ISSA Proceedings 2014 – Delineating The Reasonable And Rational For Humans

Abstract: The notions of “rational” and “reasonable” have much in common but are not synonymous. Conducting a review of the literature points to (at least) two distinct but related ideas as well as a middle “grey” area. This paper investigates and compares some characterizations of these notions and defends the view that focusing on reasonableness is best for those interested in human instances of reasoning and argumentation.

Keywords: argumentation theory, consistency, human, rational, reasonable.

1. *Introduction*

Glenn Greenwald, while speaking of his and his colleague Laura’s initial gut instinct affirming the credibility of the leaker who would later be revealed as Edward Snowden, explains that, “[r]easonably and rationally, Laura and I knew that our faith in the leaker’s veracity might have been misplaced” (2014, p. 13). Greenwald then goes on to offer reasons for this claim, such as not knowing the leaker’s name, recognizing the possibility that the leak could be an attempt at entrapment, or that the leaker could be someone just looking to ruin their credibility. As an accomplished journalist, author, and former litigator, Greenwald is no stranger to recognizing the importance of words, their definitions, and how they are received by his audience. Thus, I suspect he articulated the possibility of his and Laura’s error on both reasonable and rational grounds for a reason, even though he does not provide an explanation regarding the difference between them.

As van Eemeren and Grootendorst have pointed out, “[w]ords like “rational” and “reasonable” are used in and out of season in ordinary language. It is often unclear exactly what they are supposed to mean, and even if it is clear, the meaning is not always consistent” (2004, p. 123). Accordingly, the point of this paper is to investigate some of the differences between the ideas of the reasonable and rational from a philosophical perspective, but which I hope will also sound reasonable to the everyday language user. In what follows I will argue

that there is some consistency in the two related but distinct ideas which emerge across a variety of texts. I will further argue that the notion of the rational is typically narrower than the notion of the reasonable and that those interested in investigating human reasoning and argumentation ought to focus on reasonableness. In order to proceed, I will start the second section by reviewing some characterizations of the notion of rationality. The third section, then, will discuss the notion of the reasonable, followed by a comparison of the two ideas in the fourth section. The conclusion will summarize the arguments presented and indicate avenues for future research.

2. *The rational*

These days, discussions of the meaning of "rational" and what it is to be rational or to think or act rationally, commonly occur in economic and philosophical circles. While clearly there is not time enough to cover all of the conceptions of rationality which have been offered, in what follows I will use a general discussion provided by Amartya Sen which allows for easy connection to other views.

In his introduction to the book *Rationality and Freedom*, Sen notes that there are three common views of rationality described as "rational choice". They are

1. internal consistency,
2. self-interest maximization, and
3. maximization in general.

Internal consistency is described as the assessment of the relation between choices in different situations, comparing what are chosen from different sets of alternatives entirely in terms of the choices themselves (2002, pp. 19-20). In other words, they are internal "in the sense that they require correspondence between different parts of a choice function, without invoking anything outside choice (such as motivations, objectives and substantive properties)" (p. 122).

Leaving aside discussion of the term "internal" from the economic literature, the notion of consistency is crucial for some explanations of rationality found in philosophy. For example, consistency is a dominant idea in what has been referred to as formal deductive logic, mathematical logic, or the introductory level of these topics, 'baby logic. All of these views support the notion that an argument is considered rational to the extent that the premises are true and the conclusion necessarily follows from the premises (Johnson, 2012, p. 121). This consistency is ensured through the application of formally valid rules of logic, demonstrable

through the use of truth tables and other theoretical apparatus.**[i]**

In terms of dialogue logic, rationality is also evaluated according to consistency. In the basic case of a simple question and answer dialogue that only permits 'yes' or 'no' answers, "The questioner's objective is to force the answerer to affirm a proposition that implies the denial of some proposition that he or she had earlier answered" (Blair, 1998, p. 327). In other words, the questioner attempts to have the answerer provide inconsistent answers.

Finally, John Broome also highlights the importance of consistency to rationality as a matter of requirement. For Broome, the property of rationality is defined by the requirements of rationality, so listing those requirements is the way to describe it (2013, p. 149). Importantly, while he admits to providing only an incomplete list of requirements, his first four requirements of synchronic rationality (attitudes at a single time) have to do with consistency and deduction (pp. 149ff). For example, the requirement of *No Contradictory Beliefs* says that "rationality requires of *N* that *N* does not believe at *t* that *p* and also believe at t that not *p*" (p. 155).**[ii]** As well, as the *Modus Ponens Requirement* states that "Rationality requires of *N* that, if *N* believes at *t* that *p*, and *N* believes at *t* that if *p* then *q,* and if *N* cares at *t* whether *q*, then *N* believes at *t* that *q*" – in short, that *Modus Ponens* holds (p. 157).

Returning now to Sen's discussion, given the difficulty in assessing the consistency of choices without invoking an outside principle, Sen claims that it is the second view of rationality that has dominated contemporary economics (2002, p. 22). Rationality on this view is the "intelligent pursuit of self-interest" wherein "the individual may value anything, but in this view he chooses entirely according to his reading of his own interests" (p. 23). One main difficulty with this view of rationality is the observed fact that people often work in cooperation and in situations counter to self-interest. For example, people often refrain from littering even if no one is around who might judge them if they were seen. A further problem is that such a view of rationality, because it comes from economic models, is focused on behaviour and action, i.e. practical reasoning and it says very little about the beliefs people come to, or their theoretical reasoning.

The third commonly held view, maximization in general, allows for people to act in cooperative and morally good ways – for example, by working toward a maximization of social welfare (p. 37). Such morality is, however, far from

necessary. As Sen points out, “maximizing behavior can sometimes be patently stupid and lacking in reason assessment depending on what is being maximized” (p. 39). For this reason, as well as the reasons above,**[iii]** Sen rejects these three views as providing a sufficient account of rationality, even though he grants maximization in general the role of a necessary condition.

Instead, Sen champions a much broader view of rationality, interpreted, “as the discipline of subjecting one’s choices – of actions as well as of objectives, values and priorities – to reasoned scrutiny… as the need to subject one’s choices to the demands of reason.” (p. 4). On this view, rationality is not a formula or an essentialist doctrine, but rather, uses “reasoning to understand and assess goals and values, and it also involves the use of these goals and values to make systematic choices” (p. 46). Thus for Sen, rationality extends as far as, and into all the domains, that reason does.

Placing reason and reasons at the centre of rationality is relatable to another description of rationally found in argumentation theory, namely Johnson’s theory of Manifest Rationality. Building upon Siegel’s view that, “[w]e need an account of rationality which recognizes various sorts of reasons and which provides insight into the nature and epistemic force of reasons, and which affords the possibility of the rational scrutiny of ends” (1988, p. 131), Johnson describes rationality as “the disposition to, and the action of, using, giving, and-or acting on the basis of reasons” (2000, p. 161). Providing reasons, for example as a premise conclusion complex, is what Johnson calls the illative core. The correct employment of the illative, however, is not by itself sufficient for rationality (p. 165). The important role of scrutiny referred to by both Sen and Siegel also appears under the title of the dialectical tier. Both the illative core and the dialectical tier are a part of argumentation and rationality becomes manifest through argumentation.

Argumentation on this view is teleological and dialectical, that is, is aimed at the rational persuasion of another. Argumentation, then, embraces, increases, and exhibits rationality while depending on the mutual rationality of an Other. This Other, is the source of reasoned scrutiny and responding to them is a central feature of manifest rationality (pp. 159-164). Although Johnson does not say it explicitly, it seems then that on this view one can be considered rational to the extent to which they accurately function with both the illative core and dialectical tier of argumentation.

Both Siegel (pp. 127ff.) and Johnson (2000, p. 14) explicitly highlight that understanding rationality in this way is important for allowing moral considerations into descriptions of rationality and thus overcoming the instrumental conceptions of rationality outlined earlier. For them, rationality is more than finding the most efficient means to your end. It is about the appropriate use and appropriate scrutiny of reasons and reasoning in all of the fields they may be used.

So much for our limited discussion of rationality. The notion of the critical scrutiny of another provides a nice link, however, with one of the most prominent views of reasonableness found in argumentation theory, the pragma-dialectical view developed by Frans van Eemeren and Rob Grootendorst, the topic to which we now turn.

3. *The reasonable*

As one of the most well-known theories of argumentation in the world, the pragma-dialectical theory places the notion of reasonableness at its core. After rejecting the "geometrical" (formally logical) approach and "anthropological" (audience relative) approach, van Eemeren and Grootendorst defend the "critical-rationalist" view of reasonableness which "proceeds on the basis of the fundamental fallibility of all human thought" (2004, p. 131) and attributes "value both to the formal properties of arguments and to the shared knowledge that is necessary to achieve consensus" (p. 129). Reasonableness on this view is achieved though conducting a critical discussion aimed at the resolution of a difference of opinion on the merits. Together, these characteristics mean that any topic of disagreement is open for discussion and reasonableness is determined according to how well or poorly the ideal model for a critical discussion is followed. Thus, reasonableness is viewed as a gradual concept (p. 16).

Further, critical-rationalists hold that "the dialectical scrutiny of claims in a critical discussion boils down to the exposure of (logical and pragmatic) inconsistencies" (p. 132). Van Eemeren and Grootendorst are clear, however, that "[a] procedure that promotes the resolution of differences of opinion cannot be exclusively confined to the logical relations by which conclusions are inferred from premises. It must consist of a system of regulations that cover all speech acts that need to be carried out in a critical discussion to resolve a difference of opinion" (p. 134). Broadening the ground for regulations to all speech acts allows for extra-logical instances of unreasonableness, sometimes known as informal

fallacies, such as the use of force.

The discussion above regarding rationality touched upon what has been referred to here as the "geometrical" view. We have also now just reviewed the basics of the "critical-rationalist" position, leaving us still to review what has been called the "anthropological" view. This view, attributed most commonly to Perelman and Perelman and Obrechts-Tyteca places the audience at the center of the notion of reasonableness, thus earning it the title "anthropological". What is reasonable, then, is audience dependant. Perelman states, "a rule of action defined as reasonable or even as self-evident at one moment or in a given situation can seem arbitrary and even ridiculous at another moment and in a different situation" (1979, p. 119). As we can also gather from this quote, in addition to the flexibility of the audience as determiner of reasonableness, the speaker must also be flexible with any rules of reasonableness. Thus, both rules and audience are context sensitive and play a role in determinations of reasonableness. On this view, the reasonable man, says Perelman, "is a man who in his judgements and conduct is influenced by *common sense"* (p. 118).

Nevertheless, on this view reasonableness is not so relativistic as to remain empty, since if everyone is reasonable, or has common sense, then to be reasonable is to "search, in all domains…for what should be accepted by all" (ibid). Reasonableness carries across instances because "what is reasonable must be a precedent which can inspire everyone in analogous circumstances" (p. 119. See also, Tindale, 2010)

4. *Comparison*

After reviewing such an array of viewpoints, a few comparative observations can be made. First, the first view of rationality, internal choice, seems to be in hard opposition to the last view of reasonableness, dubbed the anthropological view. Indeed, Perelman seems to have had this view of rationality in mind when he declared that, "[t]he *rational* corresponds to mathematical reason, for some a reflection of divine reasons, which grasps necessary relations" (p. 117). However, the two middle views presented, manifest rationality and critical-rationalist reasonableness, do not seem nearly as far apart.

What then are the characteristics of comparison from which we can assess the distance in views? Given this literature review a few characteristics stand out more clearly than others. The first is consistency. While a whole book (or more!)

could be written about the role of consistency in notions of the rational and reasonable, I will limit that discussion here to only say that it seems to me that consistency is the 'God' of rationality, but only a 'god' for reasonableness. In other words, on the far side of notions of rationality, if consistency is violated, then immediately so too is rationality. On the far side of reasonableness, however, if consistency is violated, it may constitute pause for concern or questioning, but it far from immediately dismisses a positive evaluation of reasonableness.

The second characteristic is humanity. On the far side of rationality, humanity makes no appearance. Logic is true regardless of if there is a human mind to think it, or err in it. One of rationality's greatest advantages is its independence from human fallibility. In this realm, calculations trump creativity and deduction holds in all possible worlds. On the other side, "reasonableness should contribute to the idea of the human" (Tindale, 1999, p. 202) and the idea of the human involves moral considerations crucial to reasonableness but nearly absent in rationality (see Boger, 2006).

When we move in from the ends, however, things are not so clear. Indeed there are aspects of Johnson's theory of Manifest Rationality which clearly overlap with what has here been described as reasonableness. On the other side, the pragma-dialectical critical-rationalist view of reasonableness shares some clear overlap with some aspects which have here been identified under the title of rationality. For Johnson, manifest rationality calls for scrutiny which opens the door for morality, both of which are foreign to the far side of rationality but welcomed in reasonableness. For pragma-dialectics, the rigid dictate to attempt to meet ideal rules and the focus on consistency, rings closer to the notions of rationality we have discussed than to those found on the far side of reasonableness (van Eemeren & Grootendorst, 2004, pp. 16, 132).

Aside from being an interesting literature review, one might wonder why this matters for those working on reasoning and argumentation. Part of my interest in the topic began as response to the questions I received after telling people I was working on practical reasoning evaluation. For some, that meant I was working on topics like decision theory as found in economics. On this view, clearly the universal reach of mathematical reason holds the superior position for evaluating decisions over the fallibility of mere human thought. And there is much credit to such a view. For others, it meant I was studying psychology, and how dare I feel pompous enough to offer advice on what counts as reasonable, especially across a

variety of contexts! And there is something to this view as well. One of the lessons I took from these sorts of comments is that the same words indicate for people very different ideas.

I then thought, given that argumentation theorists call their theories, or at least describe the results of argumentation evaluation, rational and/or reasonable, perhaps there is some consensus there. As I hope to have shown, that is not entirely the case. While I have argued that a few general trends can be identified, many of the authors seem content to either use the terms interchangeably or to offer stipulative definitions meant only to hold for that individual work. Although I acknowledge the big gray area in-between the terms, I still think as a community we can be at least a little more precise and consistent. For example, if our work is more focused on human aspects, we can try to stick to reasonableness. If we are less concerned with the human experience, we stick with rationality.

One main reason for holding this position is because, as I also hope to have illustrated above, the human divide seems to already be a prominent aspect in much of the literature. So, going with the flow and keeping the term reasonable for that idea seems more efficient than needlessly fighting the tide. Another reason, however, is because of how I see the relationship between reasonableness and rationality.

I agree with Rigotti and Greco Morasso when they state that reasonableness "exceeds rationality, as it also involves a more comprehensive and more articulated attitude of the human reason" (2009, p. 22). This means that the rational and the reasonable are not always in conflict. Indeed, I also agree with Perelman's sentiment (1979, pp. 121-22) that when the rational and the reasonable mutually support each other there is no problem. But when fidelity to the spirit of a system leads to what seems to be an unacceptable conclusion, accounting for the human components of the system may justify rejection of its suggestion in favour of a more reasonable alternative.

5. *Conclusion*

Back to Greenwald. Using our observations, can we explain why he would use both "rationally and reasonably" to explain why his faith in the authenticity of his then unknown leaker might have been misguided? According to our discussion it could be argued that since faith is not a rational enterprise, but a human one, and it was faith that he had in the leaker, he recognized that faith as irrational. Faith,

which it can be reasonable to have, is then also rejected based on the reasons he provides. i.e. the possibility of being entrapped or having been set up in an attempt to ruin his credibility. Thus, both rationally and reasonably his faith in the leaker's veracity may have been misplaced.

Given that we have only scratched the surface of such a big, but I think important topic, there are many areas for future work. Due to space and time, I have knowingly omitted some very common views on rationality and reasonableness that will have to be addressed in future work – for example, scientific notions of rationality and legal/political notions of reasonableness. A future work could study the extent to which those notions are in congruence with the observations made here.

To conclude: In this paper I have argued that two distinct but related notions of the rational and the reasonable exist. Further, because of how different these ideas can be, it wold be helpful to consistently distinguish between them. I have characterized them based upon observations from a variety of sources where the ideas are commonly employed. The two main observations I have drawn from these characterizations is that while consistency can be viewed as the God of rationality, it is only one of many contributing factors to a notion of human reasonableness. In other words, inconstancy can be reasonable, but it is never rational. The other related observation is that reasonableness is predominantly a human characteristic while rationality remains largely abstract. Finally, while there are already invaluable works and no doubt crucial works still to be done in the realm of rationality, it seems that those most interested in the human experience of argumentation ought to keep the expanded notion of the reasonable in mind as they continue to conduct their research.

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NOTES

i. It should be noted that premise consistency is not a necessary condition for entailment. This has been clearly shown via the fact that any conclusion can be derived from a contradiction.
ii. In addition to the admitted incompletion of the list, it is also important to note Broome's flexibility on the formulation of the differing requirements. For example, he says about this requirement "… I would not object to weakening the formulae in some suitable way" (2013, p. 155).
iii. As well as a number of others which are not crucial for our purposes here but are worthwhile nonetheless.

References

Blair, J. A. (1998). The Limits of the Dialogue Model of Argument. *Argumentation*, 12, 325-339.

Boger, G. (2006). Humanist Principles Underlying Philosophy of Argument. *Informal Logic,* 149-174.

Broome, J. (2013). *Rationality Through Reasoning.* Wiley Blackwell.

Greenwald, G. (2014). *No Place to Hide: Edward Snowden, the NSA, and the U.S. Surveillance State.* Signal.

Johnson, R. (2000). *Manifest Rationality*. Mahwah: Lawrence Erlbaum Associates.

Johnson, R. (2012). Informal Logic and Its Contribution to Argumentation Theory. In J. Riberio (Ed.), *Inside Arguments: Logic and the Study of Argumentation* (pp. 117-138). Newcastle upon Tyme: Cambridge Scholars Press.

Perelman, C. (1979). *New Rhetoric and the Humanities.* Dordrecht: Reidel.

Rigotti, E., & Greco Morasso, S. (2009). Argumentation as an Object of Interest and as a Social and Cultural Resource. In N. Muller Mirza, & A.-N. Perret-Clermont (Eds.), *Argumentation and Education: Theoretical Foundations and Practices* (pp. 9-66). Dordrecht: Springer.

Sen, A. (2002). *Rationality and Freedom*. Cambridge: Harvard University Press.

Siegel, H. (1988). *Educating Reason: Rationality, Critical Thinking and Education*. New York: Routledge.

Tindale, C. W. (1999). *Acts of Arguing: A Rhetorical Model of Argument.* Albany: State University of New York.

Tindale, C. W. (2010). Ways of Being Reasonable. *Philosophy and Rhetoric,* 337-361.

van Eemeren, F. H., & Grootendorst, R. (2004). *A Systematic Theory of Argumentation: The pragma-dialectical approach.* Cambridge: Cambridge University Press.

ISSA Proceedings 2014 – Can Argumentation Skills Become A Therapeutic Resource? Results From An Observational Study In Diabetes Care

Abstract: The paper describes results from an observational study on argumentation in the medical setting, which show how and why argumentation skills can become a useful therapeutic tool in chronic care. The results of the study show that the therapeutic goals of chronic care are strongly linked to dialogic activities such as argumentation, explanation, decision making and information giving. The article discusses how doctors' argumentation skills can be improved, especially in the crucial phase of shared decision making.

Keywords: argumentation schemes, chronic care, decision making, doctor-patient communication, medical argumentation.

1. *Introduction*

When we consider the relationship between the study of argumentation and the professions, the legal domain is probably the one in which the usefulness and applicability of argumentation skills for the achievement of professional goals is the clearest. Such link between the effective use of argumentation and professional goals, however, has not been as clear in other professional domains, such as the medical one.

The medical profession has developed in a such a way that for a long time it did not seem particularly relevant for physicians to be also good communicators and to have particular argumentation skills (see, Moja & Vegni, 2000; Roter & Hall, 2006). The trend of patient-centered care has progressively eroded the paternalistic, biomedical paradigm, collecting evidence to show that when communication between doctors and patients is good, significantly better clinical

outcomes are reached. However, it has also been observed that there is still lack of evidence as to exactly which aspects of communication correlate positively with clinical outcomes (Epstein and Street, 2011).

The therapeutic goals of chronic care are to: educate, counsel and motivate patients. In spite of these goals, it is common to talk with medical doctors and discover that, for example, many of them cannot describe the difference between the activities of information giving and argumentation. It is also common for many of them to not understand immediately why argumentation skills should be useful to them in the first place. An interesting study conducted by the Association of Italian Diabetologists (Musacchio & Zilich, 2013) revealed that diabetes doctors in Italy overestimate the effects of information-giving and are highly frustrated by the fact that after having provided a large and fairly detailed amount of data, patients still do not adhere to prescriptions or suggested behaviors. I observed a similar kind of problem when conducting individual interviews with medical staff at a diabetes outpatient clinic in Italy: the members of staff felt they were conducting rather accurate and complete shared decision-making phases with their patients, but videorecordings collected during the consultations revealed that this was not always the case.

In considering both the goals of chronic care consultations and this disconnect between what doctors do and what they think they are doing, the specific question I address in this paper is if and how argumentation skills could become actual therapeutic tools in the chronic care consultation.

I address this issue by presenting results from an observational study on argumentation in doctor-patient consultations in a diabetes care setting. The aim of the paper is to show that consciously mastering certain argumentation skills could actually become a significant resource for chronic care doctors in their effort to achieve the therapeutic goals of the consultation with their patients. On a more theoretical level, the results of the analysis show that real-life data are necessary to argumentation scholars as a basis to define more specifically the role argumentation can play in a specific context as opposed to other discursive activities, such as explanation, information giving, or others.

2. *The study*

The data I present in the following sections were collected within the framework of an observational study conducted at a diabetes outpatient clinic in northern

Italy**[i]**. The study was aimed at collecting data and insights on the most frequent communicative and argumentative patterns in doctor-patient encounters in an Italian chronic care setting. The clinic is part of the Italian public system and patients are referred to the clinic by their general doctors.

Participants
All the members of the medical staff at the clinic participated in the study: three medical doctors, specialized in diabetes care; two professional nurses, specifically trained for diabetes care; and one dietician. I also recruited 20 patients among the ones assisted at the clinic: 10 men and 10 women affected by Type 2 Diabetes Mellitus, whose ages ranged between 60 and 90. All of them had been assisted at the clinic for more than 5 years and they were chosen randomly. An informed consent was obtained from all the patients involved in the study and from all the members of staff at the clinic.

Data collection
Every time the recruited patients came in for a visit, their encounter with the health care providers was videorecorded. This resulted in an uneven distribution of the recordings for each patient. The recording went on for 21 months and resulted in a collection of 60 videos, for a total of about 1.800 minutes of recorded material.

Analysis
For the aims of the study, I proceeded by first describing the consultations according to the following phases:

1. opening;
2. record updating;
3. discussion of therapy or of eating habits/physical examination;
4. assessment;
5. shared decision making on therapy modifications/dietary recommendations/prescription of new exams;
6. closing/ These phases have been identified by slightly modifying Byrne and Long's (1976) famous representation of the medical consultation to adapt it to the specific features of the encounter in diabetes care.'

Given the specific clinical and therapeutic aims of each phase, in my analysis of the argumentative practices I focused on phase 5, where it was more likely for

argumentation to be used. More specifically, I analyzed the process of shared decision making as an instance of deliberation dialogue (Walton and Krabbe, 1995; Walton, 2006; Walton et al., 2010; Walton, 2010). As in deliberation dialogues, also in this part of the interaction the parties' aim is to answer the question: what should we do?**[ii]**. Deliberation dialogues usually develop in three stages: opening, argumentation and closing.

In the opening stage the parties agree on a common goal and acknowledge that action is needed to achieve it. In the argumentation stage, the parties conduct a discussion on which course of action is the best way to reach the common goal. During the discussion, new information is often introduced, which can bring the parties to alter their original proposals and formulate new ones. In the concluding stage, the parties agree on one proposal for action, which in the model is supposed to be a joint action, while in the case of medical encounters it is usually something that will be carried out by the patients.

For the description of the argumentation schemes, I followed the approach proposed in Walton (1996, 2006), Walton & Reed (2002), and Walton, Reed & Macagno (2008).

The next section draws on the results of such analysis to answer the question central to this paper: if and how argumentation skills can become therapeutic tools in the chronic care encounter. I first describe the results of the analysis that refer to the occurrence of the argumentation stage in interactions. I then report a few examples of doctors' argumentation and a few examples of patients' replies to doctors. Especially in the case of patients' responses, the examples show that identifying argumentation is not always straightforward, calling for a wider and deeper analysis of the kind of communication activities that are performed by the interlocutors.

3. *The results*

The results presented here are a subset from a detailed analysis of 31 out of the 60 videos collected during the observational study. The analyzed videos concern patients talking with doctors or with the dietician. These interactions differ in many ways from the ones with the nurses, which I analyze and describe separately in a paper in preparation.

The argumentation stage

Only in 3 cases out of 31 it is possible to describe an actual argumentation stage, in which doctor and patient both contribute to the discussion by putting forward alternative proposals to achieve a certain shared goal (Walton et al., 2010). In most of the other cases, doctors argue in favor of a generic line of conduct – e.g., "you should exercise more", or "you should lose weight" – without engaging with their patients in a discussion on specific action items. In a minority of cases, there is no argumentation stage because the patient's diabetes is within acceptable ranges and there seems to be no need to change neither the therapy nor the patient's behaviors.

Doctors' argumentation schemes

In my data, doctors' argumentation is realized most frequently by arguments from positive/negative consequences, from means to end, and from cause to effects.

In the following example**[iii]** of an argument from positive consequences, doctor and patient are discussing about things to do to prevent episodes of hypoglycemia, which is a very dangerous complication deriving from the sugar in the blood dropping below certain levels and causing patients a variety of serious symptoms, among which are trembling, dizziness, sweating, loss of consciousness, emotional instability, or aggressiveness. The most effective remedy when the patient starts feeling the first symptoms is to eat some sugar, but what if the crisis happens while driving, on the street, in a store? The doctor argues as follows:

(1)

"You should always carry a sugar sachet in your wallet and not in the pocket of your trousers, because nobody leaves the house without their wallet, but you do change your trousers from time to time, so if you keep the sugar in your wallet you will never forget it"

The following is an example of argument from negative consequences, in which the dietician explains to the patient why she should be careful about eating croissants or similar food too frequently:

(2)

"Croissant is not ideal for you because it is very rich in sugar and fat, and since you need to lose a bit of weight, this does not help you. If you happen to eat it on special occasions, it's ok. But if it happens every day, it is not ok"

The argument from means to end in my data occurs almost exclusively to argue in favor of better performed self-monitoring of blood glucose and in favor of always bringing the glucometer and self-monitoring journal to the encounter. In the following example, the doctor has noticed that the patient is writing in his journal very different (lower) values from the ones that have been recorded in the glucometer. She presupposes (but does not verify explicitly) that the patient is trying to hide the very high values from her and reacts with the following argument:

(3)
"I don't know if you made a mistake or if you wrote down a different value […], but what you write in your journal is for yourself, it's not for me. Is this clear? We are collaborating. In this moment I am working together with you to help you feel better and have a better health. If you do not show all the information, I cannot help you improve"

In another case, the patient asks the doctor if it is really necessary for him to take the insulin three times a day, implicitly suggesting that maybe he could take less. The doctor uses an argument from causes to effects in response to the patient's question:

(4)
"Yes, because insulin controls your blood sugar. If you were not taking insulin your values would be above 400, which can be really damaging for you"

There are also a few cases in which the doctors reason in favor of or against a certain explanation provided by patients to make sense of a phenomenon. In these cases, again, one frequent argument is the one from causes to effects, as in the case below, where the patient complains that ever since he started taking insulin he has seen a weight loss of 10 kilos. The doctor does not agree:

(5)
"You did not lose weight because of the insulin you are taking, but because the management of your diabetes is not perfect yet. When diabetes is not well controlled, you lose weight."

In very few cases, I have observed the use of the argument from waste (Walton 1996). This argumentation scheme is based on the concept that wasting resources or efforts is negative, as in the following example, in which the doctor observes

that the patient has worsened and comments:

(6) “It’s such a pity because you had improved last time”

The implicit point the doctor is making is that the patient could have done a better job at keeping his diabetes under control, because now he has wasted all the effort made previously.

Patients’ responses
As reported in many other empirical studies on doctor-patient consultations, also in my data patients are not the ones who do most of the talking. However, they do participate and one dimension of this participation that is particularly relevant to the point of this paper regards the motivations patients offer for their behaviors, in response to doctors’ noticing a worsening of their diabetes.

Most frequently, these motivations are either offered at the very beginning of the consultation, in the opening phase, or when the doctor asks to see the tests and the self-monitoring; at other times, they come up during the discussion about lifestyles, after the doctor has looked at the general situation and has begun to conduct a deeper analysis of single behaviors.

The motivations patients offer mostly have to do with social events or conditions that somehow get in the way of a proper management of the diabetes. Below I report a few examples:

(7)
“I haven’t always taken my therapy nor done the self-monitoring properly in the past few months because my husband has been very sick and I had to take care of him”

(8)
“I haven’t done the self-monitoring because I have spent a couple of months with my family in Calabria [in the South of Italy] and people were always offering me good things to eat, so then it was not the case to measure my blood glucose”

(9)
“I have been traveling often lately and when I travel I let myself go a little and I don’t do the self-monitoring the way I should”

(10)

“With the job I have, it’s difficult for me to eat properly and to do the self-monitoring when I’m at work”

(11)
“I’ve stopped going to the gym because I got lazy”

A different set of motivations refer to other conditions affecting the patient that impacted on the quality of diabetes self-management:

(12)
“A couple of months ago, I broke my arm, I was so upset, I had to undergo rehabilitation, so I just set aside the diet and the self-monitoring”

(13)
“I have been to the Emergency Room three times last month and maybe that impacted on my diabetes”

(14)
“I have had a flu earlier this month and I think that caused my sugar values to become higher”

4. *Discussion*
I now turn to discuss the results of the analysis in view of the question I set out to answer: can argumentation skills become a therapeutic resource?, by highlighting how and why argumentation in this kind of encounters could be improved.

First, the analysis showed that a complete and effective argumentation stage is almost always missing in the interactions. Literature on shared decision making in the medical encounter has shown a high positive correlation between the presence of shared decision making and patient outcomes, especially patient self-efficacy (Heisler et al., 2013; Lafata et al., 2013; Epstein and Gramling, 2013)**[iv]** As the model of the deliberation dialogue shows, effective shared decision making is based on the ability to use argumentation as a means to support or criticize proposed lines of conduct, therefore it would be crucial for medical doctors to become aware of the process and be able to activate it and conduct it in ways beneficial to patient active participation.

Secondly, in the previous section I reported a description of the argumentation schemes that are frequently used by the doctors in my data. I don’t think these

argumentation schemes pose problems of acceptability or validity, but I believe that in some cases they do at least open questions regarding their effectiveness. If we consider the argument from positive/negative consequences, we know it presupposes agreement between the parties on what is considered positive or negative, on what is considered better or worse. In the data, discussions on value hierarchies never emerge and the value of good health above everything else is taken for granted. This may be correct in a general sense, but diabetes is a disease that does not have particularly annoying symptoms until it is too late. It is likely that patients tend to underestimate the risks connected to their condition because actually they are feeling pretty good, and therefore the possibility of eating a croissant (example (2)) every now and then in practice is placed above the value of good health, simply because the risk connected to eating the croissant is underestimated. This hypothesis is supported by empirical research in the field of psychology, showing that in making decisions people tend to underestimate the probabilities of failure of complex systems, believing that it is more likely for one part at a time to stop functioning (among others, Tversky and Kahneman, 1974). Unfortunately uncontrolled diabetes will impact on eyes, heart, kidneys and nerves all at the same time, leading to the system's complete failure in the long run. Therefore, also in this case, the awareness of the importance of agreement on values as a precondition for the effectiveness of the argument from positive/negative consequences seems to be a skill that is lacking and that could be very useful to doctors.

Regarding the use of the argument from means to end, the question arises whether the importance of the end is actually shared by the parties. In example (3), the doctor argues that the patient should report in his journal his exact values, because otherwise she – in her capacities of doctor and *counsellor* – will not be able to help him appropriately. This end may not be shared by the patient, who might have an understanding of the doctor's role as that of a 'controller' rather than a 'helper'. Indeed, in a few other encounters the patients expressed quite clearly their perception of the doctor as the person who not only guides but also controls them. Evidence needs to be collected regarding patients' perceptions of doctors' authority in order to determine the effectiveness potential of the argument from means to end used in this way.

The argument from cause to effect is often necessary as a means of patient education: but are causal relations regarding scientific phenomena always

understood by patients? Examples (4) and (5) provide rather clear causal correlations, but would it help the patient to understand why and how insulin keeps the blood sugar down? Or why and how uncontrolled diabetes makes him lose weight? Maybe it would, at least according to researchers in education, who show that understanding is at the heart of behavior change (Asterhan and Schwartz, 2009). Other scholars in the same field have also collected evidence to show that understanding is not improved by *listening* to explanations about *phenomena but by talking about phenomena and their causes* (De Vries, Lund and Baker, 2002).

Finally, I point out an analytical difficulty that emerged in relation to the description of doctors' argumentation practices. There are many cases in the data in which it is very difficult to decide whether we are looking at instances of argumentation or explanation. Typically, these are cases in which patients are not doing well clinically and have not adhered to the recommended behaviors (correct self-monitoring; lifestyle changes). In almost all of these cases, the doctors assess the situation and then start providing information about the causal relations between the correct behavior and the possibility to achieve a better health condition, while the patients remain silent. From the point of view of the analysis, the difficulty is posed by the fact that in order to describe these causal relations as instances of explanations or argumentation we would need to know what the doctor had in mind, i.e. if she presumed to be addressing a misunderstading – in which case her response would function as an explanation – or a disagreement – in which case, her response would function as an instance of argumentation.

Also regarding the examples showing patients' responses to doctors, a similar question arises: should patients' responses be accounted for as instances of argumentation? If so, which are the standpoints being supported or criticized? Are patients casting doubt on the doctors' points of view or are they doing something else?**[v]**

If we take examples (7) to (11) and consider them in the context of the interactions in which they occur, it is very difficult to describe them as moves aimed at casting doubt on the doctors' claim that the self-monitoring has not been done correctly, that the diet needs to be followed more accurately, or that exercising more is necessary. Rather, they look more like instances of dispreferred responses, i.e. turns in which a party is in a position to provide the response that is considered to be contrary to the interlocutor's expectations

(Pomerantz and Heritage, 2013; Pomerantz, 1984).

Are the patients therefore not arguing? And if not, what are they doing? My understanding is that patients in these cases *are* using argumentation but not with the aim of making a conceptual point, rather in favor of behaviors that can be generally defined as 'incorrect', *except* in the specific circumstances described in each case. What the patients seem to be saying is that *since the contextual conditions in which they found themselves had temporarily changed* a behavior that would normally have been considered as unacceptable could be excused. This strategy probably has a main face-saving function and the doctors must be somehow aware of it because they seldom press the patients to admit that their behaviors were actually *not* excusable. Instead, they either change the subject, or just put forward rather generic recommendations to behave differently from now on. In spite of being socially preferred, perhaps this kind of reaction from the doctors is not the most functional to the attainment of the therapeutic goal of patient education, because the *special conditions* the patients in examples (7)-(11) describe are precisely the kind of conditions in which one should keep his/her diet, exercise and self-monitoring even more under control. A potential misunderstanding of the nature of their disease underlies these patients' motivations, but the doctors do not seem to perceive it and they do not address it.

As regards the other set of examples, (12)-(14), I consider them different from the previous ones because they aim at describing a relation of cause-effect between an additional health condition and a change in the sugar values. They look more like explanations and indeed in these cases the doctors responded by accepting them and providing argumentation to support them, thus fulfilling their goal of patient education.

In summary, the set of examples regarding patients' responses shows patients arguing that in certain specific circumstances a normally unacceptable behavior could be accepted. In other words, patients show how their 'lifeworld' is impacting on the self-management of their diabetes, disclosing important information in relation to their lifestyles. The potential for an instructive and constructive discussion on what is the best line of conduct even in those exceptional circumstances is there, but doctors rarely see it and take advantage of it.

Finally, in many cases, patients' accounts for their behaviors are provided at the

very beginning of the consultation or just as the doctors are beginning to analyze the patient's clinical picture. These cases are very interesting because they are usually preceded by some form of self-accusation, which triggers always the socially preferred reaction of the doctors who immediately disagree with the self-accusation (Pomerantz, 1984). The problem is that this 'social game' seems to 'distract' the doctors from their clinical goal, which is to assess the reasons why the patient believes s/he has not behaved properly. This almost never happens, and the patients are excused but not further questioned about their behaviors.

Limitations

The observational study on which this paper is based has of course a few limitations. First, it did not aim at quantitative representativeness. The data were collected in only one clinic and a somewhat peculiar one, as it is not the norm for diabetes doctors in Italy to be working in such a big team of professionals.

Secondly, the medical staff at the clinic had all had some training at different moments in their professional life on patient-centered care or communication with patients. It would be interesting to observe the communication practices of doctors with no such training.

I did not have the possibility to collect feedback from the patients regarding their perceptions on the encounters with the doctors, which would also have been interesting for a deeper understanding of the dynamics within the encounter.

Finally, it was not always possible to place the videocamera so as to make it totally unobtrusive. The videos give the impression that this did not substantially alter the spontaneity of the interactions, but of course this cannot be proved in any way and it may well be that without the camera in place the persons involved would have behaved differently.

5. *Conclusions*

Can argumentation skills become a therapeutic resource? Could argumentation skills become a normal professional asset for chronic care doctors? I believe even the limited results reported in this contribution point in the direction of an affirmative answer to these questions. Becoming aware of and mastering argumentation skills could actually provide chronic care doctors with crucial tools for the achievement of therapeutic goals that almost entirely depend on the quality of communication during the encounter with patients.

Interestingly, by looking at argumentation practices from this perspective can also inspire argumentation scholars to improve and refine their methods of analysis. The analytical challenge I faced when trying to make a clear-cut distinction between instances of argumentation and explanation reveals the necessity for the young field of medical argumentation to take a closer look at the context of interaction it is studying, in order to describe its relevant features and the criteria to identify and evaluate the instances of argumentation within its boundaries.

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NOTES

i. The project's website can be found at: https://sites.google.com/site/docpatcommpro/ On the project's results, see Bigi 2014

ii. In my analysis, I did keep in mind the fact that deliberation dialogues often overlap with information-seeking dialogues and persuasion dialogues, but I am not giving a detailed account of this overlap in this paper. An article discussing the use of the deliberation dialogue as a useful model for the interpretation and analysis of this phase of interactions in the medical context has been submitted by the author to a scientific journal and is currently under review.

iii. All examples have been translated by the author from the original data in Italian.
iv. Self-efficacy is defined as patients' understanding of their condition and treatment, and patients' self-confidence in their own self-care abilities (Heisler et al., 2002).
v. I thank Nanon Labrie and Fabrizio Macagno for inspiring discussions on this specific topic.

References

Asterhan, C.S.C., & Schwartz, B.B. (2009). Argumentation and explanation in conceptual change: indications from protocol analyses of peer-to-peer dialog. *Cognitive Science,* 33(3), 374-400.
Bigi, S. (2014). Healthy Reasoning: The Role of Effective Argumentation for Enhancing Elderly Patients' Self-management Abilities in Chronic Care. In: G. Riva, P.A. Marsan & C. Grassi (Eds.), *Active Ageing and Healthy Living* (pp. 193-203). Amsterdam: IOS Press.
Byrne, P.S., & Long, B.E.L. (1976). *Doctors talking to patients.* London: HMSO.
De Vries, E., Lund, K., & Baker, M. (2002). Computer-mediated epistemic dialogue: explanation and argumentation as vehicles for understanding scientific notions. *The Journal of the Learning Sciences*, 11(1), 63-103.
Epstein, R., & Street, R. (2011). The values and value of patient-centered care. *Annals of Family Medicine,* 9, 100-103.
Epstein, R.M., & Gramling, R.E. (2013). What is shared in shared decision making? Complex decisions when the evidence is unclear. *Medical Care Research and Review, Supplement* to 70 (1), 94S-112S.
Heisler, M. et al. (2002). The relative importance of physician communication, participatory decision making, and patient understanding in diabetes self-management. *Journal of General Internal Medicine,* 17 (4), 243-252.
Heisler, M. et al. (2003). When do patients and their physicians agree on diabetes treatment goals and strategies, and what difference does it make? *Journal of General Internal Medicine*, 18 (11), 893-902.
Lafata, J.E. et al. (2013). Patient-reported use of collaborative goal setting and glycemic control among patients with diabetes. *Patient Education and Counseling*, 92 (1), 94-99.
Moja, E., & Vegni, E. (2000). *La visita medica centrata sul paziente*. Milano: Raffaello Cortina Editore.
Musacchio, N., & Zilich, R. (2013). *Brain&Dia: la ricerca emozionale di AMD*. Il

Giornale di AMD, 16, 254-264.
Pomerantz, A. (1984). Agreeing and disagreeing with assessments: Some features of preferred/dispreferred turn shapes. In: J.M. Atkinson & J. Heritage (Eds.), *Structures of Social Action: Studies in Conversation Analysis* (pp. 57–101). Cambridge: Cambridge University Press.
Pomerantz, A., & Heritage, J. (2013). Preference. In: T. Stivers & J. Sidnell (Eds.), *Handbook of Conversation Analysis* (pp. 211-228). Hoboken, NJ: Wiley-Blackwell Press.
Roter, D., & Hall, J. (2006*). Doctors talking with patients/Patients talking with doctors.* Westport: Praeger.
Tversky, & Kahneman (1974). Judgment under uncertainty: heuristics and biases. *Science*, 185, 1124-1131.
Walton, D. (1996). *Argumentation Schemes for Presumptive Reasoning*. Mahwah, NJ: Erlbaum.
Walton, D. (2006). How to make and defend a proposal in a deliberation dialogue. *Artificial Intelligence and Law*, 14, 177-239.
Walton, D., & Reed, C. (2002). Argumentation Schemes and Defeasible Inferences. In: G. Carenini, F. Grasso & C. Reed (Eds.), *Workshop on Computational Models of Natural Argument, ECAI 2002, 15th European Conference on Artificial Intelligence* (pp. 45-55).
Walton, D., Reed, C., & Macagno, F. (2008). *Argumentation Schemes.* Cambridge: Cambridge University Press.
Walton, D.N. (2010). Types of dialogues and burdens of proof. In: P. Baroni, F. Cerutti, M. Giacomin & G. R. Simari (Eds.), *Computational Models of Argument: Proceedings of COMMA 2010* (pp. 13-24). Amsterdam: IOS Press.
Walton, D.N. et al. (2010). Argumentation in the framework of deliberation dialogue. In: C. Bjola & M. Kornprobst (Eds.), *Arguing Global Governance* (pp. 201-230). London: Routledge.
Walton, D.N., & Krabbe, E.C.W. (1995). *Commitment in Dialogue: Basic Concepts of Interpersonal Reasoning.* Albany, NY: State University of New York Press.

ISSA Proceedings 2014 – What Is Informal Logic?

Abstract: In this keynote address at the eighth ISSA conference on argumentation I describe the emergence of two themes that I think are key to the constitution of informal logic. One is the development of analytic tools for the recognition, identification and display of so-called "non-interactive" arguments. The other is the development of evaluative tools for assessing deductive, inductive, and other kinds of arguments. At the end I mention several current interests of informal logic.

Keywords: argument analysis, argument appraisal, informal logic, non-interactive argument, reasoning appraisal

1. *Prefatory remarks*
Good morning.

If you consider this year's ISSA keynoters, you can't help but get the impression of a kind of Aristotelian *trivium* of argumentation theory – rhetoric, dialectic and logic. Professor Fahnestock represents rhetoric. Professor van Eemeren represents dialectic (at least the Pragma version of it). So Professor Blair must represent logic. Alas, I am no logician, as my friends are quick to tell me. What I will try to do is represent informal logic, which is a some-what different kettle of fish.

I must insert here two unplanned remarks. First, as you know, Frans van Eemeren did not rep-resent dialectic in particular in his address yesterday. Instead, he took the point of view of an eagle flying high above, surveying the argumentation forest below – albeit a Pragma-dialectical eagle. Today, in contrast, I will be taking the point of view of a sparrow, surveying just one species of tree in the forest.

Second, in case you have read it in the conference program, you will know that, along with Ralph Johnson, I am credited with inventing and developing informal logic. I would be happy to take that credit. However, there are some dozens of other people, several of whom are in this room today and many who have stood on this dais at earlier ISSA conferences, who would rightly take exception. "What

about me?" they can say. No, informal logic's rise and development are due to the contributions of many scholars, and no one or two people can take credit for it. And in my talk this morning, of course, I speak only for myself.

2. *Introduction*

What motivated my topic – What is Informal Logic? – is my difficulty in coming up with a one or two sentence answer whenever someone asks me, "What IS informal logic, anyway?" or "What exactly is informal logic?"

It's not easy to say what informal logic is. I'm not entirely happy with the latest definition by Johnson and me that is quoted in the chapter on informal logic in HAT – the *Handbook of Argumentation Theory*, which is the successor to *FAT, Fundamentals of Argumentation Theory*. (By the way, the HAT chapter on informal logic is excellent.) Also, I'm quite unhappy with several features of the informal logic entries in the online Stanford *Encyclopedia of Philosophy*, and in *The Cambridge Dictionary of Philosophy* and *The Oxford Companion to Philosophy.* But instead of itemizing my differences, I want to use this occasion to spell out what I take informal logic to be.

I will do this by telling the story of two themes that feature in its development and that I think are central to what constitutes informal logic.

A word of warning before I start. You need to be wary of the notion that in the term "informal logic," the word 'informal' means "informal" and the word 'logic' means "logic." It's like the use of the term 'football' north of Mexico. In the USA and in Canada, the games called "foot-ball" don't much call for the players to control a ball with their feet. Informal logicians use variables, and talk about argument schemes, which are quasi formal. So informal logic is not strictly-speaking informal. And if you understand by logic the study of axiomatized deductive systems, informal logic is not logic. There is a story about how informal logic got its name, but it sheds no light on what informal logic is, so I won't tell it today.

3. *Background*

Let me start with a bit of background.

Informal logic, from the beginning in the 1970s and 1980s, has been motivated by goals of philosophy classroom instruction. Its subject matter was reasoning and arguments. And the enterprise was normative. The objective might be to improve

reasoning or critical thinking skills, or to assess the logic of everyday discourse. Reasoning and critical thinking skills were seen to be skills in judging the probative value of one's own reasoning and of others' arguments. Assessing logic was seen as recognizing, interpreting and evaluating the probative value of arguments. The *telos* of the enterprise was the formation of justifiable cognitive and affective attitudes, and the assumption was that understanding the norms of cogent reasoning and arguments, and acquiring some skill in their application, will contribute to that end.

The value in question was and is epistemic or probative merit – not communicative or rhetorical merit. A logically good argument, on this view, contributes to justifying adopting the attitude in question – be it a belief, a judgement, a disposition to act, an emotion, or whatever. Whether such justification is in some cases – or always – relative to audiences or circumstances was and is an open question.

We focused, in the beginning, on the arguments found in the print media: in newspapers and magazines. We did so for several reasons. For one thing, these were not the artificial arguments of traditional logic textbooks – arguments that were designed to illustrate elementary valid argument forms or for practicing the use of truth tables – like this one from Irving Copi's *Symbolic Logic* (1954):

If I work then I earn money, and if I don't work then I enjoy myself. Therefore if I don't earn money then I enjoy myself.

Those examples sent the wrong message to the students, who wanted to improve their ability to understand and assess the arguments used in public life. So the arguments we used for teaching purposes were about the topical issues of the day. They thereby served to demonstrate that arguments are thought to make a difference. Their content might be expected to be familiar to students and of interest to them, and the course would not have to presuppose technical background knowledge. Short examples could be found in letters to the editor; slightly longer ones in editorials; and even longer ones in opinion columns. One wag said we were teaching "newspaper logic."

If you need a label for such writings, you might call them "non-interactive" (see Govier 1999). While targeting some set of readers, the writer is not engaged in a face-to-face dialogue with anyone. The writer might be responding to previous

comments and the arguments might antic-ipate and respond to various kinds of objections. So the text can be dialectical. However, any direct interplay is between the writer and that commentator or objector, not between the writer and just any reader. In the early days, informal logicians did not think to take these non-interactive pieces to be conversations or dialogues. Later, some were attracted to the view that such texts might fruitfully be *modeled* as having salient properties of two-party conversational interactions. Others, however, resisted that model as misleading for non-interactive contexts.

As teachers of what we originally thought of as practical or applied logic, we were interested in guiding our students in assessing the logic of the reasoning employed in the arguments expressed in these non-interactive writings. To do so required recognizing the presence of arguments and getting at their features. Hence, the first task was to devise guidelines to aid in finding and extracting arguments, and then displaying them for critical examination. The second task was to assess their cogency, either from the point of view of an onlooker or from the point of view of the target audience.

4. *Analysis*

I want to talk a bit about what we came to see as required to "get at" the arguments. This is the first theme in informal logic's development. In a few minutes I will turn to the second theme, the question of the logical norms to be used in judging the arguments' cogency.

We quickly learned that sending students off to find arguments requires them to recognize that a communication might well be serving other purposes. Often it will consist of just a report or a description or a non-argumentative narrative. Sometimes the text is confused or confusing, so that it's unclear whether its author intends to be arguing. Sometimes the text makes some gestures in the direction of arguing, but on any interpretation the author's reasoning is muddled.

So it turns out that the interpretive tasks of argument recognition and identification, on the one hand, and argument assessment, on the other hand, while they're distinguishable, are not independent. That's because whether the author may be taken to be presenting an argument can depend on whether an at least plausible argument can be attributed to what he or she has written. That can depend on whether there are sentences that may plausibly be taken to be functioning in probative support relationships with other sentences. So the

recognition and identification of arguments in such writings can require the logical assessment of argument candidates.

To recognize the presence of argument in non-interactive texts, we found that it helps to identify what might be called the *rhetorical situation* of the text. Doing so includes, when possible, noting such features as the identity of the author, the author's ethos, the intended audience, the occasion, the venue, the surrounding circumstances, the author's objectives, any applicable institutional norms, and the function of the discourse. It also helps, we found, to identify what might be called the *dialectical environment* of the text. Here I have in mind such things as debates, disagreements, controversies and so on surrounding the author's topic; alternative positions to the author's view; and any particular opponent with whom the author has a history of dispute.

It also helps to have some knowledge of the *habitats* of arguments in general, such as locations of controversies or other contexts where burdens of proof arise. It requires knowing the signs of arguments, such as illation-indicator terms, qualifiers and hedging expressions, plus an appreciation of their fickleness. And it can help to have a sense for what counts as a reason in the subject-matter in question.

By the way, speaking of fickle illative terms, have you noticed the non-illative use of 'so' that has become widely used by experts interviewed in the media? They'll start off their explanations with a "so": "So, our study shows that … ." It seems to function like taking a breath before speaking.

So, having recognized the presence of argument, next is the *identification* of the argument. We've established that it's a bird making those noises in the bushes, but what kind of bird is it? Identifying the argument means identifying its parts and their functions, and identifying its structure. Here are to be set out the reasons, broken down into premises, and the claims, identified as their conclusions. Qualifications and hedging are to be noticed. We debated the distinctions among patterns of direct support such as linked, convergent, cumulative, and chained or serial. (And I see from the conference program that this is still a live issue.) Also, aside from direct support for the main conclusion, what various defensive supporting functions might be being served? We distinguished among defending a *premise* against an objection, defending a *premise-conclusion* link against an objection, arguing against alternatives to the

conclusion, and defending the conclusion against arguments directly opposing it. Some called for, or allowed for, the reformulation of parts of the author's original text so that the roles of given sentences in the argument can be made more evident. And some argued that unexpressed but assumed or needed components have to be identified and inserted. It also helped here to have some familiarity with the subject matter.

Having developed guidelines to help understand the argument, we sought ways to portray that understanding so the argument could be methodically assessed. Many developed premise and conclusion numbering conventions that designate any sentence's place in the structure of the argument and/or its function in the argument. As well, many developed tree diagram conventions that do the same jobs. In my experience, often students who can easily master the numbering conventions have trouble working with tree diagrams, and vice versa, so having both seems pedagogically useful.

These tasks of recognition, identification, and display lead up to the assessment of arguments in non-interactive texts. The guidelines help any assessor to gain an understanding of the arguments and so be in a position to judge their probative merits.

By the way, the need to formulate such guidelines does not belong to informal logic in particular. It belongs to any approach that undertakes to analyze the arguments in non-interactive texts. Still, one thread in informal logic is the generation of practical advice for the recognition, identification and display of arguments in non-interactive discourse. This thread was and is practice-driven; and workable and economically teachable guidelines were and are its objective.

5. *Appraisal*

I now turn to the second theme that I'm claiming characterizes informal logic, namely the logical appraisal of these arguments.

To judge the logical merits of an argument, two kinds of decision are needed. Number one: how acceptable are the reasons? And number two: how well justified are the inferences from the reasons to the claims?

Some informal logicians, me among them, have thought that these questions can be asked from at least the following two perspectives. One perspective is that of an addressee or target of the argument. This can be a person or group to whom

the author is directing his or her argument. Or it can be anyone who is interested in the argument because he or she wants to decide whether to accept its conclusion. An addressee would be someone trying to decide on a course of action, such as how to vote, whom the arguer is trying to win over, or she'd be a scientist presented with evidence for a novel theory in her field, who wants to decide whether to give it credence. The other perspective is that of an onlooker. By an onlooker I mean someone who can detach himself or herself from interests or commitments touched by the argument, and who is in the position of judging how well the arguer makes his or her case to the audience in question. An onlooker would be a teacher grading a student's essay or a referee for a submission to an academic journal, each of whom has to decide how well the author has made his or her case relative to the burden of proof that's appropriate in the circumstances.

5.1 *Premise acceptability*

Let me first say a word about the informal logic criterion for the appraisal of reasons.

Any inference made in reasoning, or invited in an argument, is clearly only as good as what it starts from: namely, its reasons, expressed through its premises. Now, you must understand that most nascent informal logicians had been trained in the analytic philosophy of the mid-twentieth century, according to which good premises are true premises. So it required a break with our upbringing to abandon this tradition and follow some of Charles Hamblin's arguments in his 1970 monograph, *Fallacies*. Hamblin proposed that, for cogency, the truth of premises alone is not sufficient, since premises would have to be not only true but also known to be true. And truth is not necessary, either, he said, since "reasonably probable" premises would be good enough (see Hamblin 1970, Ch. 7). However, not many informal logicians went all the way with Hamblin's dialectical conception. According to it, the appropriate criterion (both necessary and sufficient) for premises is that they be accepted, in the sense that they be commitments of the addressee of the argument. But there's a problem for non-interactive arguments addressed to a diverse or unknown audience: *whose* commitments are we talking about? Furthermore, in some cases there are propositions available for use as premises that are obviously true and known by all concerned to be true. But in the absence of obvious truth, many informal logicians opted instead for the criterion that the premises at least must be *worthy*

of acceptance, that is, be accept*able*. Of course, then the question is, "What counts as acceptability? That is, what makes claims that are used as premises in reasoning or arguments worthy of acceptance, and by whom?" Informal logicians have made serious, even booklength, attempts to answer that question.

5.2 *Logical assessment: Deductive validity and inductive strength*
Besides the acceptability of the reasons, there is the assessment of the consequence relations – the premise-conclusion links – of reasoning and arguments.

Our thinking about premise-conclusion relations developed along the following lines. Our education in analytic philosophy meant that our basic training in logic, a training almost everyone shared, was in the symbolic logics of the day – at a minimum, formal propositional logic and predicate logic. These are logics of the *deductive* inference relation called "validity." To use formal methods to test the inference relations of arguments in a natural language for deductive validity requires that the arguments be translated into standard logical form. However, doing so requires an understanding of standard logical form. We'd have to teach our students some propositional and predicate logic before they could even interpret these newspaper arguments. Moreover, we discovered that reformulating the newspaper texts usually required simplifying their sentences and thus changing the sense of the arguments. And finally, when inspected for conformity to the established rules of inference of deductive logic, such arguments often proved to be deductively invalid, even when, independently, they seemed to be cogent.

One hypothesis suggested to explain this last anomaly was that the arguer was making unexpressed assumptions, which, once added to the stated argument as additional premises, would render it deductively valid. The trouble is that, in many cases, the candidates for such needed missing premises are patently false. Often, a plausible argument's deductive validity could be saved only by adding problematic or false assumptions to it.

Of course many of these arguments were not intended to be deductively valid, but instead, to be inductively strong. Thus arguments in support of causal explanations, statistical generalizations from samples to populations, inductive analogies, and so on, could have their conclusions well-supported by their premises even though they were deductively invalid. So the options became that

an argument with acceptable premises would be logically cogent if it were either deductively valid or else, if deductively invalid, if it were inductively strong.

5.3 *The deductive/inductive dichotomy challenged*

An early question debated in the informal logic community was whether deductive validity and inductive strength are the *only* criteria for logically respectable inferences from reasons to claims. That is, are all arguments either deductive or inductive – is the deductive-inductive dichotomy exhaustive?

To be sure, that dichotomy can be made exhaustive by definitional fiat. Inductive reasoning can be defined as any reasoning that is not deductive. But the plausibility of this dichotomy relies on assuming a very broad conception of induction. For logicians, however, inductive reasoning provides support for its conclusions in degrees of probability specifiable numerically, or it is reasoning that relies on the assumption that experienced regularities provide a guide to unexperienced regularities. Here, for instance, is a passage from the introduction of the article on inductive logic in the *Stanford Encyclopedia of Philosophy* (Hawthorne 2014):

This article will focus on the kind of … approach to inductive logic most widely studied by philosophers and logicians in recent years. These logics employ conditional probability functions to represent measures of the degree to which evidence statements support hypotheses. This kind of approach usually draws on Bayes' theorem, which is a theorem of probability theory, to articulate how the *implications of hypotheses about evidence claims* influences the degree to which hypotheses are supported by those evidence claims.

Well, that is a *not* a broad conception of induction. It leaves out reasoning in which probability in the sense of *plausibility* or *reasonableness* is the appropriate qualifier or where it makes no sense to express the strength of support as a numerical probability. It leaves out reasoning that relies on reasons other than experienced regularities. Denying that the deductive-inductive dichotomy is exhaustive implies that there can be logically good reasoning that is deductively invalid and to which the norms of induction narrowly defined do not apply.

Two examples were proposed early on in the informal logic community to show that some reasoning doesn't seem to fit either the deductive or the narrow inductive category. One example, due to John Wisdom (1991), was the reasoning

or the argument that Govier (1999) has called “a priori analogy.” Here’s an example:

Ellen’s essay merits a high grade by virtue of the lucid clarity of its organization and expression, the thoroughness of its argumentation and the cogency of its arguments. Jay’s essay is similarly clearly organized and expressed, its argumentation is similarly thorough and its arguments similarly cogent. So Jay’s essay merits a similarly high grade.

Generalized, this is the reasoning that, when a certain property belongs to something by virtue of that thing’s satisfying certain criteria to a given extent, and another thing of the same sort as the first one is judged also to satisfy those criteria to a similar extent, then one may infer that the property in question belongs to the second thing as well.

The premises of cogent reasoning or arguments from a priori analogy do not deductively entail their conclusions, because the second thing might have, besides the stated qualifying properties, others that disqualify it from having the feature in question. (Maybe Jay’s essay was submitted well after the due date, and was not on the assigned topic.) Since it can’t be known in advance what all the possible disqualifiers are, a list of them cannot be built into the criteria. Moreover, such reasoning or arguments are not narrowly inductive either, for there is no basis for assigning a numerical probability to their conclusions. Nor are they arguments from known regularities.

The other example, due to Carl Wellman (1971), is what he called “conductive” reasoning. It’s also known as balance-of-considerations reasoning. Here is an example:

The blueberries for sale today are ripe, fresh and wild, and I adore wild blueberries; so I should buy them. On the other hand, they’re outrageously overpriced and I don’t really need them; so I shouldn’t buy them. But I can afford them, and I need to indulge myself just now. So, everything considered, I should buy them.

In such reasoning, the reasoner takes one set of considerations to favour a claim, and at the same time takes another set of considerations to tell against that claim. The reasoner judges one set to outweigh the other, and on that basis judges the claim to be acceptable or unacceptable.

The premises of cogent balance-of-considerations reasoning or arguments don't entail their conclusions, because new information can tip the balance in the other direction, thereby affecting the legitimacy of the inference to the main conclusion. (For example, my wife tells me that there is no room in the refrigerator for the blueberries, or that she has already bought some.) But these are not narrowly inductive arguments either. There is no basis for assigning a numerical probability to the reasonableness of my decision to buy the blueberries. And again, there is no argument from known regularities here.

Based on examples like these two, many informal logicians concluded that it's false that all reasoning is either deductive or narrowly inductive. Some reasoning requires other criteria of inference appraisal than deductive validity and, for instance, statistical probability.

5.4 *General tools for assessing inference strength*

Most informal logicians did not address the question of what this other kind of reasoning is, beyond the judgment that it is not deductive and not narrowly inductive. Their motivation was classroom instruction, and the immediate need was useful teaching tools. So they adopted, adapted or invented various general methods of inference appraisal. These supposedly apply to reasoning and arguments of any sort, whether they are intended to be deductively valid, or inductively strong, or to belong to neither of these two categories.

At least five such methods turn up in the informal logic literature. I'll describe each of them very briefly.

5.4.1 *Fallacy theory*

One early proposal was that an argument free of fallacies is probatively sound, and in particular, its consequence relation is fine so long as it is free of inferential fallacies. This answer leads straight to fallacy theory, and that was an early preoccupation of informal logicians. That fact led some people, understandably but mistakenly, to identify informal logic with the study of informal fallacies.

A broad consensus emerged that fallacies are not patterns of mistaken reasoning. Rather, they are errors in the sense of misfires or misuses of otherwise legitimate patterns of reasoning. What distinguishes the informal logic approach to fallacies is that not all fallacies are viewed as dialectical or rhetorical misdemeanors: many are seen as particular errors of reasoning. Some are confused deductions, some

hasty inductions, and some other types of malfunctioning reasoning. I need to add that there are some informal logicians who deny that the concept of fallacy has any legitimate application.

5.4.2 *Acceptability, relevance, sufficiency*

Another general method of assessment is to use the triad of Acceptability, Relevance and Sufficiency-ARS. Acceptability, as I have already noted, is a criterion for premises. Relevance and sufficiency are criteria for the adequacy of the link between premises and conclusion: the reasons offered must be probatively relevant to the conclusion, and they have to supply enough of the right kinds of evidence to justify accepting it.

It's been argued that relevance is redundant, since sufficiency already presupposes it. You can't have enough evidence unless what you count as evidence is already relevant. That is true. However, people's arguments sometimes include irrelevant premises. Those have to be identified and set aside before judging the sufficiency of the relevant ones that remain.

Sufficiency has become seen to require not only reasons that directly support a claim but also those that support it indirectly, by way of refuting or weakening objections or criticisms of various kinds. How far that indirect support should go is a matter that continues to be debated.

The ARS criteria are general, in that deductively valid and inductively strong reasoning and arguments, as well as those with other kinds of good consequence relations, all will pass their test. They have been widely adopted as teaching tools and their introduction has led to scholarly reflections on all three concepts.

Some people, again mistakenly, identify informal logic with the ARS method of argument assessment.

5.4.3 *Inference warrants*

Some informal logicians have been attracted to Stephen Toulmin's (1958) concepts of warrant and backing as an account of what justifies reasoning and argument inferences in general. The idea is that any particular inference relies on a general rule or warrant that licenses inferences of that sort. An inference is justified provided that its warrant is itself defensible, that is, can be backed up if questioned. Although Toulmin did not emphasize this point, a warrant can be a deductive rule of inference, such as *modus ponens*, or an inductive principle, as

well as such things as rules of practices. So warrant justification is general too.

An obvious objection to this approach is that the backing of a warrant is itself an argument, thereby involving an inference that must rely on another warrant that can be backed up if questioned – and so there begins an infinite regress. A reply to this objection is that, while an infinite regress of warrants and backings is in principle possible, in practice, in short order one arrives at backing that is either clearly solid or obviously dubious.

5.4.4 *Testing by possible counterexamples*

A fourth general method that informal logicians have used for evaluating the inferences of reasoning and arguments is testing them by means of counterexamples.

The method is to think of considerations that are consistent with the given reasons but inconsistent with the claim being inferred or argued for. Depending on whether any such counterexamples are conceivable, and if so, either probable or plausible to some extent, the reasoning can be determined to be deductively valid, or invalid but with some degree of inductive strength, or invalid but more or less reasonable.

This method is only as good as the assessors' ability to imagine possible counter-examples and the accuracy of their judgements of the possibility, probability, or plausibility or reasonableness of such counter-examples. This ability often depends on subject-specific knowledge about the topic of the reasoning or argument in question.

5.4.5 *Reasoning or argument scheme theory*

I call the fifth method, "argument scheme theory." Douglas Walton is one theorist who has proposed an account of non-deductive, non-inductive kinds of reasoning. According to Walton (1996), such reasoning is presumptive. That is, it is reasoning that establishes, or shifts, a burden of proof. A general approach for assessing deductive, inductive and presumptive reasoning, according to Walton and others, is the use of reasoning or argument schemes.

A reasoning or argument scheme is a generalization of a token of reasoning or argument. I gave examples of two such schemes earlier – the schemes for reasoning by a priori analogy and the scheme for balance-of-considerations reasoning.

Such generalizations can be deductive, inductive or presumptive. Scheme theorists think it is reasonable to accept the conclusion of an instance of such a scheme as the consequence of its premises, so long as the questions that test its vulnerable features – the so-called "critical questions" – are answered satisfactorily in the given case.

These five methods – freedom from inferential fallacy; the sufficiency of relevant offered reasons; justification by an adequately-backed warrant; passing the test of counter-examples; and being an acceptable instance of a reasoning scheme – are all *general* methods of assessing the inferences of reasoning or arguments. That is, they apply to reasoning or arguments with supposed deductive validity, or inductive strength, or other kinds of cogency. Whether these five initiatives are compatible, equivalent or otherwise related, whether they are correct, and whether the list is exhaustive, all remains to be seen.

6. *Other developments, and conclusion*

So far I have described two themes that have animated informal logic. One is the development of guidelines for the analysis of the reasoning in non-interactive arguments. The other is the articulation of generally applicable methods for evaluating the reasoning – that is, the reasons and the inferences – exhibited in arguments. My contention is that these are the principal defining threads of informal logic. Fortunately, for me, and for you, I don't have time to defend that assumption on this occasion. I just have time to add a few footnotes.

One footnote is that informal logicians came to realize that, although they had started out analyzing arguments in non-interactive texts for teaching purposes, what they are also interested in is the logic of the non-deductive, non-narrowly-inductive reasoning employed in any arguments, in whatever setting they are communicated (whether a dialogue, a group discussion, or a speech), by whatever mode they are communicated (whether orally or in writing, visually, or mixed-modally), for whatever purpose they are communicated (whether for persuasion, or disagreement resolution, or communication repair, or justification, or any other purpose), and with whatever subject-matter they are concerned.

A second footnote is that, belatedly, at least some informal logicians have come to appreciate the need to understand the rhetorical functions of communication in order to recognize and identify arguments, and in order to understand the nature and force of the reasoning expressed in them.

And a final footnote: I hope it is clear that informal logic does not aim to account for all the pragmatic and communicative properties of arguments. Nor is it a theory of argumentation, understanding by such a theory an account of the dynamics of, and the norms for, various kinds of exchanges of arguments for various purposes. It does not address the psychology, sociology, or politics of exchanges of arguments. If informal logicians happen to take up such topics, as some do, they do so flying other colours, such as "argumentation theorist."

Well, it is high time for me to stop. By now I hope you can see why I have difficulty conveying an understanding of what informal logic is in a couple of sentences. If you will allow my remarks this morning to stand as a long footnote, my summary would run as follows. Informal logic is the combination of two related things. It is the development and justification of practical guidelines for recognizing, identifying and displaying the reasoning expressed and invited in arguments, especially arguments found in non-interactive discourse or other modes of non-interactive communication. And it is the development and justification of the probative norms applicable to the reasons, and applicable to the non-deductive, non-inductive inferential links, employed in the reasoning that is expressed or invited in any argument.
Thank you.

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References
Copi, Irving M. (1954). *Symbolic logic*. New York: The Macmillan Company.
Govier, Trudy (1999). *The philosophy of argument.* Newport News, VA: Vale Press.
Hamblin, C.L. (1970). *Fallacies.* London: Methuen.
Hawthorne, James (2014). "Inductive logic", *The Stanford Encyclopedia of Philosophy* (Summer 2014 Edition), Edward N. Zalta (ed.), forthcoming
URL = <http://plato.stanford.edu/archives/sum2014/entries/logic-inductive/>.
Toulmin, Stephen N. (1958). *The uses of argument.* Cambridge: Cambridge University Press.

Walton, Douglas N. (1996). *Argument schemes for presumptive reasoning*. Mahwah, NJ: Lawrence Erlbaum Associates.
Wellman, Carl (1971). *Challenge and response, Justification in ethics*. Carbondale and Edwardsville: Southern Illinois University Press.
Wisdom, John (1991). *Proof and explanation, The Virginia lectures* (ed. by Stephen F. Barker). Lanham. MD: University Press of America. (Originally delivered at the University of Virginia in spring 1957.)

ISSA Proceedings 2014 – Evolutionary Arguments In The Birth Control Debate: Casuistic Shifting In Conservative Rhetoric

Abstract: We use dramatism to explore the birth control controversy and how it complicates conservative agent-focused arguments. Conservatives borrow from evolutionary discourse and argue that females are not agents. They are agents-minus that are irrational and subordinate to the scene. To remain loyal to underlying religious values, conservatives situationally abandon, rather than permanently stretch, their focus on the agent. This casuistic shifting enables conservatives to undermine female agency while remaining within their idealistic framework.

Keywords: argumentation, birth control, Burke, casuistic shifting, conservative rhetoric, gender, human origins, rhetoric, War on Women

1. *Introduction*

The United States Supreme Court recently ruled on *Burwell v Hobby Lobby* and decided on whether for-profit companies would be required to cover birth control on health insurance plans under the Affordable Care Act (ACA). Part of the argument against this mandate is that offering birth control as a preventative measure is seen as tantamount to supporting abortion and thus violates the

owner's religious beliefs. Hobby Lobby founder David Green, the plaintiff in the Supreme Court case, said, "These abortion-causing pills go against our faith, and our family is now being forced to choose between following the laws of the land that we love or maintaining the religious beliefs that have made our business successful and supported our family and thousands of our employees and their families" (Rovner, 2014, para. 14).

The Supreme Court ruled that Hobby Lobby and other privately held companies claiming religious exemption do not have to cover employee birth control costs. This ruling appealed to the free exercise clause and stated that the fines levied on businesses that would not provide coverage for contraceptives would be a "substantial burden" on business owners (Schwartz, 2014, para. 2). No matter the medical purpose for which it might be used, birth control will now become more expensive for some females whose employers can opt out of covering birth control without punitive government measures. Justice Ruth Bader Ginsberg, in her dissent, noted that females will now experience the burden of "cost barriers operated to block many women from obtaining needed care" (Ohlheiser, 2014, p. 3-4). The Supreme Court ruled that it is worse to constrain the choices of business owners (to deny birth control on religious grounds) than to constrain the ability of females (to access birth control).

In general, conservatives were in favor of the Hobby Lobby decision. But, in favoring the outcome, conservatives had to rhetorically establish the humanness of businesses and the non-humanness of females. Arguments that undermine individual agency are not often the territory of conservatives. Instead, conservative arguments about economics, political advocacy, and social issues such as gay marriage, often advocate unconstrained, individual choice. People can pull themselves up by their bootstraps, support themselves without government intervention, and choose their sexuality (Cloud, 1996; Brummett, 1979). Conservatives are more likely than liberals to use agent-focused arguments that produce responsibility and culpability for the individual without a concern for mitigating circumstances (Bloomfield & Sangalang, forthcoming). Conservative rhetoric is often linked to idealism, the power of the mind, and the unwavering support for political independence (Brock, 1990).

Birth control arguments are inherently complicated for conservatives, because they prompt a shift in rhetorical emphasis away from the agent. Glorifying the power of the female as an agent with the power to control her own body would be

to support access to birth control. Some conservative rhetoric has abandoned the argumentative resource of the agent and has instead shifted to a scenic focus. Emphasizing the scene links to the ideology of materialism that undermines the power of the agent and reduces them to an agent-minus status (Brock, 1990).

This seemingly contradictory shift can be illuminated through Burke's pentad. The pentad is a useful heuristic tool for mapping how various emphases inform arguments and ideologies. Burke (1945/1969) argued that the way people use language and the parts of the pentad they emphasize, reveal underlying loyalties to a "subtle, personal test of propriety" (p. 237). Abandoning a certain focus challenges the "common stake in some unifying attitude" of the person (Burke, 1945/1969, p. 237). Pentadic ratios are difficult to change as this change represents a large effort to adjust one's worldview (Burke, 1945/1969; Brummett 1979). Brummett (1979) argued that, "Life makes sense for most of us as we repeatedly explain experience to ourselves and others with one term or ratio" (p. 252). When new information challenges this guiding ratio, the entire framework is questioned. If the new information is accepted and incorporated, a new identity is formed by its inclusion in a new and adjusted guiding framework.

Although this shift may seem contradictory when considering associations between conservatives and idealism, this inquiry argues that an overarching commitment to certain values can trump loyalty to argumentative resources. This temporary shift is only reflective of a deeper need to remain loyal to religious and moral ideologies. Furthermore, the brief borrowing of scenic language is not meant to remove females from responsibility. Scenic language, then, is only used as a temporary argumentative tactic as opposed to representing a stretching of the conservative framework and worldview. The rhetorical adjustment within the birth control controversy challenges the universal applicability of casuistic *stretching* and prompts further inquiry into this unique rhetorical situation. We propose the term casuistic *shifting* to reflect the only temporary incorporation of new information that does not stretch or permanently adjust a framework. Casuistic shifting serves a starting point to explore the nuances of contemporary, polarized argument where new orientations are rejected and abandoned as quickly as they are adopted.

A series of proposed laws and vitriolic statements from conservative politicians, a few of which will be discussed in further detail, have prompted the phrase, "The War on Women" (ACLU 2014; Rosenthal, 2012). This phrase represents a

prominent and ongoing struggle to argue for women's rights against a changing, argumentative community. The American Civil Liberties Union (ACLU) (2014) defines the War on Women as a phrase that "describes the legislative and rhetorical attacks on women and women's rights taking place across the nation" (para. 1) In particular, many of these attacks have focused on reproductive rights and healthcare (Miller, 2012; Rosenthal, 2012), and are often associated with conservatives. While the phrase 'War on Women' gained considerable cachet in 2012, neither the idea of a War on Women nor the metaphors used in its arguments are novel; they are continuations of older struggles for women's rights (Faludi, 1991/2006; Solinger, 2005).

This inquiry employs generalized terms such as 'conservatives' and 'liberals' for the sake of simplicity, but recognizes that these are not fully generalizable labels. The terms male and female are used similarly; this is an indication of the ways in which sex is most commonly discussed in birth control discourse, rather than a reinforcement of sex or gender binaries or essentialisms. We will analyze prominent conservative statements that serve as indicators of a trend in conservative rhetoric. These exemplars are not meant to be inclusive of all conservative rhetoric, but instead highlights of an emerging pattern in the use of argumentative rhetoric.

These conservative statements will be analyzed using the metaphor of human origins. The evolution and creationism controversy encompasses themes also present in the birth control debate: the dichotomy between agent and scene, action and motion, and organism and machine. Human origins arguments mirror the inclusion or exclusion of religious influence in the creation and maintenance of human life. Creationism maps easily onto agent-focused arguments and evolution maps easily onto scene-focused ones (Bloomfield, forthcoming). This comparison helps us interrogate the difficulty in shifting between pentadic ratios and their corresponding ideologies.

2. *Ratios in the human origins controversy*

When forming arguments to support claims, people will draw from resources that fit within their guiding ideology and framework. Brummett (1979) argued that "ideologies motivate and guide political rhetoric and give it purpose" (p. 251). An ideology thus supplies the argumentative foundation for the creation and maintenance of a political identity. Choices made in alignment with this ideology become self-consistent because they influence future choices through the screen

or filter that is created.

Preferencing certain facets of the pentad creates a ratio that determines who or what should be blamed for the performance of an act. Tonn, Endress, and Diamond (1993) and Ling (1970) argued that emphasizing a dangerous scene or a 'wrong place, wrong time' situation undermines the responsibility of the agent for an act. Emphasizing the agent, however, can heighten the agent's complicity and responsibility, such as touting one's food choices as responsible for one's health (Bloomfield & Sangalang, 2014). Ascribed to idealism, conservatives tend to draw from the power of the agent to support conservative claims. Black (1970) argued that these associations are not arbitrary, but instead point to a "beckoning archetype" that can be used by a critic to move between ideology and the language that embodies it (p. 199). Idealist arguments often emerge from conservatives because they support an overarching framework that syncs with the conservative ideology.

Part of this ideology is informed by the conservative origin narrative or cosmology. O'Leary (1994) argued that a group's cosmology creates proper definitions for the elements of the pentad (p. 25). Creationism and evolution are cosmologies that reflect emphases on the agent and the scene, respectively (Bloomfield, forthcoming). A belief in creationism, or that humans were created in their present form through supernatural intervention, emphasizes the individual as divinely inspired and in the image of a deity. People act and control their environment, which was created for them by God to inhabit, conquer, and use. Human life is inscribed with ultimate culpability for situations and actions. Conservative rhetoric tends to pull from this religious origin story, and conservatives are the party most strongly associated with religious values, the Moral Majority, and religious followers (Domke & Coe, 2010).

Liberal arguments tend to draw from the scene, emphasize mitigating circumstances, and support assistance to others. Burke (1945/1969) argued that individuals are reduced to an agent-minus status where they are never completely removed from their ability to act, but they are heavily or overwhelming influenced by their environment, circumstances, and scene. The agent-minus is not a rational being that weighs choices or has a purpose; the agent-minus instead merely reacts to stimulus and responds to its environment.

Although conservatives share the same pentadic emphases and argumentative

framework of creationists, they abandon those idealist arguments in the birth control controversy. To remain faithful to the power of the agent that guides their view of economics or government intervention would be to support female autonomy. For many conservatives, this violates an underlying religious and moral framework that requires female abstinence and chastity. Idealist arguments would require conservatives to emphasize the rationality, autonomy, and decision-making power of females over their environments and bodies. This is a possibility that conservatives are trying to avoid and thus cannot draw from their traditional argument resources. Instead, they borrow from evolutionary language that emphasizes the scene. Females are transformed from being purposefully created and empowered individuals that are capable of rational decision making to being agents-minus. Conservatives and the government, then, must protect females by making decisions for them.

Conservatives primarily rely on metaphor to construct the female as a non-agent or agent-minus. To more fully explore these metaphors, prominent conservative statements will be analyzed. These metaphors attack and undermine the character of females and their ability to make decisions about their bodies. They work by changing the female body from being classified as a human to two other non-human states. Females are constructed into animals or machines. If females are not humans, then they do not have agent status and are not complicit in the agent:act ideology typical of conservative rhetoric. "Rhetoric," Burke (1945/1969) argued, "stands at the boundaries of contradictions" and explores how definitions, meanings, and symbols are negotiated (p. 19). These two conservative redefinitions of female as agent-minus reconstruct the notion of what it means to be female, what females are capable of doing, and whether they can be considered public and political figures capable of decision making.

3. *Females as agent-minus*

In the narrative of evolution, the scene is the controlling pentadic aspect. An animal's environment determines its action and ultimately, whether it will live or die. The animal itself does not evolve, but simply responds to its environment, irrationally, and only with the purpose to survive in order to pass on its genes. The physical environment, the presence or absence of food and predators, and changes in group dynamics affect the animal's mortality more than the animal itself. This emphasis gives the scene control of the evolutionary process, which makes evolution purposeless, thoughtless, and random. Creationism, however,

imparts intelligence and control to the mind over the environment to make rational and purposeful decisions. Humans can interact with and change their environment.

The language of motion, animality, and evolution has been applied to females seeking birth control. One aspect of animality is the inability to choose or restrict sexual partners. In an evolutionary world that is motivated by the proliferation of offspring, the urge to procreate is a driving force. The 'libido' of animals is focused only towards quantity and frequency with the purpose of procreation. These themes of animal-like sexuality emerged in conservative pundit Rush Limbaugh's response to Sandra Fluke's request for birth control subsidies at a Congressional hearing. Limbaugh called her a "slut" 78 times, mimicking the quantity and frequency of irrational sex: "She's having so much sex she can't afford the contraception" (Limbaugh, quoted in Mirkinson, 2012, para. 6). This statement reduced Fluke, and all females, to their uncontrollable sexual libidos and positioned them as only interested in casual sex. The adoption of evolutionary language reduced females to animals that are powerless to their sexual appetites to the point of fiscal irresponsibility.

Limbaugh's comment echoes older arguments about birth control. With the introduction of reliable hormonal birth control methods in the 1960s, females became seen as "seriously deficient choice makers" at fault for any "unintended pregnancies [because of their] 'laziness, stupidity and reluctance'" (Solinger, 2005, p. 170). Single women, women of color, and poor women were seen as especially irresponsible and unlikely to make rational reproductive choices. Often, the only acceptable use of birth control is when *males* have the decision-making power.

Conservative arguments that are for birth control under specific circumstances similarly frame females as animals who cannot rationally decide for themselves. Unlike sex outside of marriage, sex within marriage is seen by a conditionally pro-birth control contingent of Catholics as being "noble" rather than something that is "perform[ed] blindly and instinctively" (Foss, 1983, p. 35). Sex within marriage is a choice and human action rather than an animal motion; for this reason, married couples should be able to choose contraception since this is a way of exercising their God-given free will. Notably, however, any decision that could be construed from a Catholic viewpoint as an acceptable use of birth control is only capable of being made in conjunction with a male. While obviously this sub-group

of Catholics is not representative of all conservatives, nor does this take into account non-married and non-heteronormative couples, it illustrates how males are the ultimate decision makers and actors, while females are reduced to mere animals and movers.

Females are also framed as non-human machines. On August 20th, 2012, Representative Todd Akin (R-MO) said, "It seems to be, first of all, from what I understand from doctors, it's really rare. If it's a legitimate rape, the female body has ways to try to shut the whole thing down" (Moore, 2012, para. 3). Akin's comment became an exemplar of a lack of public knowledge about birth control, the female body, and rape. The thinking, feeling, and acting organism was replaced with the motion of a machine that can 'shut down' harmful processes. The symbolic system of language was replaced with 0s and 1s, and the mind was separated from the robotic body. Faced with a 'legitimate rape,' the body simply reacts and performs motion. Machines cannot think and are only programmed. More recently, Akin defended his controversial 'legitimate rape' comment, claiming that he was referring to the connection between stress and fertilization (Marcotte, 2014). This comment framed the female body as a machine that is programmed to perform in certain ways, for example:

```
if (rape) {
pregnancy=shut down from stress;
} else {
pregnancy=blessing;
}
```

This code constructs females as producing output that is the natural consequence of input they receive, rather than emerging from rational thought.

The metaphor of females as non-human agents-minus focuses on motion instead of action. Action, for Burke (1945/1969), is the performance of motion inscribed with symbolic purpose. Only rational agents (or humans) can perform action because they are the only animals with symbol systems capable of commenting on their existence. If females are animals or machines, then they are non-communicative and devoid of language. Females, subsequently, do not have the symbolic capabilities that males have and are therefore silenced, even in debates where the discussion is about the agency of their own bodies. Females cannot form arguments, justify themselves, or be capable of verbal or physical action.

Females were silenced in the precipitating events to Limbaugh's comments. The 2012 Congressional hearings on birth control included panels composed entirely of males, and Fluke was initially denied as a potential participant. The female gender is a defining identity, whereas males can be fully human and only descriptively male in their status as political participants (Ray, 2007). Conservative arguments construct females as non-human animals and machines, who only occupy agent-minus status. Akin's legitimate rape comment argued that females are incapable of deciding whether they were raped or not. Females may say they were raped but they lack the symbolic capabilities to decide this, leaving only their bodies' motion and response to genetic input as acceptable proof. Females are stripped of their rational decision-making power because they are re-framed as sexualized animals and irrational machines.

4. *Casuistic shifting*

Casuistic stretching is a foundational Burkean concept that helps critics interrogate worldviews, how they change, and the arguments they construct. Applying casuistic stretching to the birth control controversy, however, misrepresents the incorporation of scene in conservative arguments. The concept of stretching assumes that the scene will remain a part of the conservative worldview. It is, of course, impossible to completely separate the aspects of the pentad (Burke, 1945/1969). However, for conservatives to abandon a focus on the agent and idealism would be to sacrifice their very identity. The focus on the scene, therefore, can only be temporary if the conservative party is to remain intact. This is, in part, why conservatives must emphasize the scene to justify their stance on birth control; they are also bound to their emphasis on religious and moral values. To remain true to anti-choice rhetoric is also to deny rational decision-making power to females, resulting in a necessary shift in argument strategy. The ideology still remains unchallenged and is returned to in order to justify the overall conservative position on issues.

Despite the use of metaphors that question the agent-status of females, conservatives have tried to brand themselves as the party for females. Former Republican presidential nominee Mike Huckabee said:

Our party stands for the recognition of the equality of women and the capacity of women. That's not a war on them. It's a war for them. If the Democrats want to insult the women of America by making them believe that they are helpless without Uncle Sugar coming in and providing for them a prescription each month

for birth control because they cannot control their libido or their reproductive system without the help of the government, then so be it. (Blake, 2014, para. 2 & 4)

Huckabee claimed that the conservative party is actually in support of the 'capacity' of females. This capacity does not extend to the ability to decide about health, however, illustrating an important nexus of the agent- and scene- focus. Although ascribing females non-agent status through the repetitive use of metaphors, Huckabee still stands by the idealist ideology. He asserts that females are equal and capable and argues that it is the *Democrats* that undermine their abilities. His quotation reframes the situation so that the government is providing birth control as a crutch for the uncontrollable, sexual urges of females. What this reveals, however, is that Huckabee believes that the urges of females are irrational and uncontrollable; it is because of the Democratic Party's evil that females cannot control themselves. At first, his words can seem like they bolster females' agent-status, but they still embrace the scenic focus on female irrationality. This quotation represents the subtle shift back and forth between agent and scene.

While claiming to stand for the "equality of women and the capacity of women," Huckabee is actually denying females agent status. They are portrayed as vulnerable to the Democrat's arguments. The supposed scene of "Uncle Sugar" handing out birth control pills is acknowledged, but females are ultimately to blame for their inability to control themselves. While the scene is what is "making them believe that they are helpless," it is not what is ultimately at fault; females choosing to believe this is. In other words, females become the agents responsible for the current situation in regards to birth control. They are agents who are simply making the wrong decisions, rather than non-agents or agent-minuses who are scenically reduced into being incapable of rational decision making.

Another example of casuistic shifting comes from the recent National Right to Life Convention. Conservative radio host and speaker Joy Pinto argued that the 'real' War on Women was not attacks on birth control but was instead birth control itself. According to Pinto, women have "bit the apple" and "believed the lie" that it is acceptable and not immoral to use contraception. While Pinto acknowledged scenic elements such as the culture and institutions that promote the "lie" of birth control, blame is laid on women. Importantly, Pinto's use of the phrase "bit the apple" (an allusion to the Biblical story of Eve's temptation with the Tree of

Knowledge and humanity's subsequent fall from grace) is an important indicator of a casuistic stretch rather than a casuistic shift. Ultimately, blame still falls on women, who are incapable of making rational choices. According to both the temptation of Eve and Pinto's account of birth control, females who seek information and equality, whether from the Tree of Knowledge or from birth control, are at fault for the moral degradation of the world today.

Conservative rhetoric puts females' agent status in flux. It is simultaneously trumpeted, undermined, forgotten, overshadowed, and blamed in the birth control controversy. These mixed messages work as a rhetorical strategy themselves by appealing to various frameworks and their views of the female. They all unite in their support of anti-choice policies but interpret the role of females differently. Conservatives have rhetorically re-defined how females should be considered in terms of their actions, beliefs, and attitudes. This re-definition crosses ideological lines strategically to polarize the birth control controversy. Casuistic shifting is an important contribution to interrogating the polarized nexus of the current controversy. The need to appeal to fringe opinions and the center's wavering disloyalty has created new argument strategies that purposefully isolate one segment of the voting population.

It is not clear, however, that this strategy is isolating the female vote. Though the gender gap in voting has increased in recent elections ("Gender Gap," 2012), there has also been an increase in visibility of conservative females that oppose the feminist movement. They are working to redefine what it means to be female and advocate for female issues. Hosts on *Fox & Friends* discussed rebranding feminism so that it more closely aligns the female role with traditional biblical views. Guest Gina Loudon, owner of the conservative site *PolitiChicks*, argued that the new feminists:

want less government in their lives, they want to make their own decisions, they want freedom to choose for their children and their families. That's what women really want. And they also want real men. We love real men. (Taibi, 2014, para. 6)

This new phase of 'updating' feminism focuses on equating the struggle for female empowerment with what is actually a reduction of female choice. Similar to Huckabee, the host connects female choice with conservative policies. This trumpeting of agency, however, is only allowed by choosing conservative, traditional, and role-related (e.g., wives and mothers) aspects of being female.

What these examples share in common is the casuistic shift from agent to scene to hyper agent. These shifts are temporary and contingent on the needs of a particular argument. Where a casuistic stretch is a move to a new framework, a casuistic *shift* is simply a short-term visit. From the standard conservative starting point of an agent-focused framework, the shift is made to scenic language so as to attribute females with agent-minus status. Almost immediately, however, a turn is made which makes females *hyper*-agents, responsible for creating that same scene to which they were previously described as being vulnerable. The offering of choice and agency comes with the baggage of pre-determined decisions in order for females to be 'real' women. The traditional idealist approach to arguments, therefore, is inherently laden with removing agent-status from females. This shift is not applied to other arguments nor does it undermine their ability to claim the language of the agent. The shift, instead, represents a temporary strategy to appeal to certain segments of the population that ascribe to the importance of the agent and hold immense and unshakeable loyalties to anti-choice policies.

Faludi (1996/2001) argued that there is a repeating historical pattern of a retaliation against women whenever there is a perceived gain in women's rights, which could, in part explain the perceived need for such an argumentation strategy. In the 1980s and 90s, this backlash took the form of adopting much of the language of female empowerment but using it to promote conceptions of women and femininity that ran counter to the message of the 1970s feminist movement. For example, media accounts often portrayed women who tried to 'have it all' as being unsatisfied and depressed, instead finding themselves happier and more fulfilled when they stayed at home to take care of their house, husband, and children.

Conservative arguments against birth control follow much of this same pattern. In an effort to counteract made by the advent of hormonal birth control and its argumentative sphere, conservatives adopt the language of that argumentative sphere (i.e., they make the casuistic shift to a more agent-focused argumentative track, allowing that females can have agency). Once they have reversed the gains they see as harmful, however, they quickly shift away from that tactic and return to their original underlying pentadic framework. In other words, changing conservative arguments about birth control do not represent a change in ideology, but rather a desire to return to an earlier time and reverse changes in

the world that have already occurred.

5. *Conclusion*

When she read about the 2012 Congressional birth control hearings, Senator Patty Murray remarked that attending the hearing:

was like stepping into a time machine and going back 50 years. It's a picture that says a thousand words, and it's one that most women thought was left behind when pictures only came in black and white. (quoted in Miller, 2012)

While obviously things have changed in that time, the fact is that so many of the arguments and the metaphors that undermine women remain. Strides have been made in areas of equality, but the birth control controversy illuminates the ongoing struggle to consider females as capable of rational decision making. Females are very much still second-class citizens; institutional structures, similar to racial ones (Cloud, 1996), serve as obstacles to their realization and consideration as political beings. The birth control controversy provides evidence for the continuing rhetorical problems of women's rights and female advocacy. Furthermore, this controversy illuminates an important intersection of argumentation, rhetoric, and women's studies that echoes long-standing gender divides in America.

Conservative rhetoric makes use of an argumentative strategy that undermines the agent-status of women despite conservatives' idealist ideology. They adopt evolutionary language and a scenic focus to compare females to animals and machines. In doing so, they empower other agents, such as the government, to restrict their choices to manageable, moral, and rational options. Conservatives do not casuistically stretch their idealism to include the scene permanently. Instead, evolutionary language is used only to displace the female as a rational decision maker while simultaneously blaming her for those irrationalities.

The War on Women serves as one example of a casuistic shift in conservative arguments. Evolutionary language is adopted so as to frame the issue scenically; women are attacked as being irrational and thus incapable of being agents. There may be other instances where such a temporary argument strategy results in a shift in ideology rather than a stretch. In this case, however, casuistic stretching allows us to better account for the apparent rhetorical inconsistencies in conservative rhetoric. The Hobby Lobby decision has reignited the attention paid

to religious and conservative argumentative strategies in regards to the birth control controversy, which is an ongoing nexus of deliberation that engages politics, sexuality, health, gender, and religion. In this deliberation, conservatives have attempted to lay new deliberative grounds instead of highlighting the power of the agent as is their traditional strategy, both responding and contributing to political polarization. This argumentative shift illuminates contemporary rhetorical strategies and how they incorporate issues of agency and agent-status in issues of gender.

References

ACLU. (2014). "War on Women." Retrieved from https://www.aclu.org/blog/tag/war-women

Black, E. (1970). The second persona. *Quarterly Journal of Speech*, 56(2), 109–119. doi:10.1080/00335637009382992

Blake, A. (2014, January 23). Huckabee: Dems think women can't control their libido. *The Washington Post*. Retrieved from http://www.washingtonpost.com/blogs/post-politics/wp/2014/01/23/huckabee-dems-think-women-cant-control-their-libido/

Bloomfield, E. F. & Sangalang, A. (2014). Juxtaposition as visual argument: Health rhetoric in Super Size Me and Fat Head. *Argumentation and Advocacy,* 50(3), 141-156.

Bloomfield, E. F. (forthcoming). Controversy over human origins: Pentadic ratios in evolution, creation, and intelligent design narratives. Unpublished Manuscript.

Brock, B. (1990). *The dramatist perspective. In Methods of rhetorical criticism: A twentieth-century perspective* (3rd ed., pp. 183–196). Wayne State University Press.

Brummett, B. (1979). A pentadic analysis of ideologies in two gay rights controversies. *Central States Speech Journal*, 30(3), 250–261. doi:10.1080/10510977909368018

Burke, K. (1945/1969). *A grammar of motives*. Berkeley, CA: University of California Press.

Cloud, D. L. (1996). Hegemony or concordance? The rhetoric of tokenism in `Oprah' Winfrey's rags-to-riches biography. *Critical Studies in Mass Communication,* 13(2), 115–137.

Domke, D., & Coe, K. (2010). *The God strategy: How religion became a political weapon in America*. New York, NY: Oxford University Press, USA.

Faludi, S. (1991/2006). *Backlash: The undeclared war against American women*,

15th Anniversary Edition. New York, NY: Crown Publishing.
Foss, K.A. (1983). Singing the rhythm blues: An argumentative analysis of the birth-control debate in the Catholic Church. *The Western Journal of Speech Communication,* 47, 29-44.
"Gender gap." (2012). Gender gap: Three decades old, as wide as ever. Pew Research Center for the People & the Press. Retrieved from http://www.people-press.org/2012/03/29/the-gender-gap-three-decades-old-as-wide-as-ever/
Ling, D. A. (1970). A pentadic analysis of senator Edward Kennedy's address to the people of massachusetts, July 25, 1969. *Central States Speech Journal,* 21(2), 81–86. doi:10.1080/10510977009363002
Marcotte, A. (2014, January 18). Another 'conservative' rape philosopher speaks up. Columbus Ledger-Enquirer. Retrieved from http://www.ledger-enquirer.com/2014/01/18/2903551_amanda-marcotte-another-conservative.html?rh=1
Miller, S. (2012, February 17). Birth control hearing was 'like stepping into a time machine.' *ABC News*. Retrieved from http://abcnews.go.com/blogs/politics/2012/02/birth-control-hearing-was-like-stepping-into-a-time-machine/
Mirkinson, J. (2012, February 29). Rush Limbaugh: Sandra Fluke, Woman denied right to speak at contraception hearing, a "slut." *The Huffington Post.* Retrieved June 11, 2014, from http://www.huffingtonpost.com/2012/02/29/rush-limbaugh-sandra-fluke-slut_n_1311640.html
Moore, L. (2012, August 20). Rep. Todd Akin: "Legitimate rape" statement and reaction. *The New York Times.* Retrieved from http://www.nytimes.com/2012/08/21/us/politics/rep-todd-akin-legitimate-rape-statement-and-reaction.html
O'Leary, S. D. (1994). *Arguing the apocalypse: A theory of millennial rhetoric.* New York, NY: Oxford University Press, Inc.
Ohlheiser, A. (2014, June 30). Read Justice Ginsburg's passionate 35-page dissent of Hobby Lobby decision. Retrieved August 22, 2014, from http://www.thewire.com/politics/2014/06/read-justice-ginsburgs-passionate-35-page-dissent-in-the-hobby-lobby-decision/373703/
Ray, A. G. (2007). The rhetorical ritual of citizenship: Women's voting as public performance, 1868–1875. *Quarterly Journal of Speech,* 93(1), 1–26. doi:10.1080/00335630701326845

Rosenthal, A. (2012, April 13). Wars: Imagined and real. *New York Times Online*. Retrieved from http://takingnote.blogs.nytimes.com/2012/04/13/wars-imagined-and-real/
Rovner, J. (2014, June 13). 6 Questions about contraception coverage and the Supreme Court. *NPR.org.* Retrieved June 17, 2014, from http://www.npr.org/blogs/health/2014/06/13/321638181/6-questions-about-contraception-coverage-and-the-supreme-court
Schwartz, J. (2014, June 30). Between the lines of the contraception decision. *The New York Times*. Retrieved from http://www.nytimes.com/interactive/2014/06/30/us/annotated-supreme-court-hobby-lobby-contraception-decision.html
Solinger, R. (2005). *Pregnancy and power: A short history of reproductive politics in North America*. New York, NY: New York University Press.
Taibi, C. (2014, September 3). Fox News guests redefine feminism and it's scary. *The Huffington Post.* Retrieved from http://www.huffingtonpost.com/2014/09/03/fox-news-feminists_n_5759954.html
Tonn, M. B., Endress, V. A., & Diamond, J. N. (1993). Hunting and heritage on trial: A dramatistic debate over tragedy, tradition, and territory. *Quarterly Journal of Speech,* 79(2), 165–181. doi:10.1080/00335639309384027

ISSA Proceedings 2014 – Cognitive Biases And Logical Fallacies

Abstract: Cognitive biases indentified in psychology are indications of imperfect reasonableness of human minds. A person affected by a cognitive bias will reason wrongly without realizing it. Argumentation theory should take the findings of cognitive psychology into consideration for two main reasons. First, the biases registered by psychologists will help create a more comprehensive inventory of fallacious reasoning patterns. Second, some cognitive biases may help explain why a person is reasoning fallaciously.

Keywords: cognitive biases, fallacious reasoning patterns, psychology,

unreasonableness.

1. *Introduction*

We know that a speaker may use some of the reasoning patterns called fallacies in order to manipulate her opponent, or to mislead the audience present at the discussion. For instance, an illegitimate appeal to the expert's status or a straw man can be used as purely sophistical devices that presumably may help the speaker win the debate. We also know that a person can reason fallaciously without realizing that she's actually doing so. For instance, she may be affirming the consequent or using an undistributed middle term in a syllogism while not realizing that she is, in fact, committing a logical fallacy. In such cases we usually put it down to poor logic in the reasoner. However, with the help of a few examples I'll show that some reasoning errors are committed not because the arguer's mind lacks in logic, but because it is abundant in psycho-logic. As the human mind is a multifaceted structure, our choice of argumentation patterns can be determined not only by logic – or lack of it – but also by our psychology. In other words, I want to argue that if a speaker is reasoning wrongly it may be not because of bad intent, and not because his logical machine breaks down, but because his psychological machine is in gear.

Cognitive psychology identifies several dozen cognitive biases, which are "replicable pattern(s) in perceptual distortion, inaccurate judgment, illogical interpretation, or what is broadly called irrationality**[i]**". (This and other quotations that describe cognitive biases below are taken from the Wikipedia list of cognitive biases; see Footnote 2.) I think argumentation scholars should incorporate these findings of cognitive psychology into their research for several reasons. First, some cognitive biases resonate well with the logical fallacies argumentation theorists know of, and to no surprise: both are, in fact, improper reasoning patterns that occur systematically. Moreover, references to such reasoning patterns as wishful thinking, gambler's fallacy, Texas sharpshooter fallacy, bandwagon effect, and some others can be found both in the lists of cognitive biases and in the lists of fallacies**[ii]**. However, logic and psychology look at bad reasoning from different angles, and even though many cognitive biases are somehow related to the fallacies we are familiar with, the descriptions of the former can sometimes give a wider perspective on, and/or a deeper insight into the reasoning patterns argumentation scholars are accustomed to being aware of.

A second reason why more should be learnt about cognitive biases is that one must realize that a person may well be expressing a biased view without ever wanting it to be biased, without even knowing that it is biased. Walton, Reed and Macagno describe an argumentation scheme called 'argument from bias' (Walton et. al., 2008, pp. 154-169), but when talking about this scheme the authors seem to use the word 'bias' – which is admittedly an ambiguous word – to mean a conscious, intentional bias, as in the phrase 'institutional bias', for example. However, if an arguer is affected by a cognitive bias, she will commit a fallacy unconsciously and unintentionally. I think it is important to distinguish between appeals to conscious and unconscious bias because a) such appeals will have different rhetorical functions and b) dialectical evaluation and methods of criticism of arguments from conscious and unconscious bias will also be different.

Apart from this, learning more about cognitive biases will have some pedagogical implications. If one goes deep into the subject, she will probably see that it is not enough to teach her students logic, rhetoric, and dialectic if she wants to make good reasoners of them. She may want to teach them some cognitive psychology as well. In my opinion, argumentation theory must join forces with psychology in discovering how judgments are formed in the human mind.

2. *Examples of cognitive biases consonant with logical fallacies*

In this section I will provide several examples of cognitive biases that are consonant with logical fallacies. Logicians register the Fallacy fallacy when the conclusion of an argument is claimed to be false on the grounds that the argument in its support is fallacious. Psychologists, in their turn, register the Belief bias – "an effect where someone's evaluation of the logical strength of an argument is biased by the believability of the conclusion" (see, for example, Stupple et. al., 2011). These two reasoning patterns are opposites of each other. In other words, they appear to be mirror reflections of one another. However, psychologists don't know about the Fallacy fallacy while logicians are unaware of the Belief bias. At the same time, it can't be denied that we often encounter this fallacious reasoning pattern in everyday communication: 'This one is a good argument because it supports the conclusion I endorse'. Thus, a piece of knowledge generated in the field of cognitive psychology can evidently be of use to an argumentation theorist compiling a list of logical fallacies.

Logicians also know of the cherry-picking (or suppressed evidence) fallacy while psychologists point out to the Confirmation bias – "the tendency to search for or

interpret information … in a way that confirms one's preconceptions" (see, for example, Lewicka, 1998). When an argument critic accuses someone of cherry-picking he means that his opponent (or collocutor) intentionally selects the evidence that supports her conclusion while intentionally ignoring (suppressing) the evidence that contradicts it. (Cherry-picking is a common argumentative tactic among linguists, for example. They put forward a general claim about some aspect of the language and then give examples of language use that support this claim. In so doing, they often suppress counterexamples that would undermine the claim. This argumentative strategy is rightly regarded as a way of cheating.) However, with the help of some experiments psychologists show that a person can indeed be selective in providing evidence for a claim without ever knowing she is being selective. In other words, this person can be 'honestly in error'. The imperfection of our cognitive apparatus may be causing the errors in our reasoning – not bad intentions.

A few more examples of consonance between cognitive biases and logical fallacies – in even less detail. There's a bias called 'Anchoring effect' – "a common human tendency to rely too heavily, or "anchor," on one trait or piece of information when making decisions" (see, for example, Strack & Mussweiler, 1997). There's also a 'Halo effect' – "a cognitive bias whereby the perception of one trait (i.e. a characteristic of a person or object) is influenced by the perception of another trait (or several traits) of that person or object" (see, for example, Nisbett & Wilson, 1977). Both of these biases are related to the part/whole fallacies but they take these patterns of reasoning at a different angle: rather than explaining their fallaciousness by absence of logic they explain it by natural presence of psycho-logic in the human mind. Besides, the Anchoring effect can help account for the persuasiveness of the 'Outstanding example' fallacy. Thus, knowledge in cognitive psychology may sometimes allow the argumentation theorist to understand why certain fallacies can be effective persuasive devices.

The Hindsight bias, sometimes called the 'I-knew-it-all-along' effect, – the tendency to see past events as being predictable at the time those events happened (see, for example, Mazzoni & Vannucci, 2007) – is consonant with the Historian's fallacy in the sense that the reasoner relies on the knowledge she has in the present when judging about events that took place in the past. Stereotyping – "expecting a member of a group to have certain characteristics without having actual information about that individual" (see, for example, Judd & Park, 1993) –

has a lot in common with inductive fallacies such as hasty generalization. The Projection bias – "the tendency to unconsciously assume that others share one's emotional states, thoughts and values" (see, for example, Sheppard), and the False consensus effect – "the tendency for people to overestimate the degree to which others agree with them" (see, for example, Gilovich, 1990), are both consonant with, though a bit different from, the Psychologist's fallacy. There are other examples of this kind too, and if argumentation theorists read more about cognitive biases they will be able to enlarge the existing lists of fallacious reasoning patterns and have a better understanding of why logically bad reasoning can at times be persuasive.

3. *Conscious vs. Unconscious bias*

In this section I will discuss the differences in rhetorical functions and dialectical roles of appeals to conscious and unconscious bias that the speaker's opponent in a critical discussion may appear to have. In their monograph *Argumentation Schemes* Walton, Reed, and Macagno describe a 'bias *ad hominem*' scheme that is formalized as follows:

Premise 1: Person *a*, the proponent of argument *∂* is biased.
Premise 2: Person *a's* bias is a failure to honestly take part in a type of dialog D, that *∂* is a part of.
Premise 3: Therefore, *a* is a morally bad person.
Conclusion: Therefore, *∂* should not be given as much credibility as is would have without the bias (Walton et. al., 2008, p. 338).

When discussing arguments from bias (ibid., pp. 154-169) the authors seem to have in mind appeals to conscious bias only. It is true that a person may have this kind of bias – her institutional position, social status, or association with a certain group can be making her reason in a prejudiced way. The following anecdote will serve as an illustration of a communicative situation where an appeal to conscious bias would be justified, in my opinion.

Once I was accompanying a Swedish ecologist, Lars, to a meeting with the Irkutsk aluminium plant administration. They spread on the table for us the wind rose (wind direction map) for the area, and it quite expectedly showed that the major winds blew away from the city and, therefore, brought no pollution from the plant to it. When Lars and I discussed the meeting afterwards, we both were very skeptical about the trustworthiness of the wind rose we'd seen: we knew the plant

administrators couldn't have shown us anything different. We doubted the honesty of our interlocutors. We knew they could have fabricated the data to deceive us.

Now let us imagine that meeting was held in public. Suppose Lars would say to the plant bosses: 'Of course your wind rose shows what it shows: as company administrators you could never publicly admit that the plant is polluting the air in the city'. For the audience present this utterance would probably constitute a cause to doubt the administrator's sincerity. For the administrators themselves it would probably constitute a cause for some irritation: they would be angry with the Swede because he's shaken the audience's trust to them. Such an appeal to bias is of course an ad hominem argument and without doubt it contains an attack on the opponent's moral qualities. I must note here that Douglas Walton insists that any ad hominem argument must contain a premise (or a sub-conclusion) 'arguer a is a morally bad person', because in any of its disguises this argument is some kind of attack on the opponent's personality. I disagree with this proposition for the reasons given below.

Let us consider a different situation. Imagine that I put forward a hypothesis and cite some data that confirm it. Suppose now that my collocutor brings forward some evidence that clearly contradicts my hypothesis. What should my reaction be? Should I feel angry with him? Not at all! I will realize that because I liked my hypothesis so much, because I so much wished it to be true, I got blinded by the confirmation bias. So instead of being angry I'll be grateful to my collocutor because he's rescued me from a potentially erroneous conclusion. And how would the audience react should they be present at this exchange? If in the course of a public discussion one of the participants manages to show that her opponent is unknowingly biased, this should not evoke suspicions about his moral qualities. Instead, the audience would probably pity the poor lad, and thus even develop some sympathy to him. Haven't you ever felt pity for a colleague who is wrong but he just can't see it?

I'd like to stress that the basic logical structure of arguments from bias will always be the same, no matter if it is an appeal to conscious or unconscious bias. Such arguments will always remain ad hominem arguments showing that the opponent's view (or his argumentation) is one-sided. However, appeals to conscious and unconscious bias are different in at least three other respects. First, an appeal to conscious bias is a hostile move in the sense that it is often

used to raise suspicions about the opponent's sincerity or honesty. Therefore, formalization of this argument must have 'arguer a is a morally bad person' as one of the premises. On the other hand, an appeal to unconscious bias is a friendly move as it doesn't attack the opponent's personality. Instead it is an act of charity because it can save the opponent from an erroneous conclusion by showing that his psychology is playing a trick on him and making him reason wrongly. Even though such argument will still be an ad hominem, its formalization should not have 'arguer a is a morally bad person' among the premises. The second difference is that the addressee of an appeal to conscious bias will most probably be annoyed with this argument, while the addressee of an appeal to unconscious bias should be grateful to his interlocutor. The reaction of the addressee is important to consider because the discussion may take two drastically different routes: it will probably become antagonistic in the first case and cooperative in the second. Finally, in a public discussion, appeals to conscious and unconscious bias will evoke different feelings in the hearts of the audience: it may grow distrustful to the argument addressee in the first case and sympathetic in the second. It goes without saying that one has to bear in mind the differences in the rhetorical functions of different arguments. An appeal to a conscious bias may be instrumental in winning the discussion while an appeal to a cognitive bias can be helpful in arriving at the right conclusion as the result of the discussion.

4. *Conclusion*

I think the most important lesson an argumentation scholar can learn by studying cognitive biases is that the human mind is only imperfectly reasonable. We can be logical, yes. But at times we can also be psychological. If my reasoning is poor, it may be not because I lack certain skills or abilities but because my thinking process is distorted by some inherent, natural features of my mental organization. By pointing out numerous instances of unreasonable human behavior, cognitive psychology does us all great service: we now can get rid of our illusions about the maximum achievable amount of reasonableness in humans.

Reading about cognitive biases will have some pedagogical implications, too. To make good reasoners of our students it is apparently not enough to teach them logic, rhetoric, and dialectic. When we talk to them about fallacies, we do it for a clear purpose: we hope that they will try to avoid bad reasoning patterns when making up their own arguments, and that they will be able to spot such patterns

in the reasoning of others. I believe we must talk to students about cognitive biases for exactly the same purpose. If a person is aware that her mental apparatus is liable to malfunctions of certain types, she will be better armed against falling into traps of her own psychology. Of course, self-reflection is not an easy task and neither is psychological analysis of others. And of course, cognitive biases are not tangible or measurable things, not even clear-cut notions. But replicable experiments show that some such biases do exist and knowing about them will certainly help account for the causes of poor reasoning in some instances. Moreover, it may help eliminate these causes thus improving the overall quality of reasoning.

In conclusion I'd like to reemphasize why I believe argumentation scholars should take into consideration the relevant research in cognitive psychology. First of all, we must remember the fact that the human mind is not only logical but psychological too. Some of the unreasonable actions people carry out result not from their poor logic but from their rich psychology. To be frank, I've always felt that some reasoning patterns described as informal fallacies are rooted in the human psychology. Take wishful thinking, for example. In my opinion, it is wrong to say that the utterance 'I want it to be true, therefore, it is true' lacks logic. It is so transparently anti-logical that the apparatus of logic is simply inadequate for its interpretation. Instead, a reference to the psychological 'side' of the human mind can explain how a reasoning pattern so appallingly illogical may exist at all: it comforts me to think it's true, therefore, I will think it's true. Or take the Bandwagon fallacy: 'Everybody believes it (or does it), therefore, I must believe it (or do it) too'. That's psychology at work, or herd instinct maybe, but it's not a logical breakdown. If argumentation theorists know more about cognitive biases they will be better equipped to say why a person is reasoning – and behaving – wrongly.

Besides, learning about the biases will help compile a more comprehensive inventory of fallacious reasoning patterns. Some cognitive biases are formalizable in the same fashion Douglas Walton and some other authors formalize argument schemes. For instance, the reasoning pattern affected by the Belief bias can be formalized as follows: "I share proposition *p* that argument *A* supports; therefore, *A* is a good argument". The Anchoring effect can have the following form: Object *O* has property *P; P* has positive (negative) value; therefore, *O* has positive (negative) value.

Other reasoning schemes affected by cognitive biases are apparently more difficult to formalize (the Confirmation or the Hindsight bias, for example), but I'm sure theorists can find ways to deal with such instances too. In any case, if they study cognitive biases and compare them to the fallacies they know, they will have a better chance to understand how the healthy brain may malfunction.

Of course one shouldn't forget that psychology is a purely argumentative science in the sense that all the conclusions psychologists make are liable to refutation. Indeed, when reading about cognitive biases I failed to be convinced by some arguments that I found. Well, after all, psychologists are liable to the Psychologist's fallacy by definition. Besides, there are controversies among cognitive psychologists about the existence and classification of many biases just the way there are controversies among argumentation theorists about the fallacies. So caution must be taken when analyzing what psychology has to say. At the same time, no-one is in a better position to evaluate the quality of arguments than scholars of argumentation.

NOTES

i. Although I'd prefer the word "unreasonableness" as I like to preserve the word "rationality" to talk about mathematical, abstract thinking which I'm not talking about here.

ii. For example, compare these two lists from Wikipedia: http://en.wikipedia.org/wiki/List_of_cognitive_biases and http://en.wikipedia.org/wiki/List_of_fallacies

References

Gilovich, T. (1990). Differential construal and the false-consensus effect. *Journal of Personality and Social Psychology,* 59 (4), 623–634.

Judd, C. M., Park, B. (1993). Definition and assessment of accuracy in social stereotypes. *Psychological Review*, 100 (1), 109–128.

Lewicka, M. (1998). Confirmation bias: Cognitive error or adaptive strategy of action control? In M. Kofta, G. Weary & G. Sedek (Eds.), *Personal Control in Action: Cognitive and Motivational Mechanisms* (pp. 233–255). Springer.

Mazzoni, G., & Vannucci, M. (2007). Hindsight bias, the misinformation effect, and false autobiographical memories. *Social Cognition*, 25 (1), 203-220.

Nisbett, R. E., & Wilson, T. D. (1977). The halo effect: Evidence for unconscious alteration of judgments. *Journal of Personality and Social Psychology,* 35 (4), 250–256.

Sheppard, S. Basic psychological mechanisms: Neurosis and projection. *The Heretical Press*. Retrieved on May 03, 2010.
Strack, F., & Mussweiler, T. (1997). Explaining the enigmatic anchoring effect: Mechanisms of selective accessibility. *Journal of Personality and Social Psychology*, 73 (3), 437-446.
Stupple, E.J.N., Ball, L. J., Evans, J. St. B. T., & Kamal-Smith, E. (2011). When logic and belief collide: Individual differences in reasoning times support a selective processing model. *Journal of Cognitive Psychology,* 23 (8), 931–941.
Walton, D., Reed, C. & Macagno, F. (2008). *Argumentation schemes.* Cambridge: Cambridge University Press.

ISSA Proceedings 2014 – Reasons Why Arguments And Explanations Are Different

Abstract: Trudy Govier defends the distinction (elsewhere taken for granted) between arguments and explanations. I will discuss what making the distinction really amounts to and try to show that the kind of distinction she wants to make between products (rather than between speech-acts whose distinctness from each other is uncontroversial) is under-motivated. In particular, I will show that her discussion of Hempel's covering law model is a terminological muddle.

Keywords: argument, deductivism, explanation, Govier, justification, prediction, Stephen Thomas

1. *Four ambiguities in setting the problem*
In this section I want to narrow down what the distinction between arguments and explanations would amount to.

One might wonder whether defence is at all necessary, since 'argument' and 'explanation' are not synonyms and nobody takes them to be such. The issue, rather, is what the distinction is a distinction between and what notice we need to

take of it. Kasachkoff (1988, p.25) instructively puts it this way:

What we are faced with, then, is a dispute not about whether there is a distinction between explanations and justifications: a distinction between them is maintained not only by those who . . . hold that we should analyze explanations and justifications differently, but also by those who claim that – at least for purposes of critical examination and evaluation – explanations are NO different from justifications. What, then, is the point of contention? It is whether the (admitted) distinction between explanations and justifications provides a reason for treating them differently. . . . . It is beside the point to argue against holders of this latter position that there is a difference between explanations and arguments, for their position does not deny this point. It is only the difference these differences make which it calls into question.

Kasachkoff, like Govier and like most who write on this subject, thinks that the matter is to be settled by showing that there are different normative constraints on the two things being evaluated; all that is then required to establish the distinction is an example of something that is successful as an explanation but unsuccessful as a justification, or *vice versa*.

Let us break this down a little more. At one extreme, explanations and justifications have precisely the same criteria of evaluation, that is to say that the same normative constraints are operative, and so it is not necessary to decide "for purposes of critical examination and evaluation" whether a piece of reasoning represents explanation or justification. Slightly weaker, but still adequate for denying any purpose to making the distinction, would be the case where explanations and justifications have different criteria of evaluation, but these criteria were such that they were co-extensive, that is to say that they gave the same verdict of goodness or badness irrespective of whether a piece of reasoning is taken to represent explanation or justification. To put it in terms of reasons, if the reasons given are always equally successful in providing an explanation and an argument, then there is no purpose for making the distinction, even if we supposed that the reasons functioned in different ways in the reasoning.

At the other extreme, explanations and justifications have different criteria of evaluation, so it is always necessary to make the distinction prior to proper evaluation of the reasoning. Not only is there no reason to suppose that a piece of reasoning will be good when evaluated as an explanation because it is good when

evaluated as a justification or *vice versa,* but in fact this is never true; the criteria are incompatible. This, as indicated, is an extreme view and not one that I think anybody holds – it is not the view of Govier or Kasachkoff. They hold to a weaker version where the criteria are not incompatible and thus it is possible in principle for the same reasons to satisfy both sets of criteria. Not only is it possible in principle but it actually occurs in practice**[i]** – there are some questions for which the same reasons will perform both roles. Nevertheless, if there is some question for which this is not so, then this is a reason for the claim that explanations and arguments are different. I will call this the Identity Question. However, I am not convinced that this is adequate, and I would like to point out four ambiguities.

Firstly, there is an act-object or process-product ambiguity in the terms 'explanation' and 'justification.' The acts of explaining and justifying are speech-acts, and it seems quite possible to follow the lead of McKeon (2013) in taking the distinction to be between the acts rather than the objects, and then difference in success is explained by the speech-act of explaining having conditions that the speech-act of justifying does not. Then, the only thing that counts for evaluation of the *object* is how well the reasons support the claim; furthermore, if all reasons-claim relations are deductive or can at least be represented in some logical system or other, then it is the object as a logical structure that concerns us normatively and that we need to evaluate. On the other hand, defenders of the distinction may still claim that there is a distinction between the objects or products themselves – even if these objects have the same logical structure this does not prevent them from being *conceptually* distinct, and for this reason from having different norms. One way of putting this is to say that defenders of the distinction may accept the act-object distinction yet still defend a distinction between objects as a type-token distinction.**[ii]** It is no small task to determine whether the norms in question are norms for the successful performance of a speech-act or the goodness of the object.

Secondly, there is an ambiguity in the word 'argument' that motivated my shift to speaking of justification above. In the logical sense of the word, 'argument' is just an abstract object, propositions arranged in a particular structure that exhibits logical inter-relationships between them, by evaluating which according to well-known canons of logic we are able to judge whether the argument is good. A piece of reasoning is good if and only if the reason supports the claim. The goodness of the reasoning can be evaluated by reconstructing it as an argument

and evaluating the argument (by showing that it is valid, if the argument is deductive). It is another sense of the word 'argument' that seems to be being distinguished from explanation in this literature. "In arguments, premises are stated in an attempt to prove, or justify, a conclusion," says Govier (1987, p.159). 'Justification' and 'proof' are then considered to be synonyms for 'argument' in the sense at issue. The claim that explanations are distinct from arguments is then the claim that explanations are distinct from justifications.**[iii]** As we have already seen, this leaves open the question whether it is a distinction between products.

Thirdly, I wish to note an ambiguity in the title itself. Govier takes herself to be giving reasons why arguments and explanations are different, but what kind of "why"-question does she take herself to be responding to? A request for a justification that arguments and explanations are different or a request for an explanation of why they are different? Nobody denies that these are different questions, but do they need different answers? Do the reasons Govier gives serve to answer both questions? If they do, and are *equally good for both purposes*, then the topic question of this paper is at least one instance where, whatever the conceptual distinctions between justifying something and explaining something, the object we use to argue and explain, that is to say, the reasons we give are the same. Govier (1987, p.171) allows that after a justification has shown that you should believe something, sometimes the very same reasons will help you understand why it is true. Presumably she feels that the chapter under discussion falls into that category.

Fourthly (though not strictly an ambiguity), there is also another question that our topic question might be confused with, and that is "Can an informal logician make the distinction between an argument and an explanation in a given piece of discourse?" Sometimes they obviously can, for instance, when the speaker begins with "Let me explain: . . .", or is the response to the question "Explain why . . ." But most of the time it will not be so simple, for it is only rarely that we explicitly use in discourse the illocutionary verbs that identify the speech-act that we are performing, and rarely that we explicitly request an explanation rather than just asking a "why"-question that is interpretable as a request for an explanation or for an argument. So let us suppose that the context of the discourse does not solve this. Also, it is not to be solved by appeal to specialized knowledge in the domain of which the discourse is a part, for what we have then is not informal

logic but applied epistemology of the particular discipline.**[iv]** If an *informal logician* can make the distinction between an argument and an explanation for a given piece of discourse then they must do so by appeal to linguistic indicators that they find in the discourse itself and perhaps common knowledge that is not domain or discipline-specific. The question "Can a distinction be made in practice?" I will call the Analysis Question. If it cannot be done – if the distinction cannot actually be made – then the tenability of the distinction becomes a rather academic exercise. It is important, therefore, that we should be able to answer "yes" to this question.

Before going on to Govier's defence of the distinction, it is worth pointing out that there is one fairly trivial sense in which all justifications are explanations. When I give my reasons for thinking that something is true then I am also explaining firstly why I think that it is true and secondly (often) the normative fact that everybody (or at least everybody who accepts my premises) *should* think that it is true. What I am not necessarily doing is explaining why it is true. Note that in each case the conclusion or explanandum is slightly different, i.e., *p,* I believe that *p*, everybody should believe that *p*. The reasons are different too. If I am asked why I believe that *q* I might answer that I believe that *p* and I believe that $p \rightarrow q$, and that I believe that *q* must be true if *p* and $p \rightarrow q$ are true; the logical principle modus ponens here becomes a principle of rationality telling me what I should believe given other things I believe. If I am asked why *q* is true, though, beliefs don't come into it and I will say only that *p* and $p \rightarrow q$ are true, and that q must be true if *p* and $p \rightarrow q$ are true.

2. *Govier's reasons: a defence of the distinction*

Govier (1987, p.159) starts by pointing out that linguistic indicators like "thus," "therefore," "since," and "because" occur equally in arguments and explanations, and that some sets of statements are interpretable either way. How does this affect our questions?

It seems we have reason to answer, provisionally at least, negatively to the Analysis Question; linguistic indicators do not on their own favour interpretation as an explanation or an argument. If informal logicians are to make the distinction after all (or at least to make the distinction prior to the evaluation**[v]**) then this is only on the provision that common knowledge has the resources for doing so.

We have reason also to answer negatively to the Identity Question, for whether it

is an explanation or an argument that is requested, any answer that we can give in discourse will be reasons that are linked together by these kind of indicator words, and unless there is a semantic difference between these words as they occur in arguments and explanations – i.e., these indicator words are ambiguous – then the object that we get out of the discourse by analysis will be the same both logically and semantically, irrespective of whether it is analysed as an explanation or as an argument. I can find nowhere that Govier claims that these words are ambiguous.**[vi]** This seems to imply a token-identity between explanations and justifications, at least in so far as informal logicians are able to determine the token through analysis of the linguistic indicators. It also implies that it is the product that is in question, for this is what we can get from analysis of a text. So, the defence of the distinction depends, as I suggested above that it must, on establishing the necessity of a type-distinction, which is to say, on establishing different normative standards for the products.

Govier next discusses the claim of the deductive-nomological model that all explanations are arguments, or at least, that it is a particular type of argument in which one premise is a covering law. There are actually two claims here that Govier might be referring to but which she fails to distinguish; in fact, the discussion of this issue in the informal logic literature is something of a terminological muddle. The first is that explanation in the object sense is an argument in the purely logical sense of the word 'argument,' though with certain additional logical features that distinguishes them from other arguments; not every argument, or even every valid argument, can be used as an explanation. The second is that explanation in the object sense is structurally identical to *prediction*.

These are quite different claims as the following excerpt from Hempel and Oppenheim (1948, p.137) shows:

If a proposed explanation is to be sound, its constituents have to satisfy certain conditions of adequacy, which may be divided into logical and empirical conditions. . . .

I. *Logical conditions of adequacy.*
(Rl) *The explanandum must be a logical consequence of the explanans; in other words, the explanandum must be logically deducible from the information contained in the explanans . . .*

(R2) *The explanans must contain general laws, and these must actually be required for the derivation of the explanandum. . . .*
(R3) *The explanans must have empirical content; i.e., it must be capable, at least in principle, of test by experiment or observation. . . .*

II. *Empirical condition of adequacy.*
(R4) *The sentences constituting the explanans must be true. . . .*

The appeal to logical deducibility in (R1) has the result that a good deductive-nomological explanation must be a valid deductive argument, and (R4) has the result that this argument is also sound. So, a good deductive-nomological explanation just is a sound deductive argument that also satisfies (R2) and (R3). Hempel would understand "All explanations are arguments" as saying only that all explanations are arguments in the logical sense (whether deductive for deductive-nomological explanation or statistical for inductive-statistical explanation) that comply with certain additional yet still *logical criteria*, principally the subsumption of the conclusion under a covering (universal or statistical) law. This has nothing yet to do with justifications. Continuing (Hempel and Oppenheim, 1948, p.138):

. . . Let us note here that the same formal analysis, including the four necessary conditions, applies to scientific prediction as well as to explanation. The difference between the two is of a pragmatic character. If E is given, i.e., if we know that the phenomenon described by E has occurred, and a suitable set of statements Cl, C2, . . . , Ck, L1, L2, . . . , Lr, is provided afterwards, we speak of an explanation of the phenomenon in question. If the latter statements are given and E is derived prior to the occurrence of the phenomenon it describes, we speak of a prediction. It may be said, therefore, that an explanation is not fully adequate unless its explanans, if taken account of in time, could have served as a basis for predicting the phenomenon under consideration. Consequently, whatever will be said in this article concerning the logical characteristics of explanation or prediction will be applicable to either, even if only one of them should be mentioned.

This is the second claim referred to above. If we take a prediction that something will occur as a proof that it will occur (if the explanation is sound), then this seems to be what Govier wishes to distinguish from an explanation. It is important to note that Hempel does not deny a pragmatic difference between explanation

and prediction; the identity he proposes is *structural* – it is the same object that is used to explain as to predict, and the features that make it a sound explanation when used to explain also make it a sound prediction when used to predict. Also note that Hempel is explicitly referring here to scientific prediction. Because the *scientific* explanation is adequate if and only if the scientific prediction is adequate – or perhaps we might say would have been adequate or successful if the premises were given and taken account of before the explanandum event – we do not need to make the distinction in order to evaluate them.

An interesting point is that the structural identity thesis can be defended even if we deny that the structure involved is a logical argument or inference. What underpins the identity of explanation and prediction is the claim that reasons do not explain unless the conditional probability of the explanandum being true given the truth of those reasons is greater than 0.5, i.e., it is more likely to be true than false, and the closer this probability gets to unity the better the explanation and the more reliably we can predict that the explanandum event will occur. If it is less than 0.5, then it is not more likely to occur than not and we would not predict that it would occur. Obviously, deductive entailment is a limiting case where given the premises the conclusion must be true. Deductive and statistical arguments represent the relevant modal facts, but it is these facts themselves that underpin the identity thesis. Mellor (2006), denying that explanations are inferences, nevertheless endorses the identity thesis on the basis of this probability. However, against Mellor I would say that what we are attempting is not a conceptual analysis of explanation but merely a theoretical explication of its normativity; once it is agreed that deductive and statistical arguments actually can represent the relevant modal facts, that is all we need to determine whether the explanation and/or prediction is good or not, simply by evaluating the argument.

It should be obvious that the big question is whether reasons can explain – whether an explanation can be good – without making its explanandum more likely than not. This is an issue that will come up later. Instead, Govier pursues a course that is actually orthogonal to the structural identity thesis as Hempel proposes it. There is a difference, Govier says, in the 'pragmatic direction' of an argument (proof/justification/prediction) and in the direction of the 'certainty shift.'**[vii]** She cites Nozick approvingly:

A proof transmits conviction from its premises down to its conclusion, so it must

start with premises (q) for which there is already conviction; otherwise, there will be nothing to transmit. An explanation, on the other hand, may introduce explanatory hypotheses (q) which are not already believed, from which to deduce p in explanatory fashion. Success in this explanatory deduction may lend support and induce belief, previously absent, in the hypothesis. [Nozick (1981, p.14) cited in Govier (1987, p.162)]

This is odd in a number of ways. For one thing, Nozick is not here denying the structural identity of a proof and an explanation. Slightly before the excerpted segment, Nozick (1981, p.13) writes in perfect harmony with Hempel: "Even if (deductive) proof and (deductive) explanation have the same abstract structure . . . the pragmatics of the two activities differ." For Nozick as for Hempel, there are pragmatic differences, but these are differences between the two *activities* and not between the objects, which have the same structure.

For another thing, Nozick does not say that the conclusion of an explanatory argument shifts its certainty to the premises of the argument, as Govier seems to think; what shifts the certainty is the *additional* fact that the "explanatory deduction" is *successful.* It has the form:

1. F
2. E is the (best) explanation for F.

Therefore, probably

3. E

It is premise (2) that does the work here, and this premise is a comment on the explanatory argument "E, therefore F" and not the argument itself or an element thereof. This, Govier (1987, pp.169-70) says, is an argument, not an explanation. So we do not here have a case where the explanandum 'shifts certainty' to the explanans.

There is, of course, a sense in which we might say that the truth of a derived consequence shifts certainty onto the premises it was derived from. Thus, we say that when a prediction has been confirmed (e.g., by observation) that this also *confirms* the explanans or whatever it was derived from. That is to say,

1. F

Therefore, probably

2. E

might itself be considered an argument in Govier's sense and it is certainly true that we might give F as a reason for believing E. Clearly this is not an explanation since it is not F that explains E but the other way round, but nor is it a scientific prediction. Hempel advocates both the structural identity thesis and confirmation, and is clearly not inconsistent to do so. All that this shows is that Govier's sense of the term 'argument' is wider than Hempel's sense of the term 'scientific prediction.'

All Govier's talk about pragmatic direction and certainty shifts has actually nothing at all to do with the structural identity thesis and is orthogonal to the Identity Question; we could concede these and still claim that the products are identical. What she needs to show is that the differences that everybody admits to are not simply differences between activities (Nozick) or speech-acts (McKeon) but actually differences in the products. I suggested above that she could concede that these products are token-identical, but argue that we must make a type-distinction between them. Recall that the Identity Question asked not only whether there was a question for which the same reasons could be given as an answer, but whether those reasons were equally good for both purposes. Govier's task, then, is to show that they are not, in general, equally good.

This is getting ahead of ourselves, though. Govier's next attack is on Stephen Thomas' four reasons for abandoning the distinction between arguments and explanations for pedagogical purposes. Thomas does not deny that there is a distinction, or that informal logicians can make it, but seems to be saying only that comparatively unskilled informal logicians cannot make it (hence it should be abandoned for "pedagogical purposes"). This is a version of the Analysis Question. More important is his deflationary claim that there is actually no point in making it, for what we are really evaluating in either case is the reasoning involved, i.e., how well the reasons support the conclusion. If this is so then it amounts to answering negatively to the Identity Question. Thomas uses the term 'argument' to cover both justifications and explanations simply because they both contain reasoning (Thomas, 1981, pp.11-14) and it is the reasoning that we seek to evaluate.

Thomas's first reason is that sometimes our discourse is explanatory and justificatory at the same time and on the same interpretation: "An argument *that* x is true may also constitute an explanation *why* X is true" (Govier, 1987, p.163). According to Govier, Thomas argues that making a distinction between argument

and explanation amounts to saying that explanation falls outside the scope of what can be evaluated by logic, and correctly points out that we can claim that explanations are logically evaluable without assimilating them to justifications. The existence of some discourses that are explanatory and justificatory at the same time and on the same interpretation is not sufficient to deny the viability of making a conceptual distinction.

If this is Thomas's argument then Govier's response seems valid. But as far as I can tell Thomas makes no comment on the "scope of logic" beyond the fact that it is concerned with reasons and reasoning, and as already noted above he does not deny the viability of making a conceptual distinction between explanations and justifications. He only means that we do not need two separate evaluations, since the justificatory discourse is good if and only if the explanatory discourse is good; there is simply no point in making the distinction, as far as the informal logician is concerned. We do not have to treat them differently, to use Kasachkoff's phrase:

. . . [I]n relation to real-life discourses, the distinction between justifications and explanations is neither sharp nor exclusive. Some discourses cannot be clearly categorized as one or the other, and many discourses seem to be both an explanation and a justification at the same time. However, this need not worry the reader of this book, because in either case the word 'because' and its synonyms are classified as inference-indicator words, and the discourse in which they appear in either case is counted as an argument. (Thomas, 1991, p.14)

Perhaps also the explanatory discourse need be good only in the trivial sense of explaining why I think or believe something [mentioned in the first section and in Wright (2002, p.37)]. If so, Govier is arguing past Thomas. Her point that the distinction is not shown not to be viable simply by the fact that some discourses are good in both ways is valid, but not one I think Thomas should be taken as denying. The example of discourses that are good in both ways is meant to respond to the Analysis Question more than the Identity Question. It is the difficulty of making the distinction that makes Thomas's claim that we do not need to make it in order to evaluate the reasoning so welcome, and if it were not so difficult this deflationary claim would serve little purpose. So, all I think that Thomas is trying to establish here is this difficulty, and Govier's criticisms miss their mark.

Thomas's second point is that making the distinction relies on extra-logical

factors: function, social purpose, psychological factors. Again, Thomas (according to Govier) is assuming that arguments are within the scope of logic and that explanations are not. If the extension of the term 'argument' is relative to these kinds of factors, then either the scope of logic is also relative to the same factors (Govier, 1987, p.163) or, perhaps, the same product is sometimes evaluable and sometimes not.

Govier's (1987, p.164) response, once more, is to challenge Thomas's assumption and allow explanations within the scope of logic: "To say that pragmatic factors are required to apply the distinction between arguments and explanations is quite consistent with the sort of account Nozick offers, where beliefs of authors and their audiences are relevant to the issue of whether the intent is to justify or to explain." Once more, Govier's invocation of Nozick is inopportune, for we have already seen that for Nozick the distinction is not between the products but between the activities. The point is whether the intent to explain imports anything distinctive into its product, or to be a bit more precise, whether it imports anything that would affect its goodness or is relevant to its evaluation, into its product.**[viii]**

Again, I see no evidence that Thomas really does make the assumption Govier accuses him of making. His main objective, here just as in his first argument, is to raise problems for answering affirmatively the Analysis Question. But let us suppose that we are in fact able to make the distinction. The next point is that *goodness* should not be relative to these kinds of factors – if an argument is good, it cannot become bad just because it is used for a different social purpose (explaining why its conclusion is true might qualify as such a purpose) or because the arguer loses faith in its premises. We only ever need to evaluate the product as an argument, any distinctions being a distinction between functions and purposes and not between products.

We see again that the issue actually turns on what we are evaluating when we evaluate arguments and explanations, whether it is the product itself or an act, and, if it is the product, whether this a distinction we can make on the basis of common knowledge. This difficulty for the Analysis Question is emphasized in Thomas's fourth argument where he says that pragmatic factors are often not revealed by the text. Again, this is related to the Analysis Question. Granted there is a distinction of some kind between argument and explanation (which nobody denies), there is no point trying to make it if it cannot be made (because of the

vagueness of the linguistic indicators) and would make no difference to its evaluation or goodness even if it could be made.

Thomas's third argument is that explanations are regarded as arguments in the hypothetico-deductive model. Thomas says that this means they can be evaluated by the same logical criteria because they contain the same reasoning. Govier (1987, p.164) responds: "The idea that logic should encompass the appraisal of the reasoning used in explanation can be accepted without renouncing the distinction between explanation and argument." Again, the real issue is what kind of thing this is a distinction between. As said earlier, if there are different normative criteria for evaluating the products are involved, then there must be a type-distinction between the products. What Govier needs to show is that there are some good arguments that are bad explanations and some bad arguments that are good explanations, and she gives several examples meant to show precisely this. Her first example is this (Govier, 1987, p.164):

1. Jones is a liberal.
2. Jones is fat.
3. Jones is a bachelor.

Therefore,

4. Jones is a fat, liberal bachelor.

Therefore,

5. There are fat, liberal bachelors.

This is a valid argument that nobody, Govier says, would claim to be a good explanation – it does not answer the question of why there are fat, liberal bachelors (although it does explain why the one offering the argument thinks that there are)**.[ix]** Hempel would agree since it does not meet the requirement (R2) that requires one premise to be a law, and Govier (1987, p.165) herself says that subsumption under law would provide what is lacking. Still, it does show what Govier intends to show, namely that not all arguments are explanations of the same conclusion, and that explanation has criteria that arguments as such do not. This claim, Govier acknowledges, is trivial and uncontroversial. Govier (1987, p.165) takes her next example from Salmon:

1. Doctor Smith has predicted that Susan will catch the measles.
2. Doctors are almost always correct when they predict that children will catch the measles.

Therefore,
3. Susan will catch the measles.

This is a good inductive argument but in no way explains why Susan catches the measles.

However, although I agree that this is a good inductive argument in the logical sense of the word 'argument,' there is a disanalogy between the relationship between the premises of this argument and its prediction that Susan will catch the measles and the relationship between the premises of an argument and its prediction as it occurs in deductive-nomological, or even inductive-statistical, explanation. In the latter case the premises are used to make the prediction, and could be said to be that which makes the prediction. This is not so in the example above – it is not (1) and (2) that makes the prediction that (3). It is Doctor Smith that makes the prediction that (3) – as stated by (1) – and (2) then says something *about* that prediction bearing on its likelihood of being true (doctors' track-record for measles prediction). Thus, it is quite different from the similar looking:

1. The measles virus causes measles to occur more often than not in those exposed to it who have not had measles before or been vaccinated against measles.
2. Susan has been exposed to the measles virus and has not had measles before or been vaccinated against measles.
Therefore,
3. Susan will catch the measles.

Only the latter argument is a good scientific prediction; the former is not a prediction at all but a justification of a prediction. Note that both arguments are statistical, but only in the second is the statistical premise a covering law.

Consider this argument:

1. Susan is presenting what looks like Koplik spots.
2. When children present what looks like Koplik spots they almost always have the measles.
Therefore,
3. Susan has the measles.

(2) is a so-called law of co-existence – Koplik spots are reliable indicators of

measles. But should we treat this as a covering law, as something that satisfies (R2), or is it more like the track-record premise in Salmon's example? Is it possible to say that Koplik spots make the prediction in a similar way in which we said this of Doctor Smith in Salmon's argument? Hempel treats causal laws and laws of co-existence on a par, but this infamously leads to asymmetries where the height of a flagpost is explained by the length of its shadow and a storm is explained by the fall of barometric pressure in a barometer. It would take me too far afield to discuss these matters. I only offer the possibility of saying that laws of co-existence do not explain or predict, but only justify predictions.**[x]**

In her next example she notes that in retrodictive inductive arguments facts that are true now can be used to argue that something occurred in the past but cannot explain it; for instance, the use of fossilized remains to substantiate claims about our prehistoric past and the use of archaeological remains to substantiate claims about ancient civilizations (Govier, 1987, pp.165-66). Govier (1987, p.166) then generalizes this result, claiming that there are many cases where we have good evidence and reasons for thinking that something is the case that do not explain why it is the case.

I find this curious. Certainly, when a prediction, or retrodiction for that matter, is established (because the prediction is validated by observation or because a retrodiction is corroborated by other independent evidence, for example) then that fact is evidence for the truth of the premises, but we would not expect it to either explain or predict the premises. As I have already said, confirmations are not predictions, and this has nothing to do with the structural identity thesis. We would here be arguing from the conclusion to the premises, whereas both explanation and prediction argue from the premises to the conclusion.**[xi]** Perhaps Govier would say that her only point is that we would call this a good argument but not a good explanation. On these modest terms she succeeds. I would say only that the type of inductive argument that confirmation theory studies is not one we would expect to be a good explanation, but is in fact the converse of the explanatory and predictive relation.

Govier seems aware that she has not actually touched the structural identity thesis, for she concedes that the Hempelian can accept all these things and would say that it is only explanations that comply with (R1) to (R3) that are structurally identical to predictions. In other words, none of these counter-examples really count because they do not include a law among their premises. If this is so, then

all arguments that are good explanations should be good predictions. However, Govier (1987, pp.166-67) gives an example to show even this much to be false:

1. Smith is a Communist sympathizer.
2. Cuba is a Communist state.
Therefore,
3. Smith's account of conditions in Cuba is flawed and biased.

As an argument this is fallacious *ad hominem*, as Thomas concedes, so he should not, if he thinks that the criteria of evaluation are the same, think that the explanation is good. Yet, if we consider (3) as an explanandum that is already known, then (1) and (2) provide a very plausible explanation of that fact. We can see (1), (2) therefore (3) as an inductive-statistical explanation that explains (3) by making it probable.

It is not clear to me that this is a bad argument. For one thing, we normally speak of *ad hominem* argumentation when accusations of bias are made regarding the premises and not, as here, when it is in the conclusion. That Smith is biased is a claim that is either likely given the premises or it is not; it depends on an unstated statistical premise concerning the veracity of accounts of Communist states by Communist sympathizers. But the same unstated premise seems to be tacitly appealed to in the claim that (1), (2) therefore (3) is a good inductive-statistical explanation (which, in the absence of a statistical premise is not a statistical argument at all) that explains (3) by making it probable, but by making it probable it seems that this succeeds to the same extent in proving that Smith is biased. Even if we do count it as an ad hominem it is not obvious that it is fallacious, since all that it is really saying is that Smith is likely to say sympathetic things about Cuba whether they were true or not. The explanation is as good or bad as the argument.

Smith seems to be a counterpart to Jones. In the Jones example, the argument was good but the explanation bad. In the Smith example, the argument is (allegedly) bad but the explanation good. I want to note one thing with regards to the Analysis Question regarding both of these examples. It is not that Govier makes the distinction between explanation and argument prior to evaluating the example; no linguistic indicators, no common knowledge, no empirical data at all seems to favour one interpretation over the other or is appealed to in making the distinction. In the end it is the Principle of Charity that makes the distinction.

Rather than making a distinction prior to evaluation, Govier essentially evaluates the example under both interpretations and then makes the distinction on the basis of the evaluation, charitably attributing that interpretation under which the example turns out good. I mention this only as an observation, for I do not think adversely affects Govier's argument unduly, for we can probably relax the requirement that says that the distinction must be made prior to the evaluation.

Sometimes we explain something even without making it probable. This means that explanation can get by with a weaker statistical premise than prediction. To this end she cites Scriven's well-known paresis example where we explain why somebody got paresis by pointing to the facts that they had syphilis and that only syphilitics get paresis, even though it is only a very small percentage of syphilitics that contract paresis and so we do not make getting paresis probable. Salmon gives a similar argument. These (unlike Govier's earlier examples) are serious challenges to the structural identity thesis; the statistical facts involved seem to be very weak evidential reasons to think that something will happen but good explanatory reasons for why it happened, given that it did.

Hempel's response is that this is not a good explanation. Realizing that there will be cases where what appear to be good explanations will not be such as to have allowed the prediction of their explanandum event, Hempel and Oppenheim (1948, p.139) say:

Many explanations which are customarily offered, especially in pre-scientific discourse, lack this predictive character, however. Thus, it may be explained that a car turned over on the road "because" one of its tires blew out while the car was travelling at high speed. Clearly, on the basis of just this information, the accident could not have been predicted, for the explanans provides no explicit general laws by means of which the prediction might be effected, nor does it state adequately the antecedent conditions which would be needed for the prediction. . . .

In some cases, incomplete explanatory arguments of the kind here illustrated suppress parts of the explanans simply as "obvious"; in other cases, they seem to involve the assumption that while the missing parts are not obvious, the incomplete explanans could at least, with appropriate effort, be so supplemented as to make a strict derivation of the explanandum possible. This assumption may be justifiable in some cases, as when we say that a lump of sugar disappeared "because" it was put into hot tea, but it is surely not satisfied in many other cases.

Thus, when certain peculiarities in the work of an artist are explained as outgrowths of a specific type of neurosis, this observation may contain significant clues, but in general it does not afford a sufficient basis for a potential prediction of those peculiarities. In cases of this kind, an incomplete explanation may at best be considered as indicating some positive correlation between the antecedent conditions adduced and the type of phenomenon to be explained, and as pointing out a direction in which further research might be carried on in order to complete the explanatory account.

Hempel here seems to be suggesting that such explanations are not really explanations, or at least not scientific explanation, but are at best incomplete explanations which when completed would allow the prediction of the explanandum event; being syphilitic does not explain why someone contracted paresis, and will not until it is explained why some syphilitics get paresis and others do not. This is a research question that, by considering the given explanation to be already good, might have been deemed unnecessary. The appearance of a good explanation is because of the pragmatic reason that it names a relevant difference that someone who did not already know that it is only syphilitics who get paresis might find informative – indeed, it is essentially Mill's Method of Differences. Also, we see Hempel say that symptoms and indicators do not suffice for a prediction.

In a similar vein, Mellor (2006, pp.232-33) argues that "explanation" is ambiguous. Something is an explanatory reason and can be given in response to a request for explanation as long as it raises the probability of the explanandum event's occurring; but only if, when conjoined with background knowledge, the probability of the explanandum event's occurring is close to unity can we claim to have a good explanation. Like Hempel, Mellor seems to be saying that when we cite an explanatory reason this is really elliptical for a much longer statement that we may or may not know how to complete, but that we are justified in giving it as a reason and as providing explanation as long as it is positively statistically correlated with the explanandum.**[xii]**

Still, maybe Hempel and Mellor are too casual with our linguistic intuitions here, and later Hempel relaxed the conditions on inductive-statistical explanations in response to these kinds of objections. However, I wonder whether this really helps Govier, for once it is raised that the goodness or apparent goodness of an explanation or explanatory reason depends on pragmatic and contextual factors,

the issue of whether these factors are part of the evaluation of the product is also raised. Pragmatics governs a kind of activity, and not the product, and the pragmatic goodness of one is not necessarily the rational goodness of the other, although a good and complete explanation should be good whatever the pragmatic and contextual factors. Do our linguistic intuitions track the appropriateness of giving a reason as a speech-act, or the goodness of the resulting product?

Kasachkoff (1988, p.26) cites an example from Thomas: "Everybody has needs. You don't fill mine. So I'm splitting." Thomas says that it is unnecessary to decide whether this is a justification or an explanation because all we need to evaluate is how well the reasons support the conclusion. Kasachkoff (1988, pp.26-27) disagrees:

If you know that the author of the above discourse is not leaving, an explanation of why she is leaving would not make any sense; if you know that she is leaving, a proof that she is leaving is beside the point.
Now, saying that an argument is either beside the point . . . or else that the argument fails to make sense, is to make an evaluation of its success.

The kind of success that Kasachkoff seems to be referring to here is perlocutionary success, but this is not a kind of success that can make a proof less good. Suppose that I prove Pythagoras's Theorem to you, and then you tell me that you already knew this. In a sense my proof was a waste of time, but this does not make it any worse as a proof; it is as good as it ever was, and cannot become bad because of psychological facts about you. As I said earlier when discussing Thomas, what should not be relative to pragmatic and contextual factors is the goodness of arguments and explanations; it is no problem that where and when the distinction between arguments and explanations is to be drawn is relative to these factors. Kasachkoff's analysis of this example only seems to reinforce the thought that the distinction is between speech-acts.

Govier does not seem to realize this issue or provide us means to decide between these options. This seems to be only exacerbated in the next section where Govier (1987, p.168) explains why explanation and argument are different: justifying evidence appropriate for showing that something is the case is not in general appropriate for explaining why it is the case. Their appropriateness is tied to the different function of the social processes for which they are typically used.

Arguments are used for rational persuasion, and even when not used this way because the conclusion is not in doubt, this does not alter the basic asymmetry between arguments and explanations. But this asymmetry seems to be between the social processes, not the products.

Given all this, Govier concludes that arguments and explanations are not, in general, the same. She asks then whether there are particular arguments and particular explanations that are the same, considers some of Thomas's examples, and by examining the pragmatic direction of each determines whether they are arguments, explanations, or both. For example, she decides that one of the examples**[xiii]** is an argument because it does not seem plausible to suppose that the audience knows its conclusion in advance of being given the argument. She then notes that, once this conclusion has been established, the very same argument does explain why the conclusion is true:

The very same claims show both that the conclusion is true and why it is true. The same passage constitutes both argument (justification) and explanation, as Thomas maintained. This can happen because the justifying premises are also statements that are appropriate to explain the fact that is in the conclusion. The audience would, however, have to be convinced of the truth of the conclusion before an explanation as to why it was true would seem necessary. (Govier, 1987, p.171)

Here she concedes, as we noted in section 1, that there are occasions where argument and explanation are at least token-identical and which are equally good as arguments and as explanations. This is, of course, quite consistent with their criteria of evaluation being different; it is simply that the same reasons can satisfy both sets of criteria. In consequence, it is also consistent with there being a conceptual distinction between arguments and explanations, which depends on there being different criteria.

Another of Thomas's examples gives convergent reasons for the conclusion. Here too, she allows that these reasons can also be good explanatory reasons, albeit the explanation is not a deductive-nomological one. These concessions, she notes quite correctly, only shows that these passages are good by the criteria of both explanation and argument and not that these criteria are the same. In fact, they cannot be the same, for then this would follow for all passages and it would be impossible for there to be good arguments that are bad explanations and *vice*

versa (Govier, 1987, pp.172-73). We see that Govier does not propose the kind of extreme view that denies that any good arguments can also be good explanations, or *vice versa.*

In her final section, Govier notes that we do make this distinction in real life. Sometimes when we ask why or somebody asks us why, we consider a justification to be the appropriate response, and sometimes we consider a justification to be beside the point or to involve a misunderstanding of the question and it is an explanation that is called for. What we consider the response to be will affect how we consider it, and this includes the addition of missing premises. She gives the example of someone saying that he believes in God because he learnt religion at his mother's knee. Is this "because" explanatory or justificatory? We can add in a missing premise on either interpretation:

(REASON) I learned religion at my mother's knee.
(MISSING EXPLANATION) People usually persist in believing those things that they learn at their mother's knee. That is (the cause) why I believe God exists.
(MISSING ARGUMENT) Most of what people learn at their mother's knee is true. Therefore, (probably) God exists.
Govier (1987, 174) suggests that this works better as an explanation and that in most contexts it makes little sense to ask for a justification.

Note that this is not an explanation of why something is true but of why the speaker believes it, which we have already said is a trivial sense of explanation and certainly not the one pertinent to Hempel. Note also that construed as an argument it is not a prediction but a justification of a prediction. So, this is not a counter-example to the structural identity thesis, firstly because it is neither a real explanation nor a real argument in the senses discussed, and also because, anyway, the structures are different, since there are different conclusions, and consequently (it should come as no surprise) different missing premises that we need to add to complete these enthymemes. What is slightly more surprising is that even after completed in the most charitable way possible the explanation of why the speaker believes something still seems that much more plausible than the justification.

This is an illusion, however. Supposing that the statistical claim made in MISSING ARGUMENT is true the justification does *confer* a high probability on God's existence (relative to the given grounds) and is, for this reason, a good argument;

the reason it appears not to be is because of information that we know (about the unreliability of certain classes of truth-claims) but that is not including among the premises. This is just the non-monotonicity of statistical arguments and what Hempel calls the structural ambiguity of inductive-statistical explanations; what is highly probable relative to one set of premises may be highly improbable relative to another set of premises, even when this second set of premises has been produced simply by adding a further premise to those already present. As in the Communist sympathizer example, the appearance of being a bad argument is deceiving. Govier (1987, p.174) concludes:

Noting how the inserted material differs in these cases and how the conclusion of the argument differs from the statement of the explanandum, we can see that the argument/explanation distinction retains considerable epistemic and practical significance. The force of 'why' questions and 'because' answers varies, depending on whether we deal with a request for an explanation or a justification. Different claims are differently relevant, and different standards of success apply. To be sure, reasoning is used both in explanations and in arguments. Without the full context, some responses could be taken as either one or the other. Nevertheless, the distinction retains its pragmatic significance, and the pragmatics of the matter are related to our logical and epistemic appraisal of the result.

But here the inserted material is different simply because the conclusions are different. It is true that we can respond to some requests for justifications with confirmations and justifications of predictions, and these are not identical to explanations. But the only genuine explanations that may not, perhaps, be genuine justifications, are those whose statistical premises do not confer high likelihood on their conclusions. This is an old point that Govier has nothing original to add to; everything else she says fails to make the distinction as a distinction between objects.

3. *Conclusion*

What do we mean when we say that explanations and arguments are different? As Kasachkoff says, nobody denies this. Nobody denies that the intention to explain and the intention to justify are different intentions. Since communicative intentions are related to the illocutionary force, the distinctness of the speech-acts of explaining and justifying are also different, as all must agree. All can agree also that they have different perlocutionary effects: understanding in the case of

explanation, justified belief in the case of justifying. All can also agree that understanding has different conditions to justified belief; to understand why something is so is not only to have a justified belief that it is so but also, plausibly, to grasp the modal fact that it must be so, given other conditions. If any normative difference between the speech-acts comes down to a difference in conditions of perlocutionary success, then it seems as if all good explanations should provide good reasons for believing that the explanandum is true and that it must be true. Consequently, all good explanations would be good arguments, although not all good arguments would be good explanations.

Furthermore, there would be no need to make the distinction between explanations and arguments, for whatever claims (including the modal claims) are made, the reasons would either support those claims or not, and this is a matter of logically evaluating the product. As Thomas says, for the purposes of evaluating the reasoning we would need only to establish whether the reasons support the claim or not, and would not need to make the distinction between the products of explanation and justification, but only if at all between the acts when, using charity (often post-evaluation, as we have seen), we attribute communicative intentions to the arguers.

When we say that there is a distinction between explanations and arguments, and that it is a (type-) distinction between the objects rather than the acts, this can only be because there are good explanations that are not good arguments. All of the talk about "pragmatic directions" and "certainty shifts" is quite compatible with the distinction being between acts and is thereby irrelevant for evaluating the goodness of the reasoning involved; both Nozick and Hempel concede that there is this difference without conceding that it is a difference between the products. Another red herring is the fact that we often cite evidence as our reasons for believing something but this evidence does not explain why something is so. This is obviously true, but shows only that observing that something is so is not to observe that it must be so.

However, if we conjoin our evidence with a law (even a law of co-existence) to argue for another particular statement, then this would justify belief in the modal claim involved. In this case, arguments that satisfy Hempel's (R1) to (R3) would be explanations, and would be good explanations to the extent that they justified the modal claim, i.e., to the extent that the law confers a high conditional probability. It is because of this high probability that there is an identity of

explanation and prediction, and not because explanation has a particular logical form; we can claim a structural identity even without committing to any particular type of structure.

If Hitchcock (2011) is right, then this is so for all arguments after all, since according to him the semantics of "therefore" wherever it appears contains implicit reference to a generalization that backs counterfactuals, which seems near enough to a law as to make no difference. However, I am not sure that Hitchcock is right about this, and this is not the place to argue the issue. I say only that if you want to explain not only why you do believe something but the normative fact that you should, you need some kind of law to support the modality involved. I would not like to say, and nor would Hempel, that all arguments obey (R1) to (R3). It is no problem in making a distinction between explanations and arguments that do not obey (R1) to (R3), since we can make a distinction between arguments that do and arguments that do not obey (R1) to (R3). I think we can agree with Govier that there is this distinction, and several of her examples illustrate it, but this distinction is not a pragmatic distinction at all but a logical distinction, (R1) to (R3) being logical conditions. The interesting and controversial question is whether it is worthwhile, in Kasachkoff's sense of meaning that we have to treat them differently, distinguishing between explanations and arguments that do obey (R1) to (R3).

Saying that there are good explanations that are not good arguments turns out to be tantamount to saying that there are reasons that are good explanations but do not confer a high probability on the outcome. It should be noted that this applies to statistical-inductive explanation only and consequently does not affect the claim that all good deductive-nomological explanations are good predictions, and it should be noted also that it is deductive-nomological explanations that Nozick (1981, p.13) refers to in the excerpt previously mentioned. This is a very old point made by Scriven in his famous paresis example and which is appealed to by Govier**.[xiv]** It is typically conceded that there is a pre-theoretical intuition that we explain paresis in a patient by giving as a reason that he had untreated syphilis. The problem is what exactly to do with this intuition. In his early responses to Scriven, Hempel explained away this intuition on pragmatic grounds, while Mellor does the same on semantic grounds. Scriven and Govier take the intuition at face-value as a counter-example to the covering law model. But by doing this they seem to concede that the goodness of an explanation depends on

the kind of pragmatic and psychological factors that Thomas says should not enter into the evaluation, and perhaps cannot be gotten by analysis of the discourse given the resources the informal logician has at his disposal. My feeling is that it makes sense to talk of the goodness (i.e., felicity) of a speech-act as depending on such factors, but less plausible to talk of the goodness of the product as depending on such factors; Govier's appeal to Nozick for help only hinders her in showing the distinction to be a type-token distinction rather than (or as well as) an act-object distinction.

What is the result of all this? For all that Govier says, the distinction between explanation and argument is a distinction between the speech-acts and does not need to be made if the argument is as Hempel describes it. Nobody denies that these acts are different. Therefore, I think the burden of proof is on the defenders of the distinction to show that the distinction is to be made in the place and in the way that they make it. I do not think they have met this burden of proof. Equally, I do not pretend to have proved that the only distinction is between the acts or that it is impossible to make a type-token distinction in the products. As I pointed out at the outset, it is extremely difficult to know how to decide between them. Hempel does not deny these pragmatic factors, but mentions them himself – they reflect different ways we may use an argument.

Has Govier succeeded in giving reasons why explanation and argument are different? I don't think so. She does not succeed in persuading me to believe that there is the kind of difference that she wants to endorse, for everything that she says is compatible with and can be explained by a distinction between the acts that everybody already accepts. For the same reason, she does not succeed in explaining why they are different, for all the differences she names could be differences between the acts. And if the differences between the objects are simply differences between different kinds of arguments – between those that do and those that do not satisfy (R2) and (R3) – then it is not very interesting, for we are still evaluating the explanation as the kind of argument that it is. It is not a distinction that means that we have to treat them differently. At most, she succeeds in telling us what some of the differences are, not what they are differences between, or, in the interesting cases, what differences the differences make.

NOTES

i. Wright (2002) describes classes of "why"-questions where the distinction seems

to fade or even vanish completely.

ii. Since he thinks that any distinction must be a structural one, McKeon (2013) fails to appreciate this kind of defence and much of his discussion is lacking for this reason. Johnson (2000, pp.98-99) rejects a structural definition of argument for the very reason that it lacks the resources to make the distinction between argument and explanation that he rather takes for granted it must. So, saying that there is the same structure is not in itself sufficient for the conclusion that the structures should be evaluated in the same way. Nevertheless, his proposal that the distinction is one between acts is certainly live.

iii. This greatly complicates Govier's discussion of Hempel, for Hempel uses 'argument' in the logical sense, but talks also of 'prediction' in a way that suggests that all predictions are proofs, but does not claim that all proofs are predictions. Discussion of this point will appear later.

iv. Writers like Weinstein and McPeck reject informal logic for this kind of reason, in favour of discipline-specific epistemology. For discussion see Johnson (2000, pp.260-68 & pp.298-309)

v. I make this qualification because we will see later Govier evaluate an analysed text as both an argument and as an explanation, and then using the Principle of Charity to give the text the interpretation under which it comes out best. For instance, if it comes out as a bad argument when evaluated as an argument but as a good explanation when evaluated as an explanation, Govier seems prepared to say that it is an explanation rather than an argument.

vi. It seems to me that you might make a case for the "therefore" of an explanation requiring backing by a generalization, whereas the "therefore" of a justification does not. This would be a qualified acceptance of Hitchcock's thesis that all uses of "therefore" have this kind of backing as part of their semantics (Hitchcock, 2011) and that "therefore" is ambiguous after all. Govier does not take this view here.

vii. It is not just Govier; distinguishing arguments and explanations on pragmatic grounds is the orthodoxy in informal logic, e.g., Groarke and Tindale (2004, pp.20-24).

viii. Govier writes here almost as if what she means is the acts after all, but this is not open to her since, going back to the Analysis Question for a moment, whatever it is that we evaluate must be extracted from the discourse by linguistic indicators and common knowledge, which is to say that it must be a product.

ix. One might wonder whether this actually is a good argument, since it simply repeats in its conclusions what was in the premises and it is precisely these kinds

of arguments that Govier is wont to claim are not 'real' arguments. However, since the premises do seem to be given "in an attempt to prove, or justify, a conclusion" in line with Govier's definition, I will not press this issue.

x. This is a distinction that is made in Hanson (1959) but applied there, in my view, wrongly, for Hanson considers all predictions that are made by covering law explanations to be justifications of predictions. The following might help to identify precisely what is meant when we speak of an argument making a prediction: One should, strictly speaking, always speak of explanatory and predictive arguments, or explanatory and predictive uses of the argument-schema, if only to avoid at the outset the objection that some predictions are not the results of inference and hence have nothing connected with them that could function as explanations (e.g. the predictions of oracles, clairvoyants, and so on). Whilst in a generic sense a prediction is simply an assertion about the future, we are here concerned with scientific prediction, and this is essentially bound up with the idea of an inferential basis, in the sense that a prediction qua assertion must be connected with some other statements which provide a rational basis for asserting the prediction. (There will obviously be room for dispute about what constitutes such a rational basis, but this is an overarching problem.) Providing the point is kept in mind, no harm is done by speaking indifferently of the symmetry of explanatory and predictive arguments or of uses of an argument-schema or simply of explanation and prediction. (Suchting, 1967, pp.42-43 fn. 5)

xi. Perhaps Govier is still under the confusion over the 'certainty shift' earlier alluded to. McKeon (2013) too seems to see the whole debate as pivoting on the difference between evidential reasons (confirmations) and explanatory reasons.

xii. Salmon claims that explanatory reasons can also be negatively correlated with the explanandum; the condition is instead statistical relevance. Govier does not discuss this, so nor will I.

xiii. This is example B (Govier, 1987, p.170).

xiv. Another example put to me when I presented this paper is the following: we can explain why Usain Bolt is the best sprinter on the grounds that he has the best genetic endowment, the best training, etc. But we have not justified the claim that he is the best sprinter, for which we need to appeal to the races he has won, etc. Without this, it might be thought, we can say that he is a good sprinter, but not that he is the best; it is a different set of facts that we need to appeal to in order to warrant use of the evaluative term "best." Do we explain why Usain Bolt is the best sprinter on the grounds of having the best genetic endowment etc.? Only, I think, by appeal to the statistical premise that those who have the best

genetic endowment etc. will be the best sprinter. This is disguised in the current case because “best” in “best genetic endowment” simply means “genetic endowment most conducive to being the best sprinter.” With the addition of this statistical premise, the same reasons do also justify the claim that he is the best sprinter. It is true that we can give reasons for him being the best sprinter that do not appeal to such things but only to, e.g., the races he has run, and these reasons will not explain why he is the best. But such reasons amount to inductive confirmations that he is the best sprinter, and I have said that confirmations are distinct from explanations and justifications. All these distinctions are logical distinctions.

References

Govier, Trudy. (1987). *Problems in argument analysis and evaluation*. Dordrecht: Foris Publications.

Groarke, Leo and Tindale, Christopher. (2004). *Good reasoning matters!* 3rd edition. Oxford and New York: Oxford University Press.

Hanson, Norwood Russell. (1959). On the symmetry between explanation and prediction. *The Philosophical Review,* 68 (3), 349-358.

Hempel, Carl G. and Oppenheim, Paul. (1948). Studies in the logic of explanation. *Philosophy of Science*, 15 (2), 135-175

Hitchcock, David. (2011). Inference claims. *Informal Logic*, 31 (3), 191-228

Johnson, Ralph. (2000). *Manifest rationality: a pragmatic theory of argument.* Mahwah, New Jersey: Lawrence Erlbaum Associates.

Kasachkoff, Tziporah. (1988). Explaining and justifying. Informal Logic, 10 (1), 21-30

McKeon, Matthew W. (2013). On the rationale for distinguishing arguments from explanations. *Argumentation,* 27 (3), 283-303.

Nozick, Robert. (1981). *Philosophical explanations.* Cambridge, Mass.: Harvard University Press.

Suchting, W. A. (1967). Deductive explanation and prediction revisited. *Philosophy of Science*, 34 (1), 41-52.

Thomas, Stephen N. (1981). *Practical reasoning in natural language*, 2nd ed. Englewood Cliffs, NJ: Prentice-Hall.

Wright, Larry. (2002). Reasoning and explaining. *Argumentation*, 16 (1), 33-46.