oralhealth/topics/fluoride/thestoryoffluoridation.htm>
- Tracey, J. (2012, June 23). Poison is Treatment: The Campaign to Fluoridate America. Retrieved from Global Research, Centre for Research on Globalization: <http://www.globalresearch.ca/poison-is-treatment-the-campaign-to-fluoridate-america>
- Water. (n.d.). Retrieved from The Doctor Within : <http://www.thedoctorwithin.com/water/water/>

Water Quality and Health Council . (2003). *Drinking Water Chlorination: A Review of Disinfection Practices and Issues* . Water Quality and Health Council.

Whitehouse, D. (2009). *Renaissance Genius: Galileo Galilei & His Legacy to Modern Science* . New York, NY: Sterling Publishing Company, Inc.

ISSA Proceedings 2014 - Conductive Argumentation, Degrees Of Confidence, And The Communication Of Uncertainty

Abstract: The paper argues that there is an epistemic obligation to communicate the appropriate degree of confidence when asserting conclusions in conductive argumentation. Contrary to the position of some theorists, we argue that such conclusions frequently are, and should be expressed with appropriate qualifications. As an illustration, we discuss the case of the Italian scientists tried for failing to convey to the public appropriate warnings of the risks of the earthquake in L'Aquila.

Keywords: conductive argumentation, judgment confidence, expression of uncertainty

1. Prologue

On April 6, 2009, a magnitude 6.3 earthquake struck L'Aquila, Abruzzo, resulting in considerable devastation and the death of 300 people. Seven Italian officials and scientists were subsequently put on trial for manslaughter. The accusation was that scientists presented incomplete, inconsistent information which falsely assured the public and caused the deaths of 30 residents. The usual practice when an earthquake was likely was for residents to sleep outside, but it was alleged that because of the assurance, these individuals remained in their houses and were killed in the quake (Ashcroft 2012). The prosecution argued that the

assessment of risk communicated to the public was unjustifiably optimistic and that lives could have been saved had people not been persuaded by the assurances to remain in their houses (Hooper 2012). In 2012, the scientists were found guilty of manslaughter and sentenced to six years in prison.

We will return to this case later. We have no intention to try to evaluate its merits, but we shall examine the issues it raises regarding the obligation to communicate an appropriate degree of certainty or uncertainty in one's judgments.

2. Introduction

This paper begins by making the argument that a degree of uncertainty is an unavoidable aspect of conductive argumentation. The arguments which comprise instances of conductive argumentation vary in terms of the degree of support that they provide for their conclusions; for this reason the strength of the judgments warranted by particular instances of conductive argumentation will vary as well. We argue, further, that this variability imposes an epistemic requirement on arguers to apportion the confidence of their judgment to the strength of the reasons. Moreover, because of the dialectical nature of argumentation, there is the additional requirement for arguers to communicate the appropriate degree of certainty or uncertainty when making judgments in the context of an argumentative exchange.

3. Argumentation and uncertainty

The traditional focus for the philosophical study of argumentation has been individual arguments, in terms of both their structure and their evaluation. The model of argument which has been dominant has been deductive argument, i.e., an argument whose premises entail the conclusion. Provided that the premises are true, the conclusion follows with certainty. Uncertainty may, of course, still arise with respect to the truth of the premises.

This requirement of inference certainty does not, however, fit a great deal of actual argumentation, as has been pointed out by theorists since the inception of the Informal Logic movement. In probable reasoning, for example, the conclusion does not follow necessarily but only with some degree of probability (Blair & Johnson 1987, p. 42). The situation is similar for inductive reasoning: "Inductive inferences vary from weak to strong; there is no all-or-nothing critique such as 'valid-or invalid' available" (Blair & Johnson 1987, p. 42).

Theorists have, however, been increasingly broadening their focus from exclusively individual arguments to the entire enterprise of argumentation. Argumentation can be conceptualized as a socio-cultural activity (Hitchcock 2002, p. 291) which is dialectical in the sense that it involves an interaction between the arguers and between the arguments (Blair & Johnson 1987). This focus is much broader than the making of individual arguments. Rather, arguments are put forward, criticisms and objections offered, responses proposed, and, frequently, revisions made to initial positions (Bailin & Battersby 2009). It is this practice of argumentation that is our focus here, and in particular the practice of conductive argumentation (or conductive reasoning). By conductive reasoning we are referring to the process of comparative evaluation of a variety of contending positions and arguments with the goal of reaching a reasoned judgment on an issue (Battersby & Bailin 2011). Such judgments are generally based on the weighing of both pro and con considerations.

The focus of many theorists working in the area is, however, on individual conductive arguments rather than on conductive reasoning. Conductive arguments are, as Govier puts it, “arguments in which premises are put forward as separately and non-conclusively relevant to support a conclusion, against which negatively relevant considerations may also be acknowledged” (Govier 2011, p. 262). In our view, however, viewing conductive reasoning in terms of individual arguments fails to do justice to the dialectical nature of argumentation (Battersby & Bailin 2011). In addition, attempting to make conductive reasoning fit into the traditional model of argument structure has resulted in unnecessary conundrums, for example how to analyze counter-considerations (are they premises? counter-premises?) or how to diagram these anomalous types of arguments. Our focus, in contrast, is on conductive reasoning more broadly. According to this perspective, the structure of conductive argumentation is viewed in terms of a balancing of competing arguments and claims rather than as a single argument.

4. Uncertainty in conductive argumentation

There are a number of reasons why conductive argumentation does not lead to conclusions which can be asserted with epistemic certainty. These include inferential uncertainty, the inherent uncertainty of particular claims and judgments, the open-endedness of the reason-giving process, and variability in the weighing of pro and con considerations. Because of these factors, the degree of

certainty with which conclusions of conductive argumentation can justifiably be held will vary.

Inferential uncertainty is a feature of conductive reasoning just as it is with inductive reasoning. Given that particular claims are true, there is still the question of how much support they give to the conclusion.

The uncertainty has also to do with the inherent uncertainty of particular claims and judgments which go into the reasoning process. The likelihood of factual claims is an important factor in evaluating their weight as the greater the likelihood of the claim, the more weight it can add to the conclusion. Likelihood is, however, often difficult to determine. To compound the difficulty, any argument leading to a judgment about what to do must also take into account future states of affairs which are usually even less certain than judgments about current states of affairs. What one can do in both these cases is to use the available information, history, contextual factors, and statistical tools to make reasoned judgments. And in the area of moral issues, while there are some widely accepted general moral principles, their application in particular cases inevitably creates some degree of uncertainty, the degree depending on the strength of the supporting arguments (Battersby & Bailin 2011).

The uncertainty arises also from the nature of conductive reasoning itself. One important factor is the open-endedness of the reason-giving process. Competent conductive reasoning requires laying out the dialectic - the arguments on various sides of the debate, as well as objections to the arguments and responses to the objections. No survey of arguments will be exhaustive, however. The possibility always exists that additional reasons and arguments will be put forward which might affect the outcome of the reasoning (Battersby & Bailin 2011). This being said, the more extensive the review of the available evidence and argumentation, the stronger the support for the resultant judgment.

Uncertainty also comes in due to the process of weighing the various reasons pro and con. There is sometimes variability amongst arguers in the evaluation of the comparative strength of evidence and arguments on different sides of an issue and disagreement about the appropriate weight to be apportioned to various considerations. This is not to say that weightings are (primarily) subjective. Weightings can be justified (or criticized) by appeal to objective factors and considerations (e.g., the likelihood of claims, appeal to widely shared values and

principles,). Nonetheless, there may not be consensus on how some considerations should be weighted and there may be more than one judgment which is defensible given the context (Battersby & Bailin 2011).

Because of the uncertainty of particular claims, the variability in the evaluation of the comparative strength of evidence and arguments, the different weightings given to various considerations, and the open-endedness of the reason-giving process, an instance of conductive reasoning can, at best, offer good reasons and strong support for a conclusion but not certainty.

This does not mean, however, that it is not possible to make warranted judgments in instances of conductive reasoning. Guidelines exist for making reasoned judgments and criteria exist for their evaluation (Battersby & Bailin 2011). What it does mean is that there will always be some uncertainty with respect to the judgments emerging from the process of conductive argumentation and that the strength of the judgments warranted by particular instances of conductive argumentation will vary.

5. Confidence in judgment

The strength of the evidence and argumentation in support of conclusions in conductive argumentation will vary from case to case (Battersby & Bailin 2011). In some cases the evidence for a particular judgment may be overwhelming. There are, for example, very strong reasons to believe that smoking causes cancer or that the enslavement of human beings is morally unjustifiable. In other cases the weight of reasons may favour a particular judgment but not without significant opposing reasons or counter considerations. Claims about the causes of climate change might fall into this category. In still other cases, the reasons may be insufficient for reaching a judgment, for example in debates about life on other planets. Thus, in robust argumentation, warrant is usually a matter of degree.

Engaging in the process of argumentation imposes certain epistemic requirements on arguers: that they present arguments justified by the available evidence, address appropriate objections and provide reasonable responses, and revise their initial position when warranted. But the variability in the degree of support for different judgments also imposes an additional requirement on arguers: that they apportion the confidence of their judgment to the strength of the reasons. Not all judgments warrant an equal level of confidence. It is

important to be clear that we are not referring to subjective confidence - how confident an individual may happen to feel about a judgment, but rather rational or warranted confidence - the level of confidence that is justified by the reasons and evidence.

The following is a schema which we have developed to represent the level of confidence warranted by different weights of reasons:

- A *very confident judgment* is warranted when the weight of reasons clearly supports the judgment.
- A *reasonably confident judgment* is warranted when the weight of reasons strongly supports the judgment but there are still strong countervailing considerations.
- A *tentative judgment* is warranted when the weight of reasons is not overwhelming but is supportive of one position, and we can make a judgment *on balance*.
- A *suspended judgment* is warranted when the reasons for different positions are closely balanced or when there is insufficient evidence to make a judgment.

This schema has similarities to the categorization used for classifying the strength of causal inferences in science (US Department of Health, 2006).

These four levels of judgment confidence are not discrete but can be seen as marking positions along a continuum. The categorization allows for a range of possibilities in between.

Apportioning one's confidence in a judgment to the strength of the reasons is always epistemologically significant. It is when there is a need to act on the basis of our judgments, however, that the issue of how justified our confidence is in our judgments becomes crucial. The greater the consequences of action (or inaction), the greater the need for a level of argumentative support that warrants a confident judgment. A useful comparison can be made to legal judgments. In criminal cases, where there is a great deal at stake (freedom versus imprisonment, or even life versus death), the standard of proof is beyond a reasonable doubt, which requires a level of evidence sufficient to warrant a very confident judgment. In civil matters, where there is usually less at stake, the standard of proof is usually balance of probabilities, which clearly requires only an on balance judgment.

6. *Degrees of certainty or uncertainty*

The fact that argumentation is dialectical imposes yet a further requirement on arguers. It is not just a matter of apportioning one's confidence in a judgment to the strength of the reasons. There is also a requirement to communicate the appropriate degree of certainty or uncertainty when making judgments in the context of an argumentative exchange.

There are many ways in which one's confidence in a judgment and hence the degree of certainty or uncertainty may be expressed:

- A very confident judgment implies a high level of certainty and would be marked linguistically by such phrases as "I am very confident that," "it is clear that," "there's little doubt that," "the evidence strongly indicates that."
- A reasonably confident judgment implies a moderately high level of certainty and might be indicated by such phrases as "I am reasonably sure that," "it seems very likely that," "the evidence by and large indicates that."
- A tentative judgment implies some degree of uncertainty, although not enough to preclude making a judgment. A tentative judgment may be indicated by such phrases as "it appears on balance that," "the weight of evidence tips somewhat in favour of," "my tentative conclusion is that."
- A suspended judgment implies a high level of uncertainty and would be indicated by such phrases as "there is not enough evidence to make a judgment," "the reasons on both sides seem equally balanced," "the judgment will have to be deferred until more evidence is available," "the jury's still out on this."

7. *An objection*

Curiously some theorists have denied that conductive arguments can have a conclusion that expresses uncertainty. In a recent posthumous publication, Adler argues against the claim that countervailing considerations detract from the support for the conclusion in a conductive argument:

The claim that I dispute is that once the conclusion is drawn, the counter-considerations continue to diminish its support (Adler 2013, p. 4).

As a consequence:

... the conclusion of a Conductive Argument is characteristically detached and accepted without (epistemic) qualification (Adler 2013, p. 6).

And further:

Let me summarize my reasons for taking Conductive Argument to characteristically lead to unqualified conclusions that are accepted and asserted (Adler 2013, p. 6).

If we understand him correctly, he is arguing that if we are asking an interlocutor to accept our conclusion, then we are always asking him to accept the conclusion without the modifiers of “all things considered,” “on balance,” “it is very likely that” etc.

It is significant that Adler’s objection is framed in terms of conductive arguments while we frame the issue in terms of conductive argumentation. The difference in framing is important in terms of the consideration of his objection, a point to which we shall return.

We would maintain that qualified conclusions are common in conductive argumentation. In arguments for factual claims, expressing uncertainty is not unusual, e.g., “The forecast notwithstanding, it looks like it might rain.” “Even though he doesn’t like parties, Tom is a good friend so he’ll likely come to my birthday party.” “There are many fine contemporary authors, but she is probably the best of her generation.” The communication of the degree of certainty of findings is also a common practice in the kind of argument to the best explanation exhibited in scientific reasoning and scientific reports. The following excerpt from an IPCC assessment report on climate change explains the confidence levels used in the report:

The degree of certainty in key findings in this assessment is based on the author teams’ evaluations of underlying scientific understanding and is expressed as a qualitative level of confidence (from very low to very high) and, when possible, probabilistically with a quantified likelihood (from exceptionally unlikely to virtually certain). Confidence in the validity of a finding is based on the type, amount, quality, and consistency of evidence (e.g., data, mechanistic understanding, theory, models, expert judgment) and the degree of agreement.
SPM-2

The following examples from the report illustrate the use of these confidence levels:

(1) It is *virtually certain* that globally the troposphere has warmed since the mid-20th century. More complete observations allow greater confidence in estimates of tropospheric temperature changes in the extratropical Northern Hemisphere than elsewhere. There is *medium confidence* in the rate of warming and its vertical structure in the Northern Hemisphere extra-tropical troposphere and *low confidence* elsewhere. {2.4} PSM-4

(2) It is *likely* that anthropogenic influences have affected the global water cycle since 1960. Anthropogenic influences have contributed to observed increases in atmospheric moisture content in the atmosphere (*medium confidence*), to global-scale changes in precipitation patterns over land (*medium confidence*), to intensification of heavy precipitation over land regions where data are sufficient (*medium confidence*), and to changes in surface and sub- surface ocean salinity (*very likely*). {2.5, 2.6, 3.3, 7.6, 10.3, 10.4} SPM-13

Although Adler's argument seems to be directed toward conductive arguments in general ("the conclusion of a Conductive Argument is *characteristically* detached ..."), many of his examples involve practical reasoning, where the conclusion is a decision or recommendation about whether to act. Apparently, he would reject a conclusion that "we should probably do X." Yet, in practice, we do often qualify a recommendation by "we should probably," "on balance the best thing to do seems to be," "there are good reasons to" etc.

Given the frequency of qualified conclusions in conductive argumentation, one might wonder what Adler's reasons are for denying their possibility. The basis of his argument is a logical one - that in order for a conductive argument to be cogent, i.e., in order for its conclusion to be correctly accepted as true, the conclusion must stand on its own.**[i]** His focus is on cogent arguments, that is arguments that end inquiry. The alternative for Adler is not qualified conclusions but rather suspended judgment.

It is here that the problem of viewing conductive argumentation in terms of individual arguments becomes manifest. Adler's analysis has some plausibility when applied to examples such as the classic argument offered by Wellman: Although your lawn needs cutting, you ought to take your son to the movies because the picture is ideal for children and will be gone by tomorrow (Wellman 1971, p. 67). Most of the examples offered by Adler, however, (e.g., mandated health care insurance, stricter rules to restrict immigration, building nuclear

power plants) are instances of complex, dialectical argumentation. (Indeed, the distinction between conductive arguments and conductive argumentation is one that Adler himself appears, in places, to acknowledge: Adler, p. 2, footnote 1). In such cases, it is inappropriate to expect certainty (for all the reasons outlined above). It is inappropriate to expect conclusions that are “true”. What we can expect, instead, are judgments that have varying degrees of support.

Adler’s argument does have some *prima facie* plausibility in that for practical arguments, either we should act, we should not act, or we simply do not know what to do. Indeed, it does seem that when we decide to do something, we have “detached” the decision from the reasoning through our commitment to action. But the detachment is in effect a pragmatic detachment which does not necessarily indicate unqualified confidence, nor will it necessarily end inquiry. On fairly straightforward practical issues, for example which camera to buy, making a decision will likely mark the end of the inquiry. But this may simply be because the action is *a fait accompli* and does not necessarily indicate a high level of confidence that we have made the right choice. With more complex issues, however, even once an action has been taken, inquiry does not necessarily end, e.g., the U.S. government has made a decision with respect to mandated health care insurance, but the debate has certainly not ended.

It seems to be Adler’s view that it is only detached, unqualified conclusions that “discern or advance and settle new or interesting or important truths, that are worth believing for ourselves or for our audience. They increase our information and expand our corpus of beliefs” (Adler 2013, p. 6). We would argue, on the contrary, that it is appropriately qualified conclusions that really add to our justified beliefs. We are justified in holding our beliefs on such issues with varying degree of confidence commensurate with the strength of the support. Jane’s belief that there should be government mandated health care insurance is one she may hold with considerable confidence given the strength of the reasons in favor and the weakness of the reasons against. She may hold the belief that we should not build nuclear power plants with considerably less confidence given the force of the reasons for as well as against. Adler seems to hold that only unqualified conclusions put “arguers and inquirers in a position that is appropriate to guide further judgments and action” (Adler 2013, p. 6). We would argue, on the contrary, that appropriately qualified conclusions are, in fact, more reasonable guides to action. The conclusions of conductive argumentation are judgments and

it is a requirement of reasonableness that such judgments should reflect the degree of support provided by our reasons.

8. *Communicating confidence and certainty*

We have been arguing, then, that there is a requirement to apportion one's confidence in a judgment to the strength of the reasons in support of the judgment. We would argue, further, there is also an epistemic and moral responsibility to communicate the appropriate degree of certainty or uncertainty when making judgments in the context of an argumentative exchange. This responsibility arises from the dialectical and interactive nature of conductive argumentation. According to Johnson, that an exchange is dialectical means that "as a result of the intervention of the Other, one's own logos (discourse, reasoning, or thinking) has the potential of being affected in some way" (Johnson 2000, p. 161). In other words, the reasoning and judgments made by others can and often should affect my reasoning and judgments and form part of the basis for my actions. Just as offering well justified judgments in the context of an argumentative exchange can contribute to others holding better justified beliefs and undertaking better justified actions, so also can communicating one's judgments at the appropriate level of confidence. Acknowledging uncertainty or confidence as part of one's judgment or decision to act can inform others of how much confidence you or they should have in the judgment. Communicating a judgment at an inappropriate level of confidence, for example with more confidence than is warranted by the evidence, may contribute to other interlocutors holding beliefs or acting in ways that are poorly grounded.

This responsibility is especially significant when one is in a position of epistemic authority. Experts have an obligation to provide reasons for their judgments, however in contexts requiring expertise, recipients of the judgment are often not in a position to assess the reasoning in any detail. These judgments are generally accepted largely on the basis of trust in the expertise and reliability of the authority. Thus the level of confidence that is expressed in the judgment is an important aspect of the information communicated in the judgment. Returning to the IPCC report, it would be have been misleading if the report had omitted the confidence levels in their various finding. This is especially important as such judgments often form the basis for decisions regarding action, or may themselves be recommendations for action. Compare the following judgments by a physician: (1.) "I have carefully evaluated all the evidence and would not recommend

surgery. It is my judgment that it would not help.” (2.) “I have carefully evaluated all the evidence and would not recommend surgery. It is my judgment that surgery is very unlikely to help and the surgical procedure is very risky. But I cannot be 100% confident because there have been a few similar cases where it appears that a surgical invention may have helped to prolong life.” To offer the same conclusion without an indication of the confidence level would be a misleading way of putting forth one’s conclusion. In cases where the argument leads to a somewhat uncertain conclusion based on a balancing of conflicting considerations, failure to indicate the presence of these considerations is an epistemic failure. Given that the purpose of conductive argumentation is to consider countervailing considerations and yet come to a reasonable conclusion, failure to communicate the degree of justification or certainty that the arguments provide also violates basic norms of communication.

9. The l’Aquila case

The trial of the Italian scientists and officials in the L’Aquila earthquake case is a pertinent one to examine with respect to the issue of the communication of certainty or uncertainty. The earthquake had been preceded by a swarm of small quakes, and the charge against the defendants was that they did not do their duty in communicating the likelihood of a major earthquake to the citizens of L’Aquila.

One of the scientists tried, Enzo Boschi, the then-president of Italy’s National Institute of Geophysics and Volcanology, is said to have compared the situation to a large quake that struck L’Aquila in 1703. Boschi is alleged to have said at a meeting in L’Aquila on March 31, 2009, “It is unlikely that an earthquake like the one in 1703 could occur in the short term, but the possibility cannot be totally excluded.” In a press conference after the meeting, Department of Civil Protection official Bernardo De Bernardinis, also a defendant, is quoted (and on video record) as saying that the situation was normal given the context, posing “no danger,” and urging residents to relax (Pappas 2012).

The details of the case are complex and include allegations of political pressure, and of misrepresentation of material. We have no intention to try to evaluate the merits of the case, nor are we in a position to do so. Nonetheless some of the issues raised are pertinent to our discussion. The statements of both Boschi and De Bernardinis would have been grounded in the knowledge that earthquake swarms are very common in seismically active regions such as Abruzzo but only a very small percentage are precursors to major quakes. In fact, seismologists claim

that it is virtually impossible to predict major earthquakes. Yet we can note a difference in the level of certainty communicated in the two judgments. Boschi's judgment that a major earthquake was unlikely could be characterized as a reasonably confident judgment, but in alluding to the possibility of such a quake, it communicated a degree of uncertainty in the judgment. De Bernardinis, in contrast, seemed to be making a very confident judgment that there was no danger of a major quake. His judgment made no reference to the possibility, slight though it may have been. The risk was indeed very low, but not non-existent. Thus his pronouncement, communicated to the public, that there was "no danger" was epistemically overly confident, expressing an unreasonable degree of certainty.

The scientists and officials in question were considered epistemic authorities and the level of certainty communicated by them to members of the public appears to have affected the public's actions. A local investigator, Inspector Lorenzo Cavallo, is quoted as saying: "The Commission calmed the local population down following a number of earth tremors. After the quake, we heard people's accounts and they told us they changed their behaviour following the advice of the commission" (Watt, S. 2011). This account is corroborated repeatedly by witnesses testifying at the trial (Billi 2013).

The specifics of this particular case are complex and contested, and it would be inappropriate and imprudent to attempt to pass any judgments. One thing that we do think that the case demonstrates, however, is a strong recognition of the responsibility to communicate the epistemically appropriate degree of certainty or uncertainty in our judgments. It is unreasonable, (epistemically inappropriate) to make or hold a judgment without the appropriate degree of uncertainty given the evidence. It is, in addition, a communicative and perhaps a moral failure to communicate a judgment without the appropriate expression of epistemic uncertainty.

Acknowledgements

We would like to thank Monica Bhattacharjee for her contribution to the preparation of this paper.

NOTE

i. Surprisingly given his thesis, Adler does acknowledge that "there are loads of arguments that end with qualified conclusions, including, 'plausible' or, more

equivocally, 'the best explanation is'" (p. 7). But the rest of his argumentation leads us to believe that he would reconcile this apparent contradiction by asserting that such arguments are not cogent, i.e., they are not arguments which can be put forward for acceptance.

References

- Ashcroft, H. (2012, Nov. 20). "L'Aquila Earthquake - shaking the scientific community." Retrieved from <http://www.bangscience.org/2012/11/laquila-earthquake-shaking-the-scientific-community/>
- Bailin, S. & Battersby, M. (2010). *Reason in the balance: An inquiry approach to critical thinking*. Whitby, Ont.: McGraw-Hill.
- Bailin, S. & Battersby, M. (2009). Inquiry: A dialectical approach to teaching critical thinking. In J. Ritola (Ed.), *Argument cultures: Proceedings of OSSA 8*, CD-ROM. Windsor, ON: OSSA.
- Battersby, M. & Bailin, S. (2011). Guidelines for reaching a reasoned judgment. In J. A. Blair & R. H. Johnson (Eds.). *Conductive argument: An overlooked type of defeasible reasoning* (pp. 145-157). London: College Publications.
- Billi, M. (2013). *Sentenza. Tribunale di L'Aquila. Sezione Penale. N.253/2010 R.G.N.R.* Retrieved from <http://processoaquila.files.wordpress.com/2013/01/sentenza-grandi-rischi-completa-1.pdf>
- Blair, J. A. & Johnson, R. H. (Eds.). (2011). *Conductive argument: An overlooked type of defeasible reasoning*. London: College Publications.
- Govier, T. (2011). Conductive arguments: overview of the symposium. In J. A. Blair & R. H. Johnson (Eds.). *Conductive argument: An overlooked type of defeasible reasoning* (pp. 262-276). London: College Publications.
- Hitchcock, D. (2002). The practice of argumentative discussion. *Argumentation*, 6, 3: 287-298.
- Hooper, J. (2012, Oct. 22). "Italian scientists convicted for 'false assurances' before earthquake." Retrieved from <http://www.theguardian.com/world/2012/oct/22/italian-scientists-jailed-earthquake-aquila>
- Johnson, R. H. (2000). *Manifest rationality: A pragmatic theory of argument*. Mahwah, NJ: Erlbaum.
- Pappas, S. (2012). "Scientists on trial for failing to predict Italian quake." Retrieved from

http://www.nbcnews.com/id/44596501/ns/technology_and_science-science/t/scientists-trial-failing-predict-italian-quake/#.U3J_LF69zw2

US Department of Health and Human Services. (2006). "The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General." Retrieved from <http://www.ncbi.nlm.nih.gov/books/NBK44324/>

Watt, S. (2011, Sept. 16). "Scientists in the dock over L'Aquila earthquake." Retrieved from <http://news.bbc.co.uk/2/hi/programmes/newsnight/9593123.stm>

Wellman, C. (1971). *Challenge and response: Justification in ethics*. Carbondale: Southern Illinois University Press.

ISSA Proceedings 2014 - The Integration Of Pragma-Dialectics And Collaborative Learning Research: Argumentation Dialogue, Externalisation And Collective Thinking

Abstract: This paper describes extensions of pragma-dialectical theory for analysing learning processes in students' argumentation dialogues. It is argued that although pragma-dialectics is the most appropriate theory in this context, it needs to be 'psychologised' by the consideration of additional discursive, dialogical, epistemological, interpersonal and affective dimensions of dialogue. In conclusion, prospects for new rapprochement between argumentation theory and psychology are discussed.

Keywords: collaborative learning, argumentation dialogue, pragma-dialectics, psychology, externalisation principle

1. Introduction

Over the past two decades, a specialised subfield of collaborative learning research (Dillenbourg, Baker, Blaye & O'Malley, 1996) has emerged, called "collaborative argumentation-based learning" (see, for example, the collective works: Andriessen & Coirier, 1999; Andriessen, Baker & Suthers, 2003; Muller Mirza & Perret-Clermont, 2009). Its general aims are to understand how and what students could learn (apart from argumentation competencies themselves) from engaging in pedagogical activities based on argumentation, such as debates, writing argumentative texts, or joint problem-solving that involving spontaneous phases of argumentative interaction. However, collaborative argumentation-based learning research has been mostly carried out either on the basis of everyday notions of what "argument" is, or else by drawing on a limited set of argumentation theories (e.g. the model of Toulmin, 1958) that that are not necessarily well adapted to the task at hand, i.e. analysing argumentative interaction.

This paper explores the relevance and utility of the pragma-dialectical theory of argumentation (e.g. van Eemeren & Grootendorst, 1984) for analysing students' argumentation dialogues in a way that brings to light interactive learning processes. I propose firstly that the pragma-dialectical theory of argumentation is the most appropriate approach to analysing students' argumentation dialogues given — quite simply — that it is a theory of argumentation in *dialogue*, and that the components of the theory are generally applicable to the data. Secondly, I propose that in order to understand collaborative arguing to learn, within a specific domain, notably with respect to conceptual elaboration, a broad pragma-dialectical framework is also well fitted to the task, provided that additional dimensions of social interaction are taken into account. For the empirical support of the relevance of these dimensions to analysing students' argumentation dialogues, this paper draws on the author's previously published work (for example, Baker, 1999, 2002, 2003, 2009) on the analysis of corpora of students' problem solving dialogues in physics, biology and geography.

In the first section below, the main components of pragma-dialectics are discussed with respect to their degrees of correspondence with processes at work in students' argumentation dialogues. In the ensuing section, additional dimensions of dialogue that need to be taken into account in educational situations — beyond the pragmatic and the dialectical — are described, in relation to interactive learning processes. In conclusion, relations between pragma-

dialectics and psychology are discussed, together with the extent to which the set of dimensions of dialogue discussed in the paper could be combined in a coherent theoretical and methodological approach.

2. Components of the pragma-dialectic model and their correspondences with students' argumentation dialogues

For reasons stated in introduction, the components of the pragma-dialectical model do provide an appropriate general framework for understanding how students' argumentation dialogues have potential for learning. However, each of the components needs to be 'psychologised' (or 'naturalised', to use the terminology of Grize, 1982, 1996) in order to understand relations between dialogue and (changes in) thinking. As discussed in conclusion, pragma-dialectics explicitly eschews consideration of psychological change 'outside' the dialogue. Below, each of the following main components of the pragma-dialectical model are discussed (stages of discussion, speech acts and perlocutionary effects, rules of conduct for reasonable argumentation, and methods for reconstructing argumentative discourse) in terms of their correspondences with the reality of students' argumentation dialogues.

Confrontation phase. This phase usually does not exist in students' dialogues: students often just move straight into opening and argumentation; or if the confrontation phase does exist, it is often reduced to a repetition of the same proposal with repeated refusals to accept.

Opening phase. In students' problem-solving dialogues, dialectical roles are unlikely to be so clear as those of "proponent" and "opponent", with their strong degrees of commitment. This is because in a learning situation, given that knowledge is supposed to be under co-construction, it is not realistic for students to have clear commitments to the tentative solutions that they propose (Nonnon, 1996). In pedagogical debates, concerning issues where personal value systems are at stake (e.g. ecology), such commitments can occur, and typically, students' views become more polarised. But in more scientific domains, such as physics, students may often shift from opponent to proponent roles, for a given thesis, as they explore around the question.

Argumentation phase. Without specific pedagogical preparation — asking students to read texts, multimedia materials on the topic, analyse possible arguments, in short, to invent or activate their arguments — this phase may often

be very short indeed, simply because students are not able to find arguments with respect to topics which are new to them (i.e. to be learned).

Concluding phase. In students' dialogues, this phase is often simply left out: the students just stop arguing, moving onto something else. Perhaps interpersonal relationships between adolescents preclude making explicit who has "won" or "lost? Adolescent 'cultures' may even preclude conflict and argumentation altogether, being more oriented towards what young people share (such as taste in rock music, hair and clothes styles) rather than what divides them (Pasquier, 2005).

In sum, the main phases of pragma-dialectics are in fact relevant and useful for analysing students' argumentation dialogues, provided one bears in mind that the phases can be more or less extended (or even deleted), depending on the more global pedagogical sequence in which the argumentation dialogue occurs. Extensive preparation, and framing or scripting of the debate will often be required in order to elicit argumentation at all.

There are two main questions with respect to *perlocutionary effects* (convincing, belief, acceptance, ...) of argumentative speech acts: what is the nature of students' attitudes in argumentation dialogue? And, how do attitudes change as a result of argumentation dialogue?

Along with Edwards (1993), I would concur that the question "what do children really think?" when they engage in dialogue is either unanswerable or else meaningless: the relation between language and thought is not so simple (see the conclusion to this paper). Even with interview techniques, or questionnaires, we cannot escape the circle of dialogue (despite methodological precautions, interviews and experiments are also social encounters); and what is expressed in dialogue by each interlocutor is a function of mutual adaptation as well as individual thought. What students "really" think is not the point of dialogue analysis: the point is what interlocutors do and say, and how this evolves.

This view is coherent with the meta-theoretical principle of "externalisation" in pragma-dialectics; but this does not mean that psychology is necessarily 'external' to the dialectical process since, under a suitable analytical approach, dialogue 'is' collective thinking. The theory of learning in and by argumentation dialogue that would be coherent with pragma-dialectics would therefore be one of stabilised

evolution of the nature of dialogue, across situations.

But this view is not incoherent with the very idea of cognitive and dialogical attitudes. Thus the philosopher of language L. Jonathan Cohen (1992) has proposed a distinction between belief and acceptance: belief is a disposition to think or feel (it can not be decided upon), acceptance is a decision to reason with what is proposed by the interlocutor, to take it as a premise, 'as far as it goes'. This seems to correspond better with students' engagement in collaborative problem solving, where — since by hypothesis or design, we are concerned with learning situations — none of the students really knows 'the answer' and so can not adopt a firm standpoint.

The second question mentioned above was: how do attitudes change as a result of argumentation dialogue? One approach to answering this question is to record individual students' opinions regarding a thesis before debating, together with their arguments, then to ask individuals to update their views (opinion, arguments) in the light of a debate (Baker, 2003, 2009). The changes before and after can be correlated with characteristics of the debates. Results show that students' changes in attitudes are almost never as clear as dialectical theories would like: one never sees students straightforwardly dropping their proposals once refuted, nor does one see them straightforwardly accepting successfully defended proposals of their opponents. Students may, of course, be constrained to concede or accept, on the scale of a specific argumentation sequence; but usually, each student will persist in maintaining his or her own views, throughout the dialogue. In other terms, it takes more than a short argumentation sequence, whatever its characteristics, to change deep-seated views. It is possible that this relates to the maintenance of the self, as a relatively stable self-construction: what would a person be like who radically and irrevocably changes his or her fundamental beliefs, on the basis of every dialogue they engage in? Beliefs surely change over a longer period of time than the usually short interactions that are considered in educational research. But changes do occur, and they are usually much more subtle than definitive acquisition or abandonment of proposals: for example, "realising that what one thought was true for certain might not be", or "maintaining one's position, but in a more open, subtle, nuanced form, that recognises possible counter-arguments". Unwillingness to lose face (Brown & Levinson, 1987) by admitting defeat is also an explanatory factor of the persistence of views across dialectical outcomes.

With respect to the famous ‘ten commandments’ of pragma-dialectics (van Eemeren & Grootendorst, 1984, pp. 151-175), two questions arise in this context: do students’ dialogues largely conform to these rules? And, what is the nature of the rules themselves? The following dialectical rules are particularly relevant:

- “participants must be able to freely state their views” — obviously, in larger groups, it is rarely the case that all participants can freely express their views, for reasons because of “production blocking”;
- “attacks must be defended” — this is a rule that is generally followed and explicitly enforced (otherwise, someone is likely to say “well, what do you have to say to that?”). An exception often occurs in the case of simple conflicts, where one student simply refuses to accept a proposal, without giving reasons;
- “attacks must not be repeated” — they often are repeated, but in a reformulated way, which can be positive for learning to the extent that it corresponds to negotiation of meaning of key domain concepts.
- “dialectical outcomes must be made explicit” — this is rarely followed, probably because of the need to preserve face, to not too explicitly push home the victory and make the other look stupid; usually, the students just stop, think again and move onto something else.

In sum, it is difficult to reply definitively to the question “do students argumentation dialogues generally conform to the ten pragma-dialectical commandments?”, because of the necessarily limited number of cases that can be analysed. The main rule that is respected is the one concerning the necessity to defend against attacks. But then, if this is not respected, there could probably be no argumentation dialogue at all. This may relate to the second question mentioned above, concerning the nature of pragma-dialectical rules. According to dialogic logic (Barth & Krabbe, 1982), the purpose of dialectical rules is to ensure convergence on a determinate outcome (a winning or losing proposal) in the most efficient way. But if it is generally the case that the rule requiring defenses against attacks is the most basic or fundamental, then this amounts to the necessity for achieving agreement on what type of dialogue (Walton & Krabbe, 1995) is being engaged in (argumentative). In other terms, pragma-dialectical rules can be seen as special cases of a general “cooperative contract”, according to which, ‘as everyone knows’, you should not waste other people’s time (e.g. by stalling), and you should generally put the group objective — finding the most acceptable solution — before personal misgivings.

Finally, the aim of reconstructing argumentative discourse is to ‘uncover’ the pragma-dialectical structure from the inter-discursive texture, for the purposes of evaluating it (van Eemeren, Grootendorst, Jackson & Jacobs, 1993). This involves, for example: deletion (of repetitions, of parts irrelevant to argumentative structure); addition (of missing premisses and reasoning); permutation of the linear structure towards an argumentative structure; substitution (of clearer expressions of ambiguous statements). But it is possible that the ‘deleted parts’ are those where the factors that are most important for learning may reside. These include processes of negotiation of meaning of proposals (e.g. in repeated attacks in a reformulated form) that, whilst they can be used to abusive ends (such as avoiding the issue, or defeat), constitute the principal vehicles of conceptual change.

In summary, although pragma-dialectics is the most appropriate theory of argumentation for understanding collaborative argumentation-based learning, each of its components needs to be transformed, or ‘psychologised’, for this purpose. Nearly all stages of discussion can be omitted by students, and even the argumentation phase itself often depends on preparatory activation of arguments. Students’ cognitive and dialogical attitudes are characterised by weak commitment and volatility, given that it is difficult to adopt firm stances with respect to knowledge that is undergoing co-construction in the learning situation. Only the most basic pragma-dialectical rule, requiring defense against attack, is generally respected.

Certainly, such a large gap between what students’ argumentation dialogues and the pragma-dialectical model is not a criticism of that model, since it aims to be both descriptive and normative. Rather, it indicates the necessity for research on collaborative argumentation-based learning to integrate other dimensions of dialogue, beyond the pragmatic and the dialectic, into a coherent theory and model of learning in and by argumentation dialogue. These additional dimensions, discussed below, include the discursive negotiation of meaning, the interactive regulation of emotions and the nature of the interpersonal relation.

3. Other dimensions that need to be taken into account for arguing to learn

Pragmatic and dialectical dimensions of students’ dialogues are at the heart of collaborative argumentation-based learning. They relate to pragmatic (perlocutionary) effects of argumentation dialogue mentioned above (change in view) in relation to dialectical processes and outcomes, and to learning to engage

in such types of interaction (learning of dialectical rules and strategies). But in order to study a broader range of attendant learning processes, five other dimensions need to be considered, as follows.

The *epistemological* dimension refers to the nature of what is being discussed within a particular domain — based on perception in the current situation, on reasoning, having a particular social origin (e.g. what the teacher previously said) — or across specific domains — for example, scientific versus socio-technical domains. It is important in determining how students' attitudes are likely to change (“epistemic entrenchment”: Gardenförs, 1988) and the weight that will be given to arguments. In addition, in scientific domains, students have difficulty in achieving coherence (cf. “knowledge in pieces”, to use diSessa's, 1988, formulation), whereas with respect to societal issues, value systems and ideologies come into play, in which case, these systems will be more resilient to change and must be considered as wholes.

The *discursive* dimension concerns the ways in which ‘work’ is done on cognition through language, by the performance of cognitive-linguistic operations (Grize, 1982; Vignaux, 1988) in dialogue. This includes making new conceptual distinctions (argument by dissociation), reformulating, generalising, predicating, inferring, and so on. Interactive pressures relating to verbal conflicts of opinions may particularly stimulate this.

The *dialogical* dimension concerns the interplay of socially inscribed discourse genres, the more or less reformulated expression of what one has already heard (Bakhtine, 1977). Learning in educational dialogue can be seen, at least partially, as the appropriation of, or the articulation between, students' everyday discourse genres and school genres (Wertsch, 1991), such as the very specific genre “argumentative discourse” (e.g. Baker, Bernard & Dumez-Féroc, 2012).

The *interpersonal* dimension refers to the relationship between students, more or less friendly, as well as their different social identities (e.g. male or female) influence the extent to which they can and will deepen verbal conflicts, possibly endangering their relationships (e.g. Kutnick & Kington, 2005).

The *affective* dimension is highly important in the case of argumentative interactions, given the threat to the interpersonal relation imposed by the thematisation of verbal conflicts. Affective regulation will interact with knowledge

co-elaboration and the determination of the argumentative outcome (Baker, Andriessen & Järvelä, 2013). Affect enters into the very heart of argumentation, in that the choice of argumentative strategy (direct defense, or else attack the attack?) has been shown, experimentally, to correlate with the extent to which the attack is perceived as aggressive (Muntig & Turnbull, 1998).

Therefore, in order to understand the full range of types of learning processes and outcomes relating to students' argumentation dialogue, it is necessary to study the relations between the seven dimensions of dialogue described above (pragmatic, dialectical, discursive, epistemological, dialogical, interpersonal and affective). This enables the study, in relation to the ongoing pragma-dialectical process (relating to change in view), of conceptual learning (discursive dimension), broadening of the field of knowledge taken into consideration (epistemological dimension), the appropriation and articulation of school and everyday discourses (dialogical dimension), as well as the influence of the interpersonal relation, with all the affects that will be associated.

The integration of such dimensions into a coherent theoretical approach is, I believe, possible and useful, but would constitute a major research programme. It would require at least the integration of pragma-dialectics with theories of belief revision and cognitive dissonance, theories of discourse, of Bakhtinian dialogism, of interpersonal relations, facework and emotion. But that is what would be required in order to more fully understand the learning potential of engaging in argumentation dialogue.

4. Conclusion

In this paper I have discussed the extent to which the normative aspect of pragma-dialectical theory is descriptive with respect to students' argumentation dialogues, and the additional dimensions of dialogue that would need to be integrated with this theory in order to come to a fuller understanding of the learning potential of these types of dialogues. By way of conclusion, I shall mention a few more general considerations on a theoretical level, in terms of the possible marriage between argumentation theory and psychology, beginning with the view from argumentation theory. I propose that argumentation theory has a too restricted view of the psychology to which it could relate: other — discursive, dialogical — psychologies could make a better fit.

The role of psychology in relation to argumentation theory is seen by the “new

rhetoric” (Perelman & Olbrechts-Tyteca, 1958, p. 12: my translation) as follows:

The theory of argumentation, aiming, thanks to discourse, to obtain an efficacious action on minds, could have been treated as a branch of psychology. (...) The study of argumentation would thus become one of the objects of experimental psychology, where varied argumentations would be tested with varied groups of listeners, sufficiently well known so that one could, on the basis of these experiments, draw conclusions of a certain generality.

This is learning from argument as accepting or acquiring theses by being persuaded by arguments. But as described above, argumentation, whether in discourse or dialogue, can have many more varied effects on speakers, hearers and interlocutors; for example, it can change the way they conceptualise the domain of discourse, or broaden their perspectives on the range of points of view pertaining to a debate, or even enable them to appropriate the discourse genre. In other terms, this vision of the role of psychology in relation to argumentation is too restricted. Turning to pragma-dialectics (Van Eemeren, Grootendorst & Snoeck Henkemans, 1996, pp. 276-277),

[t]he study of argumentation should not concentrate on the psychological dispositions of the people involved in an argumentation, but on their externalized — or externalizable — commitments.

But this vision of argumentation and psychology depends on a view that psychology is only concerned with the ‘inner’ mental states of individuals. Such a distinction between language and thinking has been largely criticised by philosophers of language (Wittgenstein, 1978, 109e, 339):

[t]hinking is not an incorporeal process which lends life and sense to speaking, and which it would be possible to detach from speaking, rather as the Devil took the shadow of Schlemiehl from the ground.

Some recent psychological theories also call into question such a vision, in considering dialogue itself as a process of collective thinking (e.g. Allwood’s, 1997, theory of dialogue as collective thinking; the discursive psychology of Harré and Gillett, 1993; Fernyhough’s, 1996, Vygotskian theory of thinking as internalised dialogue; or Lave and Wenger’s, 1991, theory of situated cognition and learning). According to these approaches, ‘private’ thoughts — whilst their existence is intersubjectively undeniable — have nevertheless no role to play in

the analysis of thinking in and by dialogue, unless they become intersubjectively known, and influence the course of the dialogue itself. Lapidary statements of this position would be: the thinking is 'in' the dialogue, or even dialogue 'is' collective thinking. There is therefore no necessity to expel thinking from pragma-dialectics, or to restrict it to direct effects of persuasion. In other terms, the relations between argumentation, dialogue, thinking and learning do not have to be only conceived in terms of the 'outer' as the province of argumentation and the 'inner' being relegated to psychology, because there are psychologies that aim to cross-cut the inner/outer divide.

The analysis of students' argumentation dialogues, integrating the seven dimensions described above, would therefore constitute at the same time an analysis of public, externalised commitment and of the evolution of thinking, learning, as a collective process. This would form the basis for a new *rapprochement* between argumentation theory and psychological theory.

References

- Allwood, J. (1997). Dialog as collective thinking. In Pylkkänen, P. & Pylkkö, P. & Hautamäki, A. (Eds.) *Brain, Mind and Physics*, pp. 11-24. Amsterdam: IOS Press.
- Andriessen, J. & Coirier, P. (Eds.) (1999). *Foundations of Argumentative Text Processing*, Amsterdam: University of Amsterdam Press.
- Andriessen, J., Baker, M. & Suthers, D. (Eds.) (2003). *Arguing to Learn: Confronting Cognitions in Computer-Supported Collaborative Learning environments*. Dordrecht, The Netherlands: Kluwer Academic Publishers.
- Baker, M. (2009). Intersubjective and intrasubjective rationalities in pedagogical debates: Realizing what one thinks. In B. Schwarz, T. Dreyfus & R. Hershkowitz (Eds.), *Transformation of Knowledge Through Classroom Interaction*, pp. 145-158. London: Routledge
- Baker, M. J., Bernard, F.-X. & Dumez-Féroc, I. (2012). Integrating computer-supported collaborative learning into the classroom: the anatomy of a failure. *Journal of Computer Assisted Learning*, 28, 161-176.
- Baker, M.J. (1999). Argumentation and Constructive Interaction. In P. Coirier and J. Andriessen (Eds.), *Foundations of Argumentative Text Processing*, pp. 179-202. Amsterdam: University of Amsterdam Press.
- Baker, M.J. (2002). Argumentative interactions, discursive operations and learning to model in science. In P. Brna, M. Baker, K. Stenning & A. Tiberghien (Eds.), *The Role of Communication in Learning to Model*, pp. 303-324. Mahwah

N.J.: Lawrence Erlbaum Associates.

Baker, M.J. (2003). Computer-mediated Argumentative interactions for the co-elaboration of scientific notions. In J. Andriessen, M.J. Baker & D. Suthers (Eds.) *Arguing to Learn: Confronting Cognitions in Computer-Supported Collaborative Learning environments*, pp. 47-78. Dordrecht: Kluwer Academic Publishers.

Baker, M.J., Andriessen, J. & Järvelä, S. (2013). *Affective Learning Together: social and emotional dimensions of collaborative learning*. London: Routledge.

Bakhtine, M. (1977/1929). [Volochinov, V.N.]. *Le Marxisme et la Philosophie du Langage* [Marxism and the Philosophy of Language]. Paris: Minuit. [1st edition: Voloshinov, Leningrad 1929].

Barth, E.M. & Krabbe, E.C.W. (1982). *From Axiom to Dialogue: A philosophical study of logics and argumentation*. Berlin: Walter de Gruyter.

Brown, P. & Levinson, S.C. (1987). *Politeness: Some universals in language usage*. Cambridge: Cambridge University Press.

Cohen, L.J. (1992). *An essay on belief and acceptance*. Oxford: Clarendon Press.

Dillenbourg, P., Baker, M.J., Blaye, A. & O'Malley, C. (1996). The evolution of research on collaborative learning. In P. Reimann & H. Spada (Eds.) *Learning in Humans and Machines: Towards an Interdisciplinary Learning Science*, pp. 189-211. Oxford: Pergamon.

DiSessa, A. (1988). Knowledge in Pieces. In G. Forman & P. Pufall (eds.), *Constructivism in the Computer Age*, pp. 49-70. Hillsdale NJ: Lawrence Erlbaum Associates.

Edwards, D. (1993). But What Do Children Really Think?: Discourse Analysis and Conceptual Content in Children's Talk. *Cognition and Instruction*, 11(3/4), 207-225.

Fernyhough, C. (1996). The dialogic mind: a dialogic approach to the higher mental functions. *New Ideas In Psychology*, 14(1); 47-62.

Gardenförs, P. (1988). *Knowledge in Flux. Modeling the Dynamics of Epistemic States*. Cambridge, MA: MIT Press.

Grize, J.-B. (1982). *De la logique à l'argumentation* [From logic to argumentation]. Genève : Librairie Droz.

Grize, J.-B. (1996). *Logique naturelle et communications*. [Natural logic and communications]. Paris : Presses Universitaires de France.

Harré, R. & Gillett, G. (1993). *The Discursive Mind*. London: Sage.

Kutnick, P. & Kington, A. (2005). Children's friendships and learning in school: Cognitive enhancement through social interaction? *British Journal of Educational Psychology*, 75, 1-19.

- Lave, J. & E. Wenger (1991). *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press.
- Linell, P. (2001). *Approaching Dialogue*. Amsterdam: John Benjamins.
- Muller Mirza, N. & Perret-Clermont, A.-N. (2009). *Argumentation and Education: theoretical foundations and practices*. Berlin: Springer-Verlag.
- Muntig, P. & Turnbull, W. (1998). Conversational structure and facework in arguing. *Journal of Pragmatics*, 29, 225-256.
- Nonnon, E. (1996). *Activités argumentatives et élaboration de connaissances nouvelles: le dialogue comme espace d'exploration*. [Argumentative activities and elaboration of new knowledge: dialogue as a space of exploration] *Langue Française*, 112, 67-87.
- Pasquier, D. (2005). *Cultures Lycéennes. La tyrannie de la majorité*. [High-school student cultures: the tyranny of the majority]. Paris: Autrement.
- Perelman, C. & Olbrechts-Tyteca, L. (1958/1988). *Traité de l'argumentation. La nouvelle rhétorique*. [Treatise on argumentation. The new rhetoric]. Bruxelles : Editions de l'Université de Bruxelles.
- Toulmin, S. E. (1958). *The Uses of Argument*. Cambridge: Cambridge University Press.
- van Eemeren, F.H., Grootendorst, R., Jackson, S. & Jacobs, S. (1993). *Reconstructing Argumentative Discourse*. Tuscaloosa: University of Alabama Press.
- van Eemeren, F. H. & Grootendorst, R. (1984). *Speech Acts in Argumentative Discussions*. Dordrecht-Holland: Foris Publications.
- Vignaux, G. (1988). *Le discours acteur du monde : énonciation, argumentation et cognition*. [Discours as an actor in the world: enunciation, argumentation and cognition]. Paris : Ophrys.
- Walton, D.N. & Krabbe, E.C.W. (1995). *Commitment in dialogue: Basic concepts of interpersonal reasoning*. Albany : State University Press of New York.
- Wertsch, J. V. (1991). *Voices of the Mind. A Sociocultural Approach to Mediated Action*. USA: Harvester Wheatsheaf.
- Wittgenstein, L. (1978). *Philosophical Investigations*. Oxford: Basil Blackwell.