The Cogent Reasoning Model of Informal Fallacies Revisited

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Abstract: The author designed the Reasoning Analysis Test to provide empirical support for the CRM analysis of informal fallacies. While informal, the results provide presumptive evidence that those committing informal fallacies may tacitly reason as predicted by CRM. Davis has argued persuasively that Gricean theory has not lived up to expectations. In light of his critique, the CRM analyses of Begging the Question and Equivocation are amended. Johnson has provided standards for judging any theory of informal fallacies. It is argued that CRM survives the Standard Critique and sufficiently meets Johnson's other criteria.

Résumé: L'auteur a conçu le Reasoning Analysis Test afin d'appuyer empiriquement l'analyse du modèle des raisonnements probants (MRP) des sophismes informels. Bien que les résultats ne soient pas concluants, ils apportent une preuve par présomption que ceux qui commettent des sophismes informels raisonnent peut-être implicitement selon la façon prédite par le MRP. Davis a argumenté persuasivement que la théorie de Grice n'a pas répondu aux attentes. À la lumière de cette critique, on corrige l'analyse du MRP des sophismes de circularité et d'équivocation. Johnson a avancé des critères pour juger n'importe quelle théorie des sophismes informels. On soutient que le MRP réchappe de sa critique typique et répond à ses autres conditions.

Keywords: cogent reasoning model of informal fallacies, Reasoning Analysis Test, *ad baculum*, Wayne A. Davis, Grice, begging the question fallacy, equivocation fallacy, Ralph H. Johnson, informal fallacy, fallacy theory

When I introduced the cogent reasoning model of informal fallacies (Boone, 1999) (hereafter CRM), I ended with several promissory notes. This article is an attempt to discharge partially one of those promises by providing some empirical support for CRM, though the bulk of that project is reserved for another time. An effort will also be made to assess CRM through the perspective of Ralph H. Johnson's criteria for "revitalizing" fallacy theory.

1. Summary of the Cogent Reasoning Model of informal fallacies

As a reminder, CRM identifies three features of informal fallacies. First, committing an informal fallacy involves what I term implicit *cogent* reasoning; that is, there is either deductively valid or inductively strong reasoning used by the person(s) guilty of committing a fallacy, and much of that reasoning is almost always im-

plicit. Second, one or more *false* premises are responsible for the fallaciousness. And third, an element of "culpable ignorance or deception" is connected with the falsity of the premise(s). In brief, CRM asserts a major role for implicit premises or conclusions used to reason cogently in informal fallacies, with the falsity of at least one of the premises producing the fallaciousness. However, the falsity of the premise(s) must not be falsity *simpliciter* but culpably ignorant and/or deceptive falsity, or else there is no way to distinguish nonfallacious valid but unsound arguments from fallacious ones. Essentially, CRM rests on an empirically descriptive account of what is explicitly and implicitly believed or intended by a speaker and/or an audience when an informal fallacy is committed. In the original article I state that the reasoning in informal fallacies is similar to the pragmatic reasoning schemas identified by Nisbett and his colleagues (Nisbett, 1993).[1] Informal fallacies typically result when these cogent reasoning processes go astray in a particular way— i.e., those who commit the fallacy are led to or fall into an acceptance of false premises. Cogent and sound reasoning processes are learned early in life for pragmatic uses and situations and then are later manipulated or misapplied as informal fallacies. Part of the effectiveness and appeal of informal fallacies is precisely that they use familiar cogent reasoning processes that promote a failure to notice or observe the falsity of one or more of the premises. Both the familiarity and cogency combine to pack a formidable rhetorical wallop: our critical discernment of the false gets overwhelmed. Please note that CRM has a significant commitment to empirically discernible and in some sense *conventional* speaker and hearer beliefs and intentions.

2. Some empirical research supporting CRM

I wish to report briefly on some empirical research of my own. For some years I have been designing and administering test instruments (the Reasoning Analysis Test) aimed at discovering the underlying implicit premises and conclusions in several informal fallacy contexts. While this is an informal and somewhat crude effort, lacking the sophistication of psychological research methodologies, the results have been intriguing. They may at least be sufficient to attract further interest in CRM. For this paper, I will focus on only one example and leave a more thorough analysis of these and other empirical studies for another paper. I choose the example of the *ad baculum* or appeal to force fallacy because there has been so much controversy about it among informal fallacy theorists, and the empirical results I have obtained may be of more general interest.

The definition of *ad baculum* informal fallacies remains controversial. Is it an appeal to force, an appeal to fear, or can it be both? Does it involve a threat, and if so, what kind? Can we distinguish non-fallacious prudential or rational reasoning in *ad baculum* contexts from logically fallacious reasoning? Is there anything that deserves being called "reasoning" or "argument" in *ad baculum* cases and can they even occur without dialogue or speech acts? These are just a few of the

many questions raised by informal logicians about the *ad baculum* fallacy. (For a good overview, see Walton, 2000). CRM may provide an avenue for dealing with at least some of these questions. Basically, CRM directs us to seek underlying cogent reasoning structures in standard fallacy cases, especially structures that might "have a life" elsewhere. In addition, CRM entertains the possibility that there may be a number of variants under a single standard fallacy rubric. For various reasons, I speculatively assimilate one variant of *ad baculum* cases to cogent reasoning forms associated with morally justified retribution or punishment for wrong actions. That is, the use of direct, personal threats of harm in more general (and often fallacious) cases is parasitic on cogent reasoning soundly employed in cases of threatened and deserved punishment for misconduct. For example, consider a case in which a male spousal abuser threatens serious harm to his spouse if she continues complaining about his failure to find work and bring home a paycheck. Learning to threaten the spouse in this fallacious manner may be related to overly harsh punishments the abuser received as a child. Condoning such harsh punishments within the family system of the abuser may be the result of a general and long-lasting cross-generational failure to clearly distinguish between instances of justified and appropriate punishments and punishments that seriously cross over into abuse. Many in society condone mild spankings or other mild corporal punishments for misbehavior. It's an easy confusion to drift from those somewhat justified cases to harder spankings, to hitting, to hitting harder, etc., and finally to the tragic end result of abuse that is falsely believed by the abuser and even by the victim to be justified punishment. Thus, reasonable threats that have an arguably sound application ("If you hit your sister again, I'm going to spank you") are perversely escalated into an unsound fallacious use ("If you give me that look again, I'm going to hurt you").

Again, this may not be the only pattern of *ad baculum* (and in particular I shunned the "appeal to fear" cases in designing this variant and the test item) but I initially hypothesized that it is at least one important variant, especially common in American society. As such, I hypothesize the implicit cogent reasoning pattern for one type of *ad baculum* (force/threats) fallacy to be:

> If you do action A (which may be an inaction) and A is wrong, then I/we will
>   be morally justified in harming you in a certain way.
> A is wrong and you do not want to be harmed in that way.
> So, you should not do action A.[2]

It should be clarified that this is not a "reconstruction" in one sense of that term. That is, this pattern is not initially put forward as the best and most plausible account of the implicit reasoning in this variant of *ad baculum*. Rather, it is advanced (or even *entertained*) as a hypothesis to be tested empirically. A good bit of surmising, thought, and imaginative "reconstructing" went into its development, of course. But its status is that of a speculative hypothesis.

A bit more background: this variant and the target passage attempts to take on a difficult opponent—those who would deny that *ad baculum* cases involve any

reasoning or argument at all. Thus, I designed a target passage that is not particularly an instance of discussion or dialogue and is more like the tough "mugger" cases ("Your money or your life!") than like threats occurring during a dialogue or argumentative discussion.

Here is the example, with discussion to follow, drawn from one version of the test instrument:

Reasoning Analysis Test Results

These results are from a total sample size of 103 undergraduate students. Responses are listed below each item with numbers representing percentages of the total sample selecting each choice. (Totals not always = 100%, due to rounding.)

TEST INSTRUCTIONS: For the following, read the passage and then respond to each item on the answer sheet as follows:

A	B	C	D	E
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

Bill is trying to study for a major exam. His roommate Mike and a couple of Mike's friends are in the room, talking loudly, playing music with the volume way up, and generally making it difficult for Bill to concentrate. Bill asks them a couple of times to please turn the music off and go somewhere else, explaining that he has to study for an important test. Mike says, "OK, we'll be leaving soon," but then he and his friends ignore Bill's requests and continue on as if they hadn't heard Bill. After another ten minutes, Bill erupts, "If you don't shut the music off and get out of here, I'm going to start smashing your tapes!"

A	B	C	D	E
Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree

1. Bill's threatening to smash the tapes is illogical and unreasonable in the circumstances.
   A: 11%   B: 34%   C: 16%   D: 36%   E: 4%

2. When Bill is most angry and threatens to smash the tapes, he probably believes that he would be justified in taking that action if Mike

continues to make noise.

A: 35%   B: 54%   C: 6%   D: 1%   E: 4%

3. Bill would be justified in smashing the tapes, given the way Mike has behaved.

A: 4%   B: 15%   C: 19%   D: 49%   E: 13%

4. I can't understand the point of Bill's statement. There is absolutely no connection between what Mike has done and Bill's reaction. It would have made as much sense if Bill had said, "A little green alien is living in my desk."

A: 0%   B: 4%   C: 4%   D: 35%   E: 56%

5. Bill has no reason to be upset and is just selfishly using threats to get his own way.

A: 1%   B: 4%   C: 1%   D: 46%   E: 49%

6. Bill is just trying to prevent Mike from explaining or arguing why Mike and his friends have a right to stay in the room and play music.

A: 1%   B: 8%   C: 18%   D: 56%   E: 17%

7. Bill believes his threat is appropriate, and that it would be all right for him to smash the tapes if Mike keeps on making noise after being warned.

A: 15%   B: 57%   C: 13%   D: 13%   E: 2%

8. Mike's behavior is wrong enough that he does somewhat deserve to have his tapes smashed if he continues to behave the same way after being warned.

A: 7%   B: 36%   C: 22%   D: 34%   E: 2%

9. I most strongly identify with Bill in the above scenario, and would more likely find myself in Bill's situation in my everyday life.

A: 9%   B: 31%   C: 22%   D: 27%   E: 11%

10. I most strongly identify with Mike in the above scenario, and would most likely find myself in Mike's situation in my everyday life.

A: 1%   B: 3%   C: 25%   D: 45%   E: 27%

Commentary and analysis

Item 2 in the test solicits a response based on my hypothesized CRM pattern of reasoning stated above, and 89% of the respondents agreed or strongly agreed that Bill believed he would be justified in taking the action of smashing the tapes. (In earlier versions of this test with a sample size of 222, 93% responded to the same item and passage in the "agree-strongly agree" range.) Item 7 in the test is an attempt to repeat Item 2 in other language to determine if responses are consistent. In this case, 72% of the respondents agreed or strongly agreed. Thus, barring an alternative interpretation, there is a strong response (and for Item 2, an over-whelming response) suggesting that the major premise in the hypothesized CRM pattern correctly describes the implicit reasoning in this case. That premise was, "If you do action A (which may be an inaction) and A is wrong, then I/we will be morally justified in harming you in a certain way." Note that this premise is completely implicit in the target passage. Bill is not overtly described in any way as appealing to his justification to smash the tapes—he simply issues the threat. Nevertheless, respondents readily attributed to Bill the belief that he would be justified in smashing the tapes if Mike and his friends continue to make noise.

Is there an alternative interpretation of these results? One criticism offered against an earlier draft of this paper is that the strong response to this item may merely represent the subjects' evaluation of the rationality and moral appropriateness of Bill's threat. Sociological research shows that an effective deterrent may often require a threat of harm greater than what would be morally justified as punishment for the offending action. In spite of this, the threat may be not only rational but also morally required. In other words, the strong threat may be rational and morally justified even if the threatened harmful action would not be. For example, consider a case of threatening to shoot someone menacing one's family if the menacer takes "one more step." In this case, threatening to shoot for taking one more step is a punishment that does not fit the crime—a disproportionate response to the offense. However, issuing this threat may be the right and rational thing to do—even morally required—if one is morally obligated to protect the family effectively. The importance of this criticism is that it challenges the CRM interpretation as the best or only interpretation of the strong responses by subjects to Items 2 and 7.

In reply to this criticism, observe closely that Item 2 does not ask about Bill's justification for making the threat; rather, it clearly asks about his justification for "taking that action," i.e., smashing the tapes. Item 7 makes it somewhat clear that the justification of smashing of the tapes is the action to be considered, although the matter is admittedly a bit clouded by the reference to the appropriateness of the threat. But Item 2's quick follow-up by Item 3, which leaves no doubt, clarifies the matter greatly, as does the quick follow-up of Item 7 by Item 8. Both Item 3 and Item 8 make it quite clear that it is justification of taking the threatened action rather than justification or rationality of the threat itself that is at stake. In addition,

in Item 3, 19% agreed or strongly agreed, while 62% disagreed or strongly disagreed that Bill would be "justified" in smashing the tapes. If the subjects were actually confused whether it was the threatened action or the threat itself that was justified or believed by Bill to be justified, then it becomes difficult to explain the apparent inconsistency of their responses between Items 2, 3, 7, and 8. Finally, the somewhat evenly divided response to Item 1, which is explicitly about Bill's threat, is puzzling from the perspective of this criticism. The respondents did not find Bill's threat particularly "logical" or "reasonable."

This does not challenge the correctness of the sociological "credible threat" research, but its completeness. Granted, there are several obvious factors explored by that research which seem relevant to assessments of the credibility of threats, including that the proponent of the threat has the capacity and intent to follow through with the punishment, has the ability to monitor compliance, and has a history of consistent enforcement of threats. In addition, in a credible threat, the loss resulting from compliance must be significantly less than the loss to be suffered from the punishment.[3] However, it isn't clear that the sociological research has achieved some kind of "closure," showing that these are the only relevant factors involved in threat assessment. It is certainly true that in one sense threats may be assessed as "rational" if they achieve desired goals of influencing the behavior of others. But threats may be judged rational in this sense and still assessed negatively in other dimensions. In fact, it seems plausible that one main goal of fallacy identification is to discover patterns of manipulation, coercion, and deception, which may be quite "rational" in this narrow sense. Perhaps what the test responses reveal is precisely some other dimension of assessment beyond this sense of rationality, and my hunch remains that this may be the domain of informal fallacies: plausibly, threats of violence or harm inextricably prompt moral assessments and they are also perfect tools for manipulation and rhetorical persuasion. It is of relevance that recent research in the psychology of reasoning seems likewise to be seeking alternative accounts of rationality beyond this narrow sense, but that is a matter going beyond the goals of this article (see Evans and Over, 1997, and Johnson-Laird, 1999). For the present, I am not persuaded that the subjects confusedly attributed "rationality" in a narrow sense to Bill's threat in their response to Items 2 and 7. Hence, barring other plausible alternatives that fit the results, CRM remains a better explanation.

The criticism under discussion was intended to cut two ways, however. Suppose it is rational and morally correct in a certain situation to threaten to shoot someone menacing one's family if they take "one more step." It would certainly be a disproportionate harm to shoot a person for taking a single step. This seems to suggest that the major premise for the CRM analysis of *ad baculum* is false—the defender is not morally justified in shooting the menacer if the menacer "takes one more step." That is, let's assume that the action for which the harm is threatened is just the step-taking and nothing else. Thus, isn't the CRM analysis committed to calling this a fallacy, even though it is perfectly rational and morally

correct behavior? If so, CRM seems to be at odds with both the rational threat research and our intuitions. In reply, obviously it would not only be fallacious, but seriously wrong and illegal in the general case to threaten to shoot someone for taking a single step, let alone actually to shoot. However, in this specific case "taking one more step" in the context of being menaced is a synecdoche for "escalating the menace to a degree no longer to be tolerated." Thus, it isn't at all clear, absent salient details of the context, that CRM would need to classify this as a case of fallacy. Neither the threat nor the harm itself need be disproportionate to the behavior, more completely described, in which case this would not be a CRM fallacy.

Could there be a case, however, which is non-synecdochic and constitutes a serious counterexample to the CRM analysis? Consider an ordinary parental threat to a child, "Clean up your room or you can't go outside and play." The structure seems to be "Do X, or I will make sure that bad consequences Y happen to you." In the case of threatening the child with not being allowed to go out and play for failing to clean up the room, the threat seems both rational and morally warranted under typical circumstances. However, CRM would agree in not calling this a fallacy. Suppose the bad consequences are radically increased in severity: "Clean up your room or no food for a month!" In this case, the threat may be judged "rational" if it effectively achieves the parental goals, but our intuitions balk at calling this a morally warranted threat, and it doesn't seem outrageous that CRM would brand this a fallacy in typical circumstances. Thus, to find a counterexample to CRM one would have to find behavior X and consequences Y between these two extreme cases such that Y is "rational" in the prudential sense relative to X, and Y is morally proportionate to X in some sense, but Y is not morally proportionate to X in a sense specified by CRM. The advantage of synecdochic cases is that another action Z is tied to X, permitting a division of the clauses: Y is "rational" relative to X, and Y is morally proportionate in some sense relative to X, and Y is not morally proportionate to Z in a sense specified by CRM. This apparent counterexample to CRM is obtained only at the cost of ignoring the nature of the ties between Z and X, and is readily undercut by CRM. In non-synecdochic cases, it isn't clear how one would go about constructing such a counterexample without lapsing into inconsistency. Y must be both morally proportionate to X and not morally proportionate to X in some distinct senses. But what? *Prima facie* there is no reason to think that CRM is incapable of endorsing the relative senses of moral proportionality that might be employed, nor that the CRM judgments would be intuitively offensive.

Returning to the analysis of the test results, CRM claims that a fallacy results from one of the premises being false. Items 3 and 8 were designed to address that aspect. The results for Item 3 (already mentioned above) suggest a fairly strong disagreement with the truth of the first premise. Item 3 also had one of the largest Neutral responses, with 19%. Item 8 responses are more evenly divided. While not quite as strong an indication that respondents felt Bill was basing his reasoning

on a false premise, it is nevertheless clear that significantly more respondents thought Bill would *not* be justified in carrying out his threatened action than thought Bill would be justified. Thus, a significant number of respondents seem, from the CRM perspective, to have caught on to or detected the fallacy: Bill believes his threatened action would be justified, but it isn't.

Other cases of *ad baculum* seem to be fallacious because it is the second premise that offends. The second premise was, "*A* is wrong and you do not want to be harmed in that way." Shopworn examples like the lobbyist case might also be explained as detecting the falsity of the premise that it would be wrong for the legislator to vote against the lobbyist's special interests, or perhaps as detecting the falsity of the premise that the legislator is unwilling to endure the loss of votes and campaign contributions from that particular lobbying group. These are matters for further testing. Also, further variants of *ad baculum* need to be designed and tested, including those in discursive, argumentative contexts. It should be mentioned that Items 5 and 6 are what I now judge to be faulty efforts for this target passage to test prudential models and pragma-dialectical models of the *ad baculum*. These, too, are under revision. The response to Item 4 is interesting because so many informal fallacy theorists in the past have expressed doubts that the use of threats should even be seen as a kind of "fallacy" or have anything to do with "reasoning"—they are merely irrelevant appeals to emotion. Item 4 tries to capture some sense of "irrelevance." 91% of the respondents disagreed or strongly disagreed that Bill's response was "irrelevant" in whatever sense captured by the item. Further work on this item is needed to get at other aspects or senses of the "irrelevance" analysis, but for what it's worth, there is strong support for the view that Bill's threat is not seen as totally irrelevant. Combined with the very strong response in Item 2, it seems reasonable that the understood relevance of Bill's reaction is not simply the rationality of making threats to achieve goals or influence the conduct of others, but more specifically his (false but cogent) implicit reasoning about what retribution against Mike he would be justified in taking. Items 9 and 10 attempt to control for the "belief bias effect." Basically, can the results be explained away because of biasing beliefs the respondent brings to the test situation? The respondents seemed to be fairly neutral in identifying with Bill and more definitely did not identify with Mike (72% disagreed or strongly disagreed). However, the responses to Items 1, 3, and 8 are slightly more in the direction of "taking Mike's side," so to speak, and the responses to Items 2 and 7 are much stronger than the response to Item 9. Thus, responses to the items do not seem to be biased by personal identification with the individuals in the target passage.

I have constructed similar target passages for the informal fallacies of authority, pity, abusive *ad hominem*, slippery slope, ignorance, and begging the question, and the results have been, on the whole, fairly robust in supporting my hypothesized CRM patterns. The Reasoning Analysis Test is undergoing revision and extension to additional fallacies, and all past and future results will be made available on my institutional website (Boone, n.d.).[4] While further work on versions of

the Reasoning Analysis Test must be done, the preliminary results are highly encouraging. They provide some presumptive evidence that the CRM account of the fallacies so far tested is accurate. It is possible that people may tacitly think and reason in the ways predicted by CRM when engaged in committing fallacies. If further study bears this out, the value of CRM for pedagogy and general critical thinking programs is obvious, as is its significance for informal logic and fallacy theory. Hopefully this one *ad baculum* example suffices for the present to stimulate more interest in the CRM approach, and, even better, to enlist the assistance of those more capable than I at developing sophisticated and powerful test instruments to tease out the implicit reasoning that may be going on in informal fallacy cases.

3. Amendments to CRM—the Davis critique

Readers of my CRM article may have noted that CRM has, in part, Gricean commitment. My analyses of the fallacies of both Begging the Question and Equivocation make use of "metalinguistic" premises of a Gricean nature (see Grice, 1996). The intensity of the criticism of Gricean theory and its progeny has recently reached new heights. Wayne A. Davis argues persuasively "that the Gricean theory has been barren .... With the blinders off, we can see that the most familiar facts about implicature have not even begun to be explained. The goals of science have not been achieved. The illusion of understanding provided by the Gricean theory has only served to stifle inquiry" (Davis, 1998, p. 3). Davis recognizes the existence and theoretical importance of conversational implicature, but proposes to explain it in an entirely different way. Grice argues for basic principles of cooperative behavior (his Cooperative Principle and the maxims that attend it). Instead, Davis proposes that more attention be given to the conventionality of sentence implicature and its influence on the intentionality of speaker implicature. This is radically contrary to Griceans, who give no fundamental play to conventionality in conversational implicatures.

After first developing an in-depth account of Gricean implicature, Davis considers a wide variety of implicatures (quantity, tautology, conjunction, idiomatic, relevance, "close-but," modal, disjunction, manner, interrogative and imperative, and several others). Notable in his investigation is the thoroughness with which he considers the numerous types of implicature. While previous criticism of Gricean theory has addressed concerns with just one or a few implicature types, Davis provides an extensive and detailed analysis of implicatures of all kinds, and thus collectively presents a much more damaging critique of the Gricean project. The result is, as Davis puts it, "four main lines of argument against Gricean theory" (Davis, 1998, p. 2).

(1) Gricean theory generates incorrect predictions of implicatures as easily and more commonly than it generates correct predictions.

(2) Grice's conversational principles lack sufficient power, because of their fundamental indeterminacy, to permit "a rigorous derivation of specific implicatures" (Davis, 1998, p. 2). Davis argues that Gricean theorists cannot patch up this flaw because it is rooted in the indeterminate and conventional nature of implicatures, and neither factor is compatible with the Gricean project. (See note 5 below for a concrete example.)

(3) There exist implicatures even when basic Gricean principles do not hold.

(4) These first three lines of argument demonstrate the total lack of success of Gricean theory, which sheds no light at all on why there are conversational implicatures. To address that concern, Davis argues, requires a change of focus away from seeking basic principles and toward examining speaker intentionality in terms of sentence conventionality.[5]

Davis does not rest with merely a negative attack on Gricean theory, but provides a positive account of his own—a significant alternative theoretical approach. Davis appeals to sentence conventionality in explaining the phenomenon of implicature. He does not reject the essential core of Grice as much as he recasts it in an empirical form. In his conclusion, Davis states,

> Grice's Cooperative Principle, the associated maxims, and other conversational rules concerning politeness, style, and efficiency have an important reciprocal influence on the communicative intentions of speakers and on semantic conventions. As normative rules they identify goals that all people try to achieve in their speech, and to some extent they are rules people explicitly try to follow. Both forms of motivation lead to speech that contributes to the truth of the principles as descriptive generalizations. (Davis, 1998, pp 189-190)

In response to this critique, the CRM analyses of Begging the Question and Equivocation are gladly amended. Instead of an appeal to Gricean metalinguistic premises, both fallacies must be revised to include an appeal to relevant speech conventions grounded in empirical generalizations. This is consonant with the strong empirical emphasis of CRM and represents a significant improvement. For Begging the Question, this will mean recognizing Walton's (1991) concept of "evidential priority" as a generalized and descriptively true expectation in argument audiences. The fallacy occurs when this expectation is disappointed through manipulation or ignorance, even if that failure is implicit and unrecognized by participants. As a sidenote, in the Reasoning Analysis Test version that uses Begging the Question as a target passage, the response is quite strong that the amended CRM analysis is true. That is, subjects taking the test observed an implicit evidential priority premise with a 90% response. For the Equivocation fallacy, the revision is along the same lines suggested by Davis, substituting a modified version of the "meaning constancy" premise. Unfortunately, the Reasoning Analysis Test has not been used for the Equivocation fallacy yet, so at present there is no evidence to support this analysis.

4. Johnson's criteria for revitalized fallacy theory

In a 1987 article, reprinted in Hansen and Pinto (1995), Ralph H. Johnson has provided higher standards by which to judge any theory of informal fallacies and in which he suggests ways to revitalize fallacy theory (FT) (Johnson, 1995). According to Johnson, the "Standard Treatment" of informal fallacies is sadly deficient, to the point that there even exists what Johnson calls "The Standard Critique." However, Johnson is optimistic that fallacy theory can be revitalized and can regain intellectual respectability. He specifies three changes that must be made: "First, it will require a revision of our conception of fallacy. Second, the presuppositions of FT must be identified and shown to be defensible. Third, some strictures need to be developed about the way in which FT is taught" (*ibid.*, p. 115). I wish to argue that CRM survives the Standard Critique and is able to meet Johnson's other criteria sufficiently to qualify as an informal fallacy theory worthy of consideration.

4.1 Johnson's first revitalization change—revision of the conception of fallacy

(a) Johnson envisions three steps in revising the conception of fallacy. The first is that "We should retain the historical nucleus of the idea of fallacy as a logically bad *argument*" (*ibid.*). Earlier in the article, Johnson identifies difficulties with several standard definitions fitting his schematization (FS): "A fallacy is reasoning which appears to be good but is not" (*ibid.*, p. 110). The term 'good' is a placeholder for terms like 'valid,' 'sound,' 'persuasive,' and 'conclusive.' In spite of these difficulties, Johnson wants to hang on to the notion that fallacy is *reasoning* or *argument*. That is, "the conception of fallacy belongs to the theory of criticism" (*ibid.*).

CRM fits Johnson's category of traditional definitions using the term "sound," in the usual sense of "having true or acceptable premises and employing valid reasoning." CRM defines fallaciousness as deriving from the falsity of one or more premises within a cogent reasoning schema, and thus, the CRM definition would have the overall Johnsonian schematization of:

A fallacy is reasoning which appears to be *sound* but is not.

Of course, CRM locates the unsoundness in the falsity of one of the premises rather than in the invalidity of the reasoning. The main research emphasis of CRM is to sort out how fallacies misuse good reasoning and to specify in detail exactly what good reasoning patterns are being misused. Hopefully, Johnson's notion of a theory of criticism is broad enough to admit such a conception of fallacy. At the very least, CRM focuses attention on the reasoning used in informal fallacies rather than being an account that attempts to reduce fallacies to something that involves no reasoning. The stress Johnson places in his "historical nucleus" comment is on the term "argument" rather than on the term "logically." Thus, even though CRM

is not a theory of fallacy qua a "*logically* bad argument," it is a theory of fallacy *qua* a "logically bad *argument*," and thus would seem to conform to Johnson's demand.

There is one way in which CRM departs from traditional interests in reasoning, but which Johnson should find acceptable. CRM defines "cogent" as deductively valid *or* inductively strong, and requires that the idea of "soundness" be stretched to include the idea of "sound" *inductive* arguments. Such stretching should be welcome to Johnson, who seems to accept the Standard Critique's desire to shun "deductive chauvinism," i.e., the uncritical assumption of the "vantage point of formal, deductive logic." Thus, CRM preserves Johnson's "historical nucleus" by keeping the focus on critical argumentation and reasoning, and does so in a manner that broadens the nature of argumentative criticism to include inductive concepts. Also, it is worthwhile noting at this point that CRM readily escapes Gerald Massey's critique (Massey, 1981). Since CRM does not define fallacies as "invalid," it does not depend on any "theory of invalidity." Hence, the impossibility of mounting a "theory of invalidity," which Massey sees as an insurmountable obstacle to traditional informal fallacy theory, is of no concern to CRM.

(b) The second step Johnson proposes for revising the conception of fallacy is to eliminate any reference to "matters of appearance" (Johnson, 1995, pp. 110, 115). His (FS) schematization describes a fallacy as reasoning that *appears* to be good, but is not. Such reliance on appearances, Johnson argues, is dangerous: it opens the way to individual subjectivity in whether or not there is a fallacy in a particular case. A satisfactory fallacy theory cannot classify an argument as a non-fallacy for one individual who accepts it as a good argument, and as a fallacy for another individual who doesn't. CRM seems to meet this demand through its essential dependence on common and general implicit reasoning structures. Premises and conclusions must be psychologically present over a range of individuals, even if implicit, when fallacies are committed. Instruments like the Reasoning Analysis Test described above can even provide empirical evidence for the existence of these underlying and inter-subjective reasoning structures, as well as evidence that certain premises within the structure are regarded as inter-subjectively false. It is also clear that CRM is subject to falsification: absent evidence such as the Reasoning Analysis Test supporting various hypothetical predictions of underlying implicit structures holding across a population of subjects, the CRM thesis must be given up. Thus, CRM does not seem open to the kind of individual subjectivity Johnson describes in whether or not a fallacy is being committed.

Related to these issues is an important matter overdue for explicit consideration. Johnson, together with J. Anthony Blair, once argued for a dialectical conception of "true premises." According to that view, premises are "acceptable" or "problematic" (rather than "true" or "false") relative to a given conclusion and within the context of a given dialogue. CRM is quite compatible with such an analysis and can easily be extended to Johnson's dialectical conception. CRM is

radically denying the tradition of seeing fallacies as "being invalid while appearing valid." It is trying to turn that notion on its head. Fallacies actually employ cogent reasoning, CRM claims, and locates their fallaciousness in the culpably unobserved *falsity* of at least one premise within a cogent reasoning structure. I have adopted the loose language of *truth* and *falsity* mainly for purposes of rhetorical simplicity and efficiency in developing CRM. Promoting such a radical change of focus away from the tradition is difficult enough without also having to deal with more subtle questions of premise acceptability. For now, I wish to persist in what I hope is ultimately a harmless simplification: the continued and unexplained talk of "true" and "false" premises as a substitute for more sophisticated accounts of premise adequacy and acceptability.

4.2 The second and third revitalization changes—the presuppositions of fallacy theory and how to teach fallacy theory

The third step Johnson proposes for revising the conception of fallacy overlaps with and quickly passes into his second task for the revitalization of fallacy theory: we must consider the *frequency* with which a fallacy occurs. This is one of the four major presuppositions of fallacy theory that Johnson defends and that is further elaborated in the following ways:

> That such mistakes in reasoning occur with sufficient frequency to warrant the utility of a list of such mistakes . . . . [W]e should admit a (new) fallacy to the inventory just when it can be 'shown' that this fallacy occurs with sufficient frequency to make it worth our while to have a label handy . . . the point of having a label or name is simply to help people remember a certain kind of defective move that occurs in argumentation. The student must learn to dispense with the label when he or she goes public and be able to make the points in language which the arguer can understand. (*Ibid.*, 116-119)

I believe the CRM perspective can provide a useful clarification of the frequency question. Many of us working in informal logic have never been skeptics concerning the existence of informal fallacies. Quite the contrary, we believe they occur in abundance and are highly influential in the thought processes of ordinary people. One need only look to commercial advertising for just one category in which informal fallacies are numerous and play a significant role in shaping ordinary experience and thought. In fact, when I teach the informal fallacies section in my informal logic course, I often ask students to find and identify real examples of informal fallacies, but sharply limit the number of advertisements they can use to satisfy this requirement. Finding fallacious advertising is too easy! A few minutes with the average newspaper or watching TV commercials would quickly provide many examples. Yet, there is no doubt that consumer spending habits are strongly influenced by advertising, and that the economic well-being, health decisions, and other behaviors of consumers are often adversely and even catastrophically affected as a result. Horror stories are legion, exemplified by Joe Camel hooking

new generations of teenage smokers and by the costly absence of quality and reliability in a host of consumer products.

Something interesting emerges when we think about the frequency question as applied to commercial advertising. One can readily identify ordinary examples of advertising as having the structure of CRM fallacy patterns. That is, not only can we see what kind of cogent reasoning the advertiser wishes the consumer audience of the ad to use, we can even see which premise(s) are arguably false. It is also often easy to detect what sorts of distractions or other devices are used by the advertiser to help hide the falsity of the premise(s)—that is, the manipulative deception being practiced by the advertiser can be made transparent. However, what about the audience? Can we assume that everyone in a consumer audience will fall prey to the fallacy, will overlook the questionable premise, and will be gulled by the ad? Even the most unscrupulous advertiser is not *that* sanguine! Large percentages of an ad's audience pay no attention and simply "don't get it"—the ad washes over them leaving no trace. Some few may even, at least intuitively, catch the fallacy and reject the advertising claim. Nevertheless, advertising is clearly highly successful—that is, enough consumers in the ad's audience are taken in by the fallacy, and enough of those are even induced to exhibit the desired buying behavior. What constitutes "enough" will clearly vary greatly from one commercial ad to another, and possibly from one audience to another, but the goal of the advertising/ public relations department is to create ads which are "effective": entice more than enough customers to offset the huge advertising budget and even yield an appreciable profit margin for the business. *Frequency*, in this case, is literally a "pragmatic" matter—behavior that pays off *often enough* to make it worth the cost.

Informal fallacies pay off in other ways than commercial success, and do so with enough frequency to make them a worthwhile means to achieve a variety of individual and social goals. Here again there is no assumption that everyone exposed to a fallacy will simply roll over as easy prey. But it happens *often enough* to encourage continued use of these strategic rhetorical maneuvers. Thus, frequency is not simply a matter of "how often" does a fallacy occur, as Johnson presents it; rather, it is a more complex function of "how often" a fallacy is proportionally successful in achieving certain desired ends. When it is "often enough," it becomes an established and accepted tool in our rhetorical tool kit.

Johnson does a great service to fallacy theory by calling attention to the frequency question. It is especially relevant to deciding the issues of who commits a fallacy and why we should teach fallacies. On many fallacy accounts the "who" is a difficult question. CRM affords a means of resolving this question. In brief: (1) We learn early on to commit informal fallacies as manipulative strategies because of the frequency of successful payoffs. In these cases, we are often fully aware or at least dimly aware that there is something fishy or false about one or more of the premises in the implicit cogent reasoning we utilize. Or, even if we are not in the least aware of the falsity, we at least ought to know better. That is, we are at

least being careless and irresponsible in what we present as true. Thus, anyone directing such reasoning at an audience to achieve a payoff and who is guilty of culpable deception or ignorance about the truth of the premises has committed a fallacy. (2) We often succumb to the manipulations practiced on us when we ought to think more critically about what we're being told. Perhaps a little more reflection and we would have questioned the truth of the premises and reasoning presented. Hence, anyone succumbing to such reasoning through culpable ignorance is committing the relevant fallacy. Hence, the "who" question is sorted out by CRM through assignments of degrees of culpability to both perpetrators and audiences. Who commits the fallacy? In most cases, the perpetrator, certainly. Also, the audience members individually share the guilt to the extent that they become willing and unquestioning participants. In this regard, Johnson and Blair see teaching about fallacies as a matter of "self-defense" (Johnson and Blair, 1994). We need to teach students to recognize fallacies to avoid future victimization by these socially prevalent tactics. But in particular, according to CRM, we need to teach them to be on guard against a too-ready acceptance of the false or dubious assumptions in the implicit cogent but fallacious reasoning.

4.3 Johnson's concluding desiderata: strictures on fallacy theory

Johnson is concerned about the criticisms of Richard Paul and his "weak" sense of critical thinking connected with the teaching of fallacies. Johnson seeks to avoid these criticisms (which he thinks weighty) by presenting five "strictures" to which fallacy theory must adhere. In summary form, they are: (1) each fallacy has differentiating identity conditions; (2) any charge of fallacy must be thoroughly defended by appeal to satisfied identity conditions; (3) any charge of fallacy is just an initial critical probing rather than a final refutation; (4) any fallacy can have a true conclusion—this must be stressed to students; (5) fallacy theory is a means to an end, helpful reminders of defective moves in argumentation, and students should learn to dispense with the labels in the public arena.

CRM seems to satisfy all five of these strictures. Addressing them *seriatim*: (1) CRM attempts to provide detailed analyses (identity conditions) of each specific fallacy and variations. One virtue of CRM noted in the original article (pp. 9-10) is the fact that both similarities and distinguishing features of traditional fallacies can be revealed, and the fallacy taxonomy thoroughly clarified, justified, and explained. (2) Discussion or defense of a specific fallacy charge will of necessity proceed through the analysis of identity conditions, making explicit all the premises and conclusion in the cogent reasoning pattern and identifying the false premise(s). Justification that a fallacy was indeed committed will involve making it plausible that in fact *this* is precisely the reasoning used, and *these* are the false premises. (3) This justification can be overthrown either by showing that the claimed implicit reasoning is absent or by showing that the questioned premises are true, not false. So, a CRM fallacy charge is not in any sense an attempt at a "final refuta-

tion." The detailed and in-depth analysis permitted by CRM promotes rather than cuts off dialogue. (4) Further, CRM insists only that one or more of the premises be false, and so is quite open to constant reminders to students that the conclusion might be true, even if fallaciously supported in the instance under consideration. (5) Finally, the dominant claim of CRM is that it reveals precisely what reasoning is taking place in committing a fallacy, thus, dispensing with the fallacy label on any occasion is easy. The fallacy label, as discussed above, merely records as worthy of notice a sufficient effective frequency of social abuse using this same unsound reasoning. In itself, that says nothing about the specific unsound reasoning at hand or what is unsound about it. The CRM-trained student can (and often *should*) express the previously hidden implicit reasoning, discuss the fatal attractions of its cogent structure, and then defend the falsity of at least one premise, all without the least appeal to the label or historical tradition.

As a final conclusion to this section, by one major standard of measurement of fallacy theories—the "Johnsonian" standards—I claim CRM to be an adequate and satisfactory theory.

5. Conclusion

For this article I have tried to sustain two strands of argument. The first is that there is some modest empirical evidence that gives *prima facie* support to CRM, making it a possible contender as an informal fallacy theory. The second is that CRM can survive the stringent demands Johnson places on any theory of informal fallacies.

One distinctive feature of CRM is that it preserves so much of the informal fallacy tradition. Since Hamblin (1970), to make that claim is to flirt with professional suicide. Johnson's article almost stood alone at the time it was written in seeking to restore fallacy theory "if not to a position of blazing splendor, then at least matronly respectability" (Johnson, 1995, p. 108). CRM is not based on tradition just for the sake of tradition, however. Rather, the old "standards" represent much past effort in attempting to identify the phenomenon of fallacies, and this creates a presumption that they should be assessed for value rather than uncritically cast aside. And in fact, when examined from the CRM perspective, the old standards so far surveyed have fared quite well. This is certainly one area in which CRM is incomplete—not all of the traditional fallacies have yet been assessed or a CRM analysis attempted for them. But what has already been accomplished speaks well for the sensitivity and acuity of both ancient and contemporary observation within the tradition.

CRM is not a purely empirical theory because it includes one non-empirical component: CRM defines fallacies as containing false premises for which the falsity is due to "culpable ignorance or deception." This feature cries out for further elaboration and critical treatment, though that was not a goal of this present paper. One criticism of CRM is that even this feature as presently stated does not

rule out all cases of non-fallacies. Consider a case in which someone lies about one of the premises while presenting a valid or inductively strong argument. To escape from a boring discussion, I say to a colleague, "If that's my phone, then I need to go pick up my kid." Pretending to listen harder and lying through my teeth I next say, "Ah, yes, that's my phone." Good old *modus ponens*, but hardly a traditional fallacy. However, given my three conditions and the CRM theory as currently developed, I would need to recognize it as an informal fallacy. Whether or not the "culpable ignorance or deception" condition will take care of such cases when more fully developed in the future remains to be seen. And even if not, the assimilation of CRM fallacies to cases of lying and deception may prove to be not overly pernicious, especially if CRM is able on other grounds to give a thorough and systematic account of informal fallacies. In any case, clearly much work remains to be done if CRM is ever to achieve that status.

Perhaps the greatest obstacle to accepting CRM remains its apparent counterintuitive nature. How can *fallacies* possibly involve GOOD reasoning, no matter how hidden or implicit it's supposed to be? I hope this article has gone some small distance in convincing others that, although at first glance counterintuitive, CRM just very well might be an acceptable approach to the nature of informal fallacies.[23]

Notes

[1] I say "similar to" because I do not wish to rule out the possibility that the mental model theory of P. N. Johnson-Laird may work just as well. CRM is neutral at this time as to the best cognitive theories of reasoning.

[2] Earlier versions have sometimes omitted the "A is wrong" phrase, thinking that it may be redundant given the "morally justified" clause.

[3] See, for example, Douglas Walton, 2000, p. 120. Walton cites a credible threat literature survey by Seidenberg and Snadowsky (1976).

[4] http://www.chss.iup.edu   Look for links to the Philosophy Department and then to the Reasoning Analysis Test under my name.

[5] Davis has not produced just conceptual evaluations and arguments; rather, his account is replete with a large number of concrete examples to illustrate his critical points. Here is one minor example, drawn randomly, in which Davis contests the attempt by some Gricean theorists (Brown and Levinson, Atlas, Schiffrin, and Searle) to liken implicature to inference. Consider two dialogues offered by Davis (1998):

A: Let's stop and get some money for groceries.
B: The bank was flooded yesterday, so it may not be open.

A: Let's stop and have a picnic by the river.
B: The bank was flooded yesterday, so it may not be open.

The ambiguity of *bank* means we must use the references to money and the river as clues or evidence to disambiguate each of B's statements. But, as Davis points out, neither of these contextual clues "determines" what B meant. However idiosyncratic, B could have been referring to the riverbank in the first dialogue and to the financial institution in the second. Thus, implicatures cannot be inferences because it is possible for the implicate to be false in each dialogue—i.e., it is not sufficiently "determined" to be true (Davis., 1998, pp. 124-126).

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