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C O N T E N T S

Editorial

History begins here. In the future, this journal might be remembered as a brave act of will, or as a superfluous project, or as a bad investment, or the opposite of these scenarios. But none of the negative possibilities or positive prospects are good reasons today to stop doing what is necessary: to create new paths of communication for those interested in the phenomenon of reasoning and argumentation, both at a theoretical and a practical level.

In September 2009, *Cogency* opens its doors to the international academic world in the hope of contributing to the study of reasoning and argumentation by means of a new space for discussion across related fields, such as logic, informal logic, psychology of reasoning, artificial intelligence, communication studies, rhetoric, argumentation theory, discourse analysis, linguistics, law, education, among others fields and disciplines.

Cogency is a journal of the Centre for the Study of Argumentation and Reasoning (CEAR) at the Faculty of Psychology, Diego Portales University, Chile. At CEAR, we are convinced that by opening up this space opportunities are provided to the theoretical and empirical study of argumentation and reasoning with a technical and social interest.

To address these challenges, this journal emerges with a clear multidisciplinary vocation and, for this reason, we kindly invite the academic community to support this project by submitting articles and book reviews that combine innovative proposals and revisions of all topics implied in the ecology of argumentation and reasoning.

Some of these general aims are already reflected in this inaugural volume, where some of the key dimensions in the study of reasoning and argumentation are investigated by the following authors (in alphabetical order): partially from a logical point of view, First Margaret Cuonzo pro-

poses a way to resolve paradoxes, namely: to analyse the implicit intuition that motivates accepting the parts of the paradox; from the point of view of argumentation theory, particularly the pragma-dialectical perspective, Frans H. van Eemeren and Bart Garssen shed light on the fallacies of composition and division by outlining their parameters; from an informal logic perspective, Trudy Govier reveals how to deal with the gap between logical opposition and social opposition; also from an informal logic point of view, Ralph H. Johnson thoroughly discusses the project of informal logic itself, by showing its strengths and weaknesses; to accept rhetoric as action-oriented discourse is the proposal that Christian Kock offers as an angle from which to understand the problem of constant conflict of value concepts in audiences and arguers; using Ducrot's semantic-argumentative perspective, Carolina Tosi investigates the linguistic strategies social sciences secondary textbooks in Argentina use to direct the reader.

From now on into the future, the team will work to be remembered as having a good cooperative project in hand and for investing its money wisely.

Cristián Santibáñez Yáñez, Director
Amsterdam, September 2009

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How to Solve Paradoxes: A Taxonomy and Analysis of Solution-Types

Cómo resolver paradojas: Una taxonomía y el análisis de soluciones tipo

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Abstract: Just as philosophical paradoxes cluster in categories, such as the paradoxes of self-reference, justification, and so on, so too do solutions. And just as paradoxes (e.g., the liar paradox) take on new spins, get strengthened, and reappear from time to time, so too do solutions. Solution-types can be given a fairly complete taxonomy. By "solution-type" I will mean a "strategy for analyzing paradoxes." In this article, a taxonomy for solution-types to philosophical paradoxes is given. Such a taxonomy suggests that, even for the most restricted of solution-types, in which the paradox is taken to expose some kind of fundamental, unresolvable conceptual glitch, all solution types address the underlying intuitions that motivate accepting the parts of the paradox. In addition, an analysis of the taxonomy suggests that only the most shallow of philosophical paradoxes get straightforward solutions.

Keywords: Paradox, solution, solution-type, intuition, sorites.

Resumen: Tal como las paradojas encajan en categorías, tales como las paradojas de auto-referencia, justificación, y otras similares, así también las soluciones caben en categorías. Y tal como las paradojas toman nuevas formas, fuerza renovada y reaparecen de tiempo en tiempo (como la del mentiroso), así también las soluciones. Soluciones-tipo pueden dar una taxonomía muy adecuada. Por "solución-tipo" me referiré a "una estrategia para el análisis de paradojas". En este articulo, se ofrece una taxonomía de soluciones-tipo de paradojas filosóficas. Esta taxonomía sugiere que, incluso para aquellas con mayor restricción para solucione tipos en las que las paradojas son tomadas como exponentes de un tipo de concepto fundamental, todas las soluciones tipos se dirigen a la intuiciones implícitas que motivan la aceptación de partes de la

paradoja. Además, el análisis de la taxonomía sugiere que sólo las más superficiales paradojas filosóficas tienen soluciones directas.

Palabras clave: Paradoja, solución, solución-tipo, intuición, sorites.

Introduction

There are many more proposed solutions to paradoxes than there are paradoxes themselves. Indeed, a glance through the long history of philosophical paradoxes reveals not only that paradoxes cluster in categories, such as the paradoxes of self-reference, justification, and so on, but that types of solutions do this, as well. Moreover, just as paradoxes (e.g., the liar paradox) take on new spins, get strengthened, and reappear from time to time, so too do solutions. Solution-types, too, can be given a fairly complete taxonomy. By "solution-type" I will mean a "strategy for analyzing paradoxes." Two theories may give different solutions to the same, or even different paradoxes, yet these two solutions may involve using the same strategy for analyzing the paradox, and hence be part of the same solution-type. For example, popular solutions for both the barber paradox (concerning the barber who shaves all and only those men that don't shave themselves) and Russell's paradox (concerning the set of all sets that don't contain themselves as members) both deny the existence of any such paradoxical entity (i.e., barber or set). Both solutions are simple denials of the entity giving rise to the paradox, the most basic strategy for solving paradoxes. Below, a taxonomy for solution-types to philosophical paradoxes is given. Such a taxonomy suggests that, even for the most restricted of solution-types, in which the paradox is taken to expose some kind of fundamental, unresolvable conceptual glitch, all solution types address the underlying intuitions that motivate accepting the parts of the paradox. In addition, an analysis of the taxonomy suggests that only the most shallow of philosophical paradoxes get straightforward solutions.

The Intuitive Basis of Paradoxes

Before turning to solutions, it will be helpful to briefly discuss paradoxes,

the entities for which the solutions are proposed. Conceived very broadly, a *paradox* can be anything from a tough problem, to a counterintuitive opinion or conclusion. Yet, while philosophers are by no means in complete agreement of the correct way to define *paradox*, within philosophical circles paradoxes are generally something more specific. On one philosophical definition, a *paradox* is *an argument with seemingly valid reasoning and true premises, but an obviously false conclusion* (cf. Mackie). Another common definition (cf. Resnick) holds that a *paradox* is *a set of mutually inconsistent propositions, each of which seems true*. Still others claim that *paradoxes* are *unacceptable conclusions drawn from seemingly true premises and correct reasoning* (cf. Sainsbury). What all philosophical definitions have in common is that paradoxes engender strong intuitions about the truth-values of propositions and about the reasoning in the paradox. And since the parts of the paradox are in conflict, those who attempt to solve them are often called on to explain why the strong intuition that we have regarding one part of the paradox is mistaken. In this way, these definitions are faithful to the etymological roots of the term *paradox*, which comes from the Greek terms for *against* or *beyond* (*para*) and *expectation* or *opinion* (*doxa*). The Greek terms emphasize the counterintuitive nature of paradoxes.

To illustrate this, consider two examples of paradoxes, which for uniformity's sake, I'll formulate as arguments:

Sorites Paradox

1. A person with 0 hairs is bald.
2. For any number *n*, if a person with *n* hairs is bald, then a person with (*n* + 1) hairs is bald.
3. Therefore, a person with 1,000,000 hairs is bald.

Russell's Paradox

Let R be the class of all classes that are not members of themselves.

1. For any object *x, x* is a member of R if, and only if it is not the case that *x* is a member of itself.
2. R is a member of R, if, and only if it is not the case that R is a member of itself.

3. Therefore, R is a member of R if, and only if it is not the case that R is a member of R.

Or, simply:

1. For any class *x, x* Œ R iff ÿ *x* Œ *x.*
2. R Œ R iff ÿ R ŒR

In these arguments we have intuitively plausible premises, apparently correct reasoning and an obviously false or contradictory conclusion. With regards to the sorites paradox, the first premise, which claims that a person with no hairs is bald, describes the paradigm case of baldness. Such a premise seems unobjectionable, since if any person were to possess the property of baldness, the person with the least possible numbers of hair would. The second premise is very intuitive as well. It claims that the difference of one hair is not enough to warrant the change in classification from being bald to being non-bald. With regards to its reasoning, the sorites is straightforward. The first premise claims that a person with a specific number of hairs (0) is bald. The second premise makes a claim about all numbers of hairs, saying that for any arbitrary number, one more or one less would not make enough of a difference to warrant a change in classification from someone's being bald to non-bald, or vice versa. The number used in premise one is plugged into the generalization in the second premise to get the conclusion that a person with a million hairs is bald.

In the case of Russell's paradox, we have fairly straightforward premise and a contradictory conclusion. Although the condition of R may be somewhat hard to read, there is no *prima facie* problem with a class of classes that do not contain themselves as members. There are classes, it seems, that do contain themselves as members. The class of classes with more than 2 members is, it seems, a member of itself. In addition, there are many classes that do not contain themselves as members. For example, the class of books is not a book and is therefore not a member of itself. So why not a class of classes that are not do not contain themselves as members? The condition for R is licensed by Cantorian, "naïve" set theory's principle of abstraction. The principle of abstraction holds that "A formula P (*x*) defines a set A by the convention that the members of A are exactly those objects a such that P

(a) is a true statement." That is, a formula is the defining property of a set if, and only if, all and only members of that set satisfy the formula. As a result, every property determines a set. For properties such as being a round square, the set is empty. And so the property of being a non-self membered class, it follows, determines a class as well. Next, R replaces the x in (1), and this leads to the contradictory conclusion.

Whether formulated as arguments as in the above cases, or as sets of propositions that are in conflict, the sorites and Russell's paradoxes are paradoxical in that they engender strong intuitions about propositions that are contradictory.

Solution Types: Early Treatments

Since Aristotle, solutions to paradoxes have been commonly thought to be the finding flaws in the paradoxical argument (cf. Kneale and Kneale.) In addition, recent analyses of solution-types were given by Charles Chihara and Stephen Schiffer. Chihara claimed that there are two main problems that a proposed solution to a paradox must solve (i) the diagnostic problem of explain what leads to the paradox, and (ii) the preventative problem of creating a logical system on which the paradox does not arise (1979). For example, consider the simple liar paradox. Take simple liar sentence, L: *This sentence is false*. If L if false, it is true. But if L is true, then it is false. And given that any statement is either true or false (bivalence), it must be one of the two. Hence it is both true and false. A solution given by a logic with truth-value gaps would solve the diagnostic problem by pointing to the principle of bivalence. The account would then introduce another logical system on which this is rectified, and L would be interpreted as neither true nor false. While Chihara's account does include many solutions such as this one, many other solutions to paradoxes do not provide a preventative solution to the paradox. Consider Michael Dummett's solution to the sorites paradox. Dummett provides a restricted solution, ultimately showing how the paradox arises, but concluding that no preventative solution can be given. Thus, solutions, which we are thinking of as strategies for analyzing paradoxes, may not always provide preventative measures to avoid paradoxes.

Stephen Schiffer has also given a brief analysis of solution-types in his

"Two Issues of Vagueness," distinguishing between happy-face and unhappy-face solutions to paradoxes. According to Schiffer:

> A *happy-face solution* to a paradox would do two things: first, it would identify the odd-guy-out, the seemingly true proposition that isn't really true; and second, it would remove from this proposition the air of seeming truth so that we could clearly see it as the untruth it is (20, italics Schiffer's).

Unlike happy-face solutions, unhappy-face solutions do not attempt to expose a seemingly true part of the paradox for the untruth that the part is. Instead such solutions indicate what about the relevant notion leads to paradox. In addition, such solutions may propose an alternative notion, one which does all that is needed of the original notion but does not lead to paradox. For example, Tarski gave an unhappy-face solution to liar paradox. According to Tarski, the ordinary notion of truth is incoherent and leads to the liar paradox, but a new notion of truth could be devised that does not lead to paradox. Schiffer's account points to the importance of philosophical intuitions for both generating paradox and finding solutions. Building on this, the account given below presents a more fine-grained analysis of solution-types.

Taxonomy of Solution-Types

Given the importance of philosophical intuition in the generation of paradox, solutions cluster in different approaches to the intuitions that make the parts of the paradox so plausible. The taxonomy of solution-types given below, like any taxonomy of paradoxes, has an element of artificiality. Some solutions occupy border regions between types. Just as Russell's paradox is both a set theoretic paradox and a paradox of self-reference, solutions, too, may not fit exactly into some particular taxonomy. I will restrict my examples to one or two examples of each solution type.

Solution Type 1: Denying the Existence of the Paradoxical Entity

When confronted with a paradox we can deny that there is any such para-

doxical entity, thus side-stepping the paradox altogether. In such a solution, we don't point to any flaw in the argument, other than the fact that one of the terms is vacuous. Consider the barber paradox. In a remote village in Sicily, there is a barber that shaves all and only the men of the town who do not shave themselves. Who, then, shaves the barber? If he shaves himself, then he doesn't need his services. But if he doesn't shave himself, then he does. So the barber both shaves and does not shave himself. Mark Sainsbury summarizes the solution this way:

> The unacceptable supposition is that there is such a barber—one who shaves himself if, and only if, he does not. The story may have sounded acceptable; It turned our minds, agreeably enough, to the mountains of inland Sicily. However, once we see what the consequences are, we realize that the story cannot be true: There cannot be such a barber or such a village. The story is unacceptable. This is not a very deep paradox because the unacceptability is very thinly disguised by the mountains and the remoteness (2).

To Sainsbury, our intuitions about the barber are wrong, because we are lulled into believing that there can be things like barbers that shave all an only the men of the town who do not shave themselves.

Solution Type 2: Denying an Assumption

By far the most common strategy for solving paradoxes is to point to an assumption made by the paradox and show that it is false, and that our intuitions regarding the plausibility of that assumption are misleading. Consider a standard solution to the simple unexpected examination paradox. A teacher announces that there will be a surprise exam one day next week, but a student presents a proof that this cannot be. If the exam is held on Friday, then there will be no element of surprise, because all the other possible days have been eliminated. So Friday is ruled out. If the exam is held Thursday then there will be no surprise either, because Friday has been ruled out, as well. The same goes for the other days of the week, including Monday. Monday is the last remaining option, so there is no element of surprise there

either. Therefore, there can be no unexpected exam. A standard reply to this paradox is that the student's argument, which is a *reductio* of the teacher's announcement, takes as an assumption the truth of the teacher's claim, something that the student is not licensed to do. Simply supposing the teacher's announcement is true is not enough to conclude that there will be no exam on Friday. Thus, an assumption that must be made in order to motivate the paradox cannot be drawn.

Solution Type 3: Denying the Validity of the Reasoning

Such a strategy takes issue with the underlying reasoning of the paradoxical argument. Another way to think of this is that it denies that each of the seemingly true propositions are really incompatible. An example of this type of strategy comes from the contextualist solution to a skeptical paradox. Consider the following.

1. I can know for sure that I am in New York, only if I can know that I am not dreaming.
2. I cannot know that I am not dreaming.
3. I cannot know for sure that I am in New York.

A contextualist solution to this paradoxical argument involves pointing to an equivocation in the meaning of the crucial term, *know*. Standards for knowability vary in different contexts, claims the contextualist. To know that one is in New York in the ordinary sense, involves far less stringent criteria than the knowledge that hinges certainty. Thus, *know* in the first premise of the argument means something different than *knows* in the second premise. The argument is therefore invalid, according to the contextualist.

Solution Type 4: Affirming the Conclusion

A less common strategy is to show that the conclusion, though seemingly false, is in fact true. The task then is to show why the conclusion is accept-

able, despite all appearances to the contrary. A prominent case of this is the account of the liar paradox given by dialetheism, the view that some contradictions are, in fact, true. On this account, the conjunction of both the liar sentence and its denial (L & ~L) can be accepted as true. This is typically thought to be troubling because contradictions, if taken to be true, can be used to prove anything is true[1] . To mitigate this problem, the dialetheist uses a paraconsistent logic, which abandons some very intuitive logic principles, such as disjunctive syllogism, but allows for the truth of contradiction without entailing trivialism (the view that every statement is true). (cf., Priest).

Solution Type 5: Accepting the Paradox

This type of solution affirms the intuitive basis of each part of the paradox. Each part of the paradox according to this solution-type, has strong intuitive force because each part of the paradox accurately represents some feature of the concepts that lead to the paradox. The concepts themselves lead to paradox, so the only to avoid paradox is to provide a replacement concept. This does not, however, remove the paradox. In "Semantic Conception of Truth," Tarksi gives a diagnosis of why the liar paradox arises. For Tarski, this happens because natural languages are semantically closed, that is, the same expressions of a language are used to describe the language itself. If there were a distinction between the language used (object language), and the language that describes this language (metalanguage), sentences like "This sentence is false" would not be acceptable. For Tarski, there is no way to avoid conflating the object and metalanguage using in the ordinary language notion of truth. However, he proposes another way of thinking about truth, involving satisfaction and using a semantically open language that will avoid the paradox. Tarski thus provides an alternative concept that is not meant to be a substitute for our natural language concept of truth.

[1] 1. P & ~P Assume Contradiction.
2. P 1& E
3 ~P 1 &E
4. P v A 2vI
5. A 3,4 Dis. Syllogism.

Are Certain Solution-Types More Sucessful Than Others?

I believe that, except for the most shallow of paradoxes in which a fallacy is only vaguely hidden, paradoxes admit only of the last solution-type. Every paradox has premises that seem true, otherwise the paradox would merely be an unsound argument. In addition, intuition tells us that the conclusion is false and that the reasoning is valid. As such, paradoxes force us to confront extremely strong, but conflicting intuitions about basic folk concepts that give rise to the paradoxes, such as truth, baldness, knowledge, belief, sets, and many others. The users of solution-types 1 through 4 attempt to find flaws in paradoxical arguments and then explain why we have the intuition that there is no flaw. Yet, the intuitions that we have about such folk concepts are, in fact, reliable and not to be discounted. They cannot be explained away as understandable but misleading and paradoxes cannot be treated as flawed arguments that merely look sound. This is due to the fact that the concepts that generate paradoxes, concepts like knowledge, space, truth, and so on, arise out of our own, flawed linguistic practices. Certainly new concepts can be generated on which paradoxes don't arise. However, these concepts have only a passing resemblance to the concepts that they are meant to replace.

Moreover, an influential argument in the philosophy of science is relevant to our discussion of paradoxes. It runs as follows: Throughout the long history of science most scientific theories have been proven false and the entities posited by these theories were proven not to exist. Based on this evidence from the past, it is rational to conclude that propositions of present (and future) scientific theories are false and the entities posited by the theories non-existent, as well. Larry Laudan famously provided a long list of empirically successful theories, that is, generally accepted theories that could usually provide successful predictions, that were eventually rejected and their theoretical terms shown not to refer. The list includes: the crystalline spheres of ancient and medieval astronomy, the humoral theory of medicine, the effluvial theory of static electricity, catastrophic geology and its commitment to a universal (Noachian) flood, the phlogiston theory of heat, the vibratory theory of heat, the vital force theory of physiology, the theory of circular inertia, theories of spontaneous generation, the optical ether theory, the electromagnetic ether theory, and many others.

This line of argument, the pessimistic meta-induction argument, can be used to question not only realist theories of science, but other types of theory, including theories that provide would-be solutions to philosophical paradoxes. Take, as an example, the sorites paradox. In the approximately 2000 years since the paradox was first discussed, there have countless attempts to provide a straightforward solution to it. And although each present-day advocate of a particular solution claims to have solved the paradox, it stubbornly refuses such solution. Moreover, there is even more of a lack of consensus in the case of solutions to paradoxes than there is in competing scientific theories. Given the vast amount of time and effort, and given that such solutions fare even worse than false scientific theories in terms of establishing a consensus and approximating a solution, the most rational attitude to take toward the deepest paradoxes is that they lack clear-cut solutions.

A number of objections have been posed to the pessimistic metainduction, most pointing to the progress of science, the greater reliability of theories to predict results. Such types of response, while potentially applicable to the use of metainduction the realist/antirealist debate, has little value in terms of a response to the pessimistic metainduction applied to the history of philosophical paradoxes. There is far less appreciable progress in the history of solutions to paradoxes. In fact, some of the same solutions posited by the Ancients are still posited today. Moreover, there is nothing like the consensus of acceptance that we see for scientific theories in solutions to philosophical paradoxes.

Admittedly, a pessimistic metainduction does not provide reasons why paradoxes, qua paradoxes, lack solution-types 1-4. Nor could the conclusions drawn by this type of reasoning be decisive in the sense of a successful deductive proof. However, what such an argument does do is provide grounds for thinking a particular research strategy probably fruitless. To draw a parallel to other contexts, the mind-body problem, problems of personal identity, and others in the history of philosophy were not "solved" in a standard sense. The terms of the debate were changed. Does such an argument provide decisive grounds for rejecting solution-types 1-4 for all but the most shallow paradoxes? If by "decisive" we mean an exceedingly strong probability that such solutions will fail, then yes. If by "decisive," we mean irrefutable logical proof, then of course, no. But coupled with the concep-

tual argument presented earlier, it strikes me as exceedingly implausible to claim that philosophical paradoxes have such solutions.

Conclusion

Philosophical paradoxes have received countless pages of treatment by some of the best philosophers over thousands of years. The claim that such timeless problems lack all but the most restricted solution-type will strike many as an extremely pessimistic view about the philosophical enterprise. Philosophical paradoxes are about as old as philosophy itself and are like old friends to many philosophers, myself included. But, as Aristotle once said, we must prefer the truth to friends. Paradoxes lack solution-types 1-4 because paradoxes expose conceptual glitches in the folk concepts that give rise to them. How, then should paradoxes be solved? To best "solve" any but the most shallow of philosophical paradoxes requires accepting that they expose fundamental flaws in the concepts that lead to paradox. Alternative concepts may then be introduced, and these concepts may prevent some of the negative consequence that were implied by the original paradox, but there are no straightforward solutions in the sense of pointing to fallacies in the paradox. A system may be constructed on which premises are false, conclusions true or the reasoning is invalid, but this involves creating a substitute concept different from the one that led to the paradox, and an ultimate acceptance of the paradox.

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The fallacies of composition and division revisited

Las Falacias de composición y división revisitadas

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Abstract: In the pragma-dialectical conception of argumentation fallacies are defined as violations of rules that further the resolution of differences of opinion. Viewed within this perspective, they are wrong moves in a critical discussion. Such moves can occur in every stage of the resolution process and they can be made by both parties. Among the wrong moves that can be made in the argumentation stage are the fallacies of composition and division. They are violations of the critical discussion rule that any argument used in the argumentation should be valid or capable of being validated by making explicit one or more unexpressed premises. In this paper the fallacies of composition and division are analyzed in such a way that it becomes clear that the problem at stake here is in fact a specific problem of language use. In particular, the criteria are discussed for deciding when exactly the transference of properties from parts to wholes (or from wholes to parts) is sound. These criteria relate to the way in which the properties of relativity/absoluteness and structure dependency/independency involved in the process are combined. Finally the fallacies of composition and division are characterized as special forms of strategic maneuvering.

Key words: Composition and division, fallacies, pragma-dialectics, strategic maneuvering.

Resumen: En la concepción pragma-dialéctica de la argumentación, las falacias son definidas como violaciones de las reglas que resuelven una diferencia de opinión. Vistas desde esta perspectiva, ellas son movimientos equivocados en una discusión crítica. Tales movimientos pueden ocurrir en cada etapa de un proceso de resolución y pueden ser hechos por ambas partes. Entre los movimientos equívocos que pueden ser hechos en la etapa de argumentación están los de composición y división. Ellos son violaciones de la regla de discusión critica que señala que cualquier argumento usado en la argumentación debería ser validado o capaz de ser validado haciendo explicito una o mas premisas no expresadas. En este trabajo, las falacias de composición y división son analizadas de tal forma que llega a ser claro que el problema entre manos es

en efecto un problema de uso del lenguaje. En particular, son discutidos los criterios para decidir cuando exactamente la transferencia de propiedades desde la parte al todo (o del todo a las partes) es valido. Estos criterios relacionan la forma en que son combinadas las propiedades de relativo/absoluto y la estructura dependiente/independiente. Finalmente, las falacias de composición y división son caracterizadas como una forma especial de maniobra estratégica.

Palabras clave: Composición y división, falacias, pragma-dialéctica, maniobra estratégica.

Introduction

In the pragma-dialectical theory of argumentation fallacies are defined as violations of rules for critical discussion that further the resolution of differences of opinion on the merits. Viewed within this perspective, fallacies are wrong discussion moves. Such moves can occur in every stage of the resolution process and they can be made by both parties. Among the wrong moves that may occur in the argumentation stage are the fallacies of composition and division. They are violations of the rule that any argument used in the argumentation should be valid or capable of being validated by making explicit one or more unexpressed premises. In this paper the fallacies of composition and division are analyzed. From this analysis it will become clear that the problem identifying these fallacies boils in fact down to the problem of identifying the linguistic criteria for judging whether or not the validity rule has been violated in the arguer's strategic manoeuvring with parts and wholes.[1]

Properties of wholes and the constituent parts

There are several ways of violating the dialectical rule that the reasoning that is used in argumentation should be valid or capable of being validated by making explicit one or more unexpressed premises. To make clear what

[1] This contribution is based on an article by van Eemeren and Grootendorst (1999), which was recently republished as van Eemeren and Grootendorst (2009). We extended van Eemeren and Grootendorst's approach by putting it in the newly-developed perspective of strategic manoeuvring (van Eemeren, to be published).

this involves, first, the argument has to be reconstructed that is used in the argumentation. Next, an intersubjective reasoning procedure has to be carried out to establish whether the argument is indeed valid (van Eemeren & Grootendorst 1984, 169).

A notorious violation of the validity rule consists of confusing necessary and sufficient conditions in reasoning with an 'If ... then' proposition as a premise. There are two variants. The first is the fallacy of *affirming the consequens*, in which, by way of a 'reversal' of the valid argument form of *modus ponens*, from the affirmation of the consequens (by another premise) is derived that the antecedens may be considered confirmed. The second is the fallacy of *denying the antecedens*, in which by way of a similar reversal of the valid argument form of *modus tollens* the denial of the consequence is derived from the denial (by another premise) of the antecedens.

Apart from these generally recognized violations, the validity rule can also be violated in other ways and some of these violations are not so easy to track down. A tricky violation, for example, that occurs regularly is that of unjustifiably assigning a property of a whole to the constituent parts. Or the other way around: unjustifiably assigning a property of the constituent parts to the whole. The properties of wholes and of parts are not always just like that transferable to each other.

There are indeed valid variants:

(1) a This chair is white
b Therefore: The legs of this chair are white

Sometimes, however, the transfer leads to invalid reasoning:

(2) a This chair is heavy
b Therefore: The lining of this chair is heavy

What makes for the difference between the valid and the invalid variants? And why is this difference not always immediately clear? When the answers to these questions are known, it is easier to recognize –and to avoid– mistakes.

Reconstruction of the argument form of part/whole argumentation

The form of the argument underlying both argumentation (1) and argumentation (2) can be described as follows:

(3) a X has property Z
b Therefore: All parts of X have property Z
c Y is a part of X
d Therefore: Y has property Z

In this reconstruction it is explicitly expressed that conclusion (d) refers to a part of the whole referred to in premise (a) and that this part has the same property as the whole. The premises (c) and (b), in which this is successively expressed, remain implicit in argumentation (1) and (2).

This reconstruction is, in fact, made up of two arguments, which are subordinatively related to each other. The first argument consists of (a) and (b), the second of (b), (c) and (d). The conclusion (b) of the first argument serves as a premise in the second.

The second argument has a valid form. When applied to argumentation (1) this part of the reconstruction leads to the following result:

(4) b All parts of this chair are white
c The legs of this chair are parts of this chair
d Therefore: The legs of this chair are white

And when applied to argumentation (2) the valid result is as follows:

(5) b All parts of this chair are heavy
c The lining of this chair is a part of this chair
d Therefore: The lining of this chair is heavy

The cause of the difference in validity between the reasoning in argumentation (1) and (2) can evidently not to be found in this part of the reconstruction, but in the first part. When applied to argumentation (1) and (2) this part of the reconstruction leads to the following result:

(6) a This chair is white
b Therefore: All parts of this chair are white

(7) a This chair is heavy
b Therefore: All parts of this chair are heavy

(6) and (7) represent the same argument form (3a,b), but in (7) the conclusion does not necessarily follow from the premise. The first part of the reconstruction is therefore invalid.

The crucial argument scheme in part/whole argumentation

The first part of the reconstructed argument form of part/whole argumentation has this form:

(8) a X has property Z
b Therefore: All parts of X have property Z

The argument scheme that is being used here is that of a symptomatic relation: the fact that a whole (X) has a certain property is seen as a sign that the parts of this whole also have this property.[2] As is usual in such cases, the argument scheme that is employed can be interpreted as an unexpressed premise. In the case of (3), this unexpressed premise can be made explicit as follows:

(8') a' (What applies to the properties of X also applies to the properties of all parts of X)

From the invalidity of arguments such as (7), it becomes clear that the scheme does not always automatically apply. Obviously, certain precondi-

[2] In an argument scheme based on a symptomatic relation the starting point is that what is asserted in the standpoint is a symptom, expression or other sign of what is said in the argument or the other way around. See van Eemeren and Grootendorst (1992: 94-102, 158-168).

tions need to be fulfilled to achieve a valid argument with the help of this scheme. This also applies to the reversed form of the argument:

(8") a All parts of X have property Z
a' (What applies to the properties of the parts of X also applies to the properties of X)
b Therefore: X has property Z

The application of this scheme too can either result in a valid argument or an invalid argument. Examples are (9) and (10) respectively:

(9) a All parts of this chair are wooden
b Therefore: This chair is wooden
(10) a All parts of this chair are cheap
b Therefore: This chair is cheap

In (9) and (10), a sign relation is established in which the fact that all parts of the chair have a certain property (being wooden and being cheap respectively) is regarded as a sign that the chair also has this property. This is right in (9), but not necessarily in (10): a design Rietveld chair, for example, is made of material that is relatively cheap, but the chair is all the same expensive.

Neither the attribution of properties of wholes to parts (the argument scheme of 3) nor the attribution of properties of parts to wholes (the argument scheme of 8) leads automatically to a valid argument. The validity of arguments in which one of the two variants of the scheme is applied is dependent on the transferability of the properties concerned. This transferability is determined by two factors: (a) the nature of the properties which are transferred and (b) the relation between the parts and wholes.

Absolute and relative properties

With regard to properties of people, animals or things a distinction must be made between absolute and relative characteristics. In case of an absolute property it can, in principle, be determined independently whether or not

someone or something has that property. In case of relative properties, there is always an explicit or implicit comparison involved, either directly with something else or indirectly with a standard, norm or criterion.

Terms, words or expressions that refer to absolute characteristics or properties are, for instance, the names of colors, of the fabric or the material of which something is made and adjectives that have to do with form or fixed facts such as inflammability or poisonousness:

(11) The legs of this chair are white
(12) The roof of this house is red
(13) This dress is made of cotton
(14) The stage decorations are made of cardboard
(15) The leaf of this flower has the form of a heart
(16) The village square is round
(17) This hotel is fire-risky
(18) The juice of the buttercup is poisonous

Terms which refer to relative characteristics or properties have, for example, to do with somebody's or something's weight, the measures (length, width, depth, size, contents, etc.), the strength, the price and the qualifications of the character, the appearance or other striking features:

(19) That bag is heavy
(20) That glider is light
(21) That dog is big
(22) That elephant is small
(23) That bear is strong
(24) The construction of that bridge is weak
(25) That boat is cheap
(26) My sister is nice

The relative character of the properties 'heavy', 'light', 'big', etc. is evident from the (implicit) comparative character of these terms: a heavy bag is a bag that weighs more than a bag weighs on average. This means that the bag is heavy when measured with the standard that applies to a bag. Which standard is exactly used in determining the weight of the bag is not men-

tioned explicitly; it is determined implicitly by the fact known to every language user that a bag is meant for carrying and can be called heavy if it is relatively hard to carry. Of course, a different standard applies to the weight of a plane: a light plane is not a plane that can be carried easily, but a plane that can be kept more easily in the air than other planes.

Something similar applies to the terms big, small, strong, cheap and nice. The application depends on the standards, norms or criteria that are relevant to the category to which the people, animals or things belong to which the terms refer. Within the category concerned, a comparison is made with other members of this category. A big mouse, for example, is not a big animal, for within the category of the animals there are a great number of bigger sorts. The size of a mouse must be viewed within the category of the mice. A big mouse is a mouse that is bigger than the average mouse. For a mouse, it is big.

Structured and unstructured wholes

When valuing the relation between the parts and the whole a distinction must also be made between unstructured and structured wholes. An unstructured whole, or a whole 'without ordering', is not more than a collection of elements that together constitute the whole. The whole is, as it were, just the sum of the parts. Examples of the parts of such unstructured wholes are the peas in a tin, the drops in a pool of water and the grains in a heap of sand.

A structured or 'ordered' whole is more than the sum of the parts. It is different in the sense that there is a qualitative difference between the collection of elements and the whole constituted by these elements. Examples of the parts of such structured wholes are the sentences in a novel, the players of a soccer team and the parts of a machine.

The parts of unstructured and structured wholes can be distinguished terminologically by calling the first elements of a non-ordered collection and the second parts of a coherent whole.[3] Each collection of drops consti-

[3] Our distinction between unstructured wholes or non-ordered collections on the one hand and structured wholes on the other hand resembles Hamblin's distinction between physical and functional collections (1970: 21).

tutes automatically a pool or puddle, but not every arbitrary collection of sentences is a novel. In the latter case, it is necessary that the sentences are ordered in a specific way into a coherent whole. The same applies, *mutatis mutandis*, to the players in a soccer team and the parts of a machine, but also to the parts of a house or a jigsaw puzzle.

Some properties that can be attributed to wholes are independent of the structure of these wholes while other properties are dependent on the structure of the whole. Examples of structure-independent properties are brown, copper, heavy, light and big. Structure-dependent properties are, for instance, rectangular, edible, good, bad and strong. A quantity of green peas automatically constitutes a collection that is also green, irrespective of whether the peas are separately on a plate or together in a tin. A collection of edible ingredients, however, does not automatically constitute an edible meal: then the ingredients need also to be mixed in a particular way.

The transferability of properties

As is shown by the example of the edible ingredients, structure-dependent properties cannot automatically be transferred from the parts of a whole to the whole itself. The reverse is also not possible. From the observation that a jigsaw puzzle is rectangular it does not follow that all the pieces of the puzzle are rectangular. It is not even always the case that structure-independent properties are transferable from the parts to the wholes and the other way around. In the example of the green peas this is indeed possible, but in other cases it is not:

(27) a On this plate are only small peas (a number of small peas)
b Therefore: On this plate is a small quantity of peas (a small number of peas)

The difference between (27) and the original example of the peas is that in (27) the relative term small is used and in the original example the absolute term green. Obviously, a relative term refers to a property that cannot be transferred automatically from the parts to the whole, whereas with an absolute term this is possible in principle. Not always, however, witness the following example:

(28) a Sodium and chlorine are poisonous
b Therefore: Sodium chlorine is poisonous

Sodium chlorine is the chemical name for ordinary kitchen salt, which is not at all poisonous, but edible, even if it is composed of two mortally poisonous constituent parts.

The difference between (28) and the original sound example of the green peas, however, is again precisely that the term poisonous refers to a structure-dependent property while the term green in the original example refers to a structure-independent property. So the term green refers to a property that is absolute as well as structure-independent, the term small to a property that is structure-independent but not absolute, and the term poisonous to a property that is absolute but not structure-independent. Only an absolute property which is also structure-independent is transferable from the parts to the whole or the other way around.[4]

Non-transferable properties

In the light of the foregoing we can now say that a relative property that is structure-dependent is not transferable:

(29) a All players of the soccer team are world-class
b Therefore: The soccer team is world-class

In (29) it is not taken into account that the requirements for regarding an individual player world-class are different from the requirements that apply to a team. The property of being world-class is relative. A soccer team has to satisfy other requirements in order to be world-class than that the individual players have the qualities that make each of them world-class.

[4] In connection with the non-transferability of properties of parts to wholes or the other way around, Woods and Walton speak of compositionally and divisionally hereditary properties respectively (1982: 206-207). For determining the transferability of properties they make use of Burge's theory of aggregates. See for an extensive exposition of this theory in relation to the composition and division fallacy Woods and Walton (1982).

The players must, for example, be adjusted to each other, otherwise there is no good team, let alone a world-class team. The property of being world-class is therefore also structure-dependent.

A structure-independent relative property is also not transferable:

(30) a This machine is composed of light parts
b Therefore: This is a light machine

The total weight of a machine is not dependent on the way in which it is constructed. The property light is here indeed structure-independent. The criterion for determining whether the parts of a machine may be called light, however, is different from the criterion for determining whether the machine as a whole may be called light. In the case of the parts, the material of which the parts are made will be compared with the alternatives: aluminum, for instance, is lighter than crude iron. In case of the machine as a whole, it is reasonable to look at other machines: a photo-copying machine is lighter than an agricultural machine. Therefore it would be strange to call an agricultural machine which is altogether made of aluminum a light machine.[5]

The non-transferability of an absolute and structure-dependent property can be demonstrated with the help of the following example:

(31) a All parts of this figure are triangular
b Therefore: This figure is triangular

The term triangular refers to the form of something and that form is not dependent on the size or something similar. For referring to the form of small things no other criteria apply than for referring to the form of big things. The property of being triangular is indeed absolute. The following two figures can be of help to make clear that this property is structure-dependent:

[5] The same applies when instead of the average norm a functional norm is applied. If the property of being light is interpreted as 'easy to carry', a light agricultural machine is still heavy.

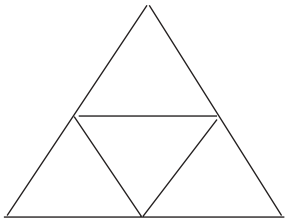

Figure 1

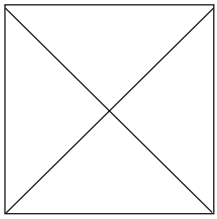

Figure 2

Figure 1 is triangular, but figure 2 is rectangular, whereas both of them are built of four triangles. The only difference between the two is the manner is which the triangles are put together in the two figures. In figure 1, the composition is such that the conclusion of (31) is true; in figure 2, this is not so. So the reasoning that is expressed in the argumentation of (31) does not guarantee that from true premises (such as those in the two figures) follows a true conclusion. The argument is therefore invalid.

Characterization of the fallacies of composition and division

The relation between the absolute or relative character and the structure-independency or structure-dependency of a property on the one hand and the transferability of this property between parts and wholes on the other hand, is indicated in figure 3:

Transferable (+) and nontransferable (-) properties	structure-independent properties (2a)	structure-dependent properties (2b)
Absolute properties (1a)	red, white, blue, glass, iron, wooden (+)	round, rectangular, edible, poisonous (-)
Relative properties (1b)	heavy, small, light, big, fat, slim (-)	good, expansive, strong, poor (-)

Figure 3

Only combination 1a/2a leads to a transferable property, which can result in a valid argument. Combinations 1a/2b, 1b/2a and 1b/2b do not lead to transferable properties; an argument in which such a combination is used is in all cases invalid. This means that in all these cases the reasonableness rule is violated that says that the arguments used in an argumentation should in principle be valid. The fallacy resulting from such unjustified transfer of properties between parts and wholes has two variants: (a) unjustified transfer a property of the parts of a whole to the whole and (b) unjustified transfer a property of a whole to the parts of the whole. In the first variant of this fallacy a property of the parts leads to a wrong combination with regard to the whole. Variant (a) is therefore called the *fallacy of wrong combination* or simply the *composition fallacy*. In the second variant a property of the whole is wrongly distributed over the parts. Variant (b) is therefore called the *fallacy of wrong distribution* or simply the *division fallacy*.

A nicer example of the composition fallacy can be found in the first Albert Verwey lecture by Gerard Reve, when he argues that there is an anti Catholic climate in the Netherlands (NRC Handelsblad, November 2, 1985):

> Looking back at the anti Catholic fury of this year in the Netherlands, we see that, *mutatis mutandis*, exactly the same conditions are fulfilled [as in the Thirties]. The accusations that are now made against the Roman Catholic Church are just as nonsensical as those that were then made against the Jews. You know what I am talking about: the Church does not take action. Or: the Church interferes too much in politics. Or: the Church keeps itself outside politics and remains deaf to the social needs. Or: the Catholics are part of everything and always manage to get things their way. Or: Catholics are always sticking together and exclude everybody else from their plotting clique. Or: the Church is very rich. (Just an aside: this is not so. The Church is very poor, because it is mainly a Church of poor people. Rich people do not need a God.)

The argumentation in the closing part in parentheses contains an argument which can be reconstructed as follows:

(32) a The Church is a Church of poor people
b Therefore: The Church is poor

In (32) it is not taken into account that the property poor is relative and also structure-dependent. First, different criteria are to be applied for determining the wealth of individual people than for determining the wealth of a church: the wealth of people is determined by comparing their income and possessions with those of other people, the wealth of the Roman Catholic Church by comparing it with that of other churches or similar institutions. Second, there is no structural relation between the wealth of the individual members of a church and the wealth of the church as such. The wealth of the church can be determined by still other factors than the donations of its members and it also depends on what part of their income and possessions the members donate to the church. Similar analyses can be made of the division fallacy. We leave it here at a brief example:

(33) a The cabinet is irresolute
b Therefore: The ministers are irresolute

In (33) it is not taken into account that the (absolute) property irresolution is structure-dependent. A cabinet can only take decisions if the members of the cabinet can reach an agreement. It is perfectly possible that all members are very resolute, but happen to want quite different things. Then the cabinet as a whole can not so easily make a decision and it is 'irresolute'.

The identification of composition and division fallacies

In the light of the evident invalidity of the examples in which a wrong combination is made (10, 28, 29, 30, 31, 32), or a wrong distribution (2, 7), it looks as if composition and division fallacies can be easily recognized as violations of the validity rule. Sometimes this is indeed the case. The easiest are, of course, those cases in which it is immediately clear that the criterion for attributing a relative property to a whole is quite different than that for attributing it to the parts or in which it is immediately clear that the way in which the whole is structured makes it necessary to attribute entirely different properties to the whole than to the parts.

In practice, however, it need not always be that simple. Although the criteria for the attribution of the properties may vary and it may also be the

case that the properties themselves vary because of the structure of the whole, this is often not clear from the terms that are used to refer to these properties. Due to the fact that the relative and structure-dependent character of terms for properties is not formally expressed at the surface level, statements with such terms are 'indeterminate' in Crawshay-Williams' (1957) sense. This means that it cannot be determined just like that whether these statements are false. In order to be able to determine their truth or falsehood, the context of the statements needs to be made explicit first. According to Crawshay-Williams, this means that one should indicate for what purpose the statements are made. This would mean here: which standards should be used for evaluating them. See for a discussion of Crawshay-Williams's approach van Eemeren et al. (1996, 74-83).

There are cases in which the same term is used to refer to the properties of the whole as to the properties of the parts.[6] Because of this, there is a risk that the differences are overlooked and the properties of the whole and the parts are confused:

(34) a An elephant eats more than a mouse
b Therefore: Elephants use more food than mice

In (34) the term more in combination with eating is used in premise (a) as well as in conclusion (b). In both cases it is also a normal term to use. For this reason, the argument seems, at first sight, valid. Its invalidity becomes clear when one realizes that the 'property' eats more than is relative. If used in connection with the elements of a set or collection, the expression 'eats more than' has to be tested by using a different criterion than when it refers to the set or collection as a whole. In (a) the expression is rightly used if it is indeed the case that an individual elephant consumes daily a larger quantity of food than an individual mouse (which is indeed the case). In (b), however, the issue is not the individual consumption of elephants and mice, but the total consumption of the collectivity of elephants and the collectiv-

[6] The relative terms in the examples of composition and division fallacies are all the same not ambiguous in the ordinary linguistic sense. That is the reason why we do not regard them as fallacies of ambiguity. Textbooks in which a different approach is taken are Copi (1982: 124-128), Engel (1982: 93-95), and Rescher (1964: 76). Much earlier, Rowe (1962) argued already emphatically that these fallacies are not fallacies of ambiguity.

ity of mice. Not only the difference in individual consumption plays a role then, but also the number of elephants and the number of mice that consume the food. It stands to reason that in the individual comparison this criterion plays no role. The difference in the criteria that must be applied is ignored in the argument (as is the fact that there are many more mice than elephants). Therefore in this case the transfer of the property eats more than is incorrect. Because this property of the parts is transferred to the whole, this is an example of the composition fallacy.

When identifying composition and division fallacies it is always very important to check properly whether in the given situation the transferred property is indeed justifiably transferred. A complication is that the terms that are used to refer to properties, when viewed superficially, neither differentiate between absolute properties and relative properties nor between structure-independent properties and structure-dependent properties.[7] This means that it has to be determined for every separate case what kind of properties the term that is used refers to and whether or not the combination of properties in the whole and the parts corresponds with the conditions for a sound application of the part/whole argument scheme represented in figure 3.

Composition and division fallacies as derailments of strategic maneuvering

Deviations from the rules for critical discussion are often at the same time persuasive and hard to detect because the parties involved are normally very keen on keeping up the pretence of reasonableness, portraying themselves as living up to all critical standards. It can therefore be expected that, when trying to realize a purpose that is potentially at odds with the objective of a critical discussion rule, they will stick as much as possible to the appropriate means for achieving the relevant critical objective and attempt to stretch

[7] An additional source of confusion is that there are cases in which the terms that are used to refer to a property are applicable both to the whole and the parts. Another complication in identifying the composition and division fallacy is that this fallacy can also be committed in combination with one or more other fallacies. See van Eemeren and Grootendorst (1992, 179-180).

the use of the means concerned in such a way that the other persuasive effect aimed for can be realized as well. This predicament requires the analyst to know in advance as much as possible about the ways in which the appropriate means for achieving the specific objective aimed for in a certain stage of a critical discussion can also be employed parasitically for realizing purposes that are at odds with this objective.

In taking account of the persuasive aims of the arguers engaged in argumentative discourse van Eemeren and Houtlosser took is as their point of departure that in reasonable argumentative exchanges persuasive aims should not be realized at the expense of the observation of critical standards (2002, 142). The arguers' attempts to have things their way can very well be viewed as being incorporated in their efforts to resolve a difference of opinion in accordance with the critical standards for conducting a critical discussion: it may be presumed that the arguers are at the same time out to reach the optimal persuasive result and to do so without violating any of the rules for critical discussion. In their efforts to achieve this result, their *strategic manoeuvring* will be directed at diminishing the potential tension between pursuing their persuasive and critical objectives. If parties allow their critical commitment to be overruled by their persuasive aim, their strategic manoeuvring violates a particular discussion rule and gets *derailed*. Because derailed manoeuvring hinders the resolution process, we are entitled to consider it fallacious.

Identifying fallacious strategic manoeuvring is not always so easy. For one thing, in everyday argumentative discourse, arguers who maneuvre strategically may normally be expected to uphold a commitment to the standards of critical reasonableness. If there are no indications that this is not justified this assumption of reasonableness is conferred on every discussion move (see also Jackson, 1995). This happens even when it concerns a move that is fallacious because it violates a rule for critical discussion. Another problem in identifying strategic manoeuvring is that arguers tend to stretch the boundaries of reasonableness – which are not always immediately transparent anyway – in a way that promotes effectiveness at the expense of reasonableness. This may easily go unnoticed if the boundaries are not clearly delineated, if they are variable depending on the macro-context in which the strategic manoeuvring takes place, or if they are for some other reason unclear. In argumentative discourse this is all in the game. Echoing

the 'standard' definition of a fallacy discussed by Hamblin (1970), we might conclude that fallacious strategic manoeuvring is manoeuvring that pretends to comply with the rules of critical discussion, but in fact does not (van Eemeren and Houtlosser 2004, 3).

In case of a composition or division fallacy, argumentation that is based on the transfer of properties from parts to the whole or the other way around derails if the properties concerned are not absolute and structure-independent at the same time. This fallacy is in both of its variants a parasite taking unjustified advantage of its reasonable counterpart involving on the transference of absolute and structure-independent properties. The fact that the fallacy has in both of its variants a reasonable counterpart that is very similar in appearance to the fallacious instances explains why it may seem reasonable to some.

In addition, the context in which a statement is made may play a part. While we can say that in general 'being light' cannot be transferred from parts to whole or vice versa because it is a relative and structure-dependent property, the property of being light may be transferable in those cases where the context is such that the right kind of provisions are in force. Take the following argumentation, which is clearly invalid:

(35) This bike is light because its parts are light.

However, if contextual information is added that makes clear that certain provisions are in force, it might be possible to fix the validity problem. For instance, if the argument is put forward in a context in which the arguer compares this bike with another type of bike:

(36) This [professional] racing bike is relatively light, because its parts are light [in comparison with those of a normal racing bike].

Only in the context provided in (36), where the use of 'light' is restricted to a comparative sense of light, the transference is allowed. In cases where such a restriction has not been made explicitly, one may take it –giving the arguer the benefit of the doubt– that it is intended, but our coming to this charitable interpretation may, of course, well be the result of strategic manoeuvring on the part of the arguer.

It is not always clear from the outset whether a property is structure-dependent or structure-independent. Uncertainty as to whether a property is structure-dependent or not can therefore also be exploited in strategic manoeuvring. A property like 'natural', for instance, can be transferred from the parts to the whole if the parts are put together in an unproblematic way, as in (37):

(37) This salad contains natural products (tomatoes, cucumber and peppers) therefore the salad is natural.

If the salad contains nothing more than tomatoes, cucumber and peppers this conclusion can be safely made. Something similar, however, seems to happen in (38):

(38) This shampoo contains natural products (aloe vera, sunflower oil and apricot oil) therefore it is natural.

Producing a shampoo is a lot more complicated than putting together a salad by mixing some vegetables. Producing a shampoo may even involve chemical processes that change the very nature of the ingredients. Therefore 'being natural' in (39) is certainly not structure-independent. Again it depends on the context in which the strategic manoeuvre takes place whether or not the property can be transferred from the part to the whole or vice versa.

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Logical Opposition and Social Opposition

Oposición lógica y oposición social

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Abstract: There are pathologies both of logical opposition and of social opposition. Logically, we often construct false dichotomies, mistaking contraries for contradictories and misrepresenting distinctions as bifurcations. Socially, groups that are distinct may see themselves as competitively opposed, leading in extreme cases to demonization and de-humanization of the 'opposite' group. In this paper I offer preliminary accounts of both logical and social opposition and explore ways in which they may be connected.

Keywords: Adversariality, contradictory, contrary, dichotomy, opposition, polarization.

Resumen: Hay patologías de ambos tipos, en términos de oposición lógica y en términos de oposición social. Desde un punto de vista lógico, a menudo construimos falsas dicotomías, confundiendo contrarios por contradictorios, y presentando inadecuadamente distinciones como bifurcaciones. Desde un punto de vista social, grupos que son distintos pueden verse asimismo como competitivamente opuestos, dejando entrever en casos extremos una demonización y deshumanización del grupo 'opuesto'. En este trabajo, ofrezco una análisis prelimar de ambos fenómenos, la oposición lógica y la social, y exploro formas a través de las que ellos pueden ser conectados.

Palabras clave: Adversarialidad, contradictorio, contrario, dicotomía, oposición, polarización.

Introduction

Bertrand Russell once said "what is wanted is not the will to believe, but the will to find out, which is the very opposite." Russell is known as a clear writer,

but it is not obvious what he meant when he made this comment. In what sense is the will to find out the opposite, or the 'very opposite' of the will to believe? The question points to the need to think further about opposites. Opposites may be logical or social, and there are several varieties of each. In this essay I wish to explore both, with a view to considering some relationships between them.

There are pathologies both of logical opposition and of social opposition. One author said: Surely we can tell the sheep from the goats, the quick from the dead, the males from the females, the A from the not-A, without resorting to traditional forms of oppression, both physical and spiritual. A disinterested respect for formal logic is inadequate as a motive for murder (Jay, 1981, 49-50).

Logically, we often construct false dichotomies, mistaking contraries for contradictories, turning distinctions into bifurcations, and neglecting to consider anomalous cases. Socially, groups that are distinct may come to see themselves as opposed; while some opposition makes for healthy criticism, opposition may come to be accompanied by hostility leading eventually to polarization and, in the worst cases, to demonization and de-humanization. My concern here is to offer a preliminary description of both logical and social opposition and then to suggest some ways in which they are connected.

Douglas Walton's work provides an interesting backdrop to this discussion because he has not fallen into the trap of portraying all argumentative discussions in an adversarial way. In his book *A Pragmatic Theory of Fallacy*, Walton (1995) distinguished a number of contexts in which persons may employ and consider arguments. These are:

(a) critical discussion
(b) negotiation
(c) inquiry
(d) deliberation
(e) information-seeking
(f) interviewing an expert
(g) pedagogy

A few preliminary comments can be made about this list. One might, for

instance, wonder why debate is not on the list. It appears that Walton subsumes debate within the category of critical discussion. But given that debate is intrinsically competitive and critical discussion need not be, we could call for a distinction here. In other contexts, we might wish to conflate two of Walton's categories. The question arises, for example, as to whether the interviewing of an expert could not simply be counted as one way of seeking information. One might argue in favour of deleting the category 'quarrel,' attributing its presence on the list as an unneeded recognition of the ambiguity of the word "argument."

On the matter of negotiation, Walton is aware of the fact that there are two importantly different models of the process. One is competitive, with each side seeking to get its own way, and achieve a victory over the other. The other is collaborative (often called 'interest-based') and emphasizes a win-win strategy; both parties seek to achieve something valuable while building a good relationship in the process. Argument strategies could be expected to differ in these contexts; we would expect adversarial criticism and competitive discourse to play a greater role in the first than in the second, and charitable reconstruction of the other parties views to play a greater role in the second than the first.

But it is not these qualifications that are my main subject here. In reflecting on *opposites* and *opposition*, my interest is in competitiveness and adversariality in these contexts. Are the claims people want to support logical opposites? Do the people supporting them oppose each other socially? If so how, and with what degree of animosity? Logical opposition, involving consideration of contrary and contradictory claims, and alternate interpretations of reasons and evidence, will be relevant to all the contexts Walton mentions. But social opposition, of the kind that involved adversarial roles and emotional criticism, will not. In win-win negotiation, deliberation, information seeking, the consultation of experts, and teaching contexts, there should be little, if any, need for social opposition, as an aspect of argument criticism. Obviously quarrels are not contexts of calm opposition; by definition, they involve competition and hostile adversariality.

While all contexts in which argumentation appears allow for reflection and criticism, not all require adversarial competition. We might call such contexts those of calm opposition. Clearly, calmness in this sense will be a matter of degree; though I wish to distinguish calm opposition from

adversarial opposition; given that there are degrees, I do not wish to dichotomize the two. To what extent can inquiry, critical discussions, and debates be conducted within the bounds of calm opposition?

Logical Opposites

Logically, we may speak of opposites when we have contraries and when we have contradictories. Examples of contraries are the beautiful and the ugly, the moderate and the extremists, the lost and the found, the public and the private, the immigrant and the non-immigrant, the rural and the urban. Contradictories involve denial of the very thing asserted: a woman is beautiful or not; a violin is lost or not; a book is interesting or not. Mistaking contraries for contradictories is a common and well-known logical error which I will call here the Error of Contrariety. When we commit the Error of Contrariety, we misunderstand contraries in a way that confuses them with contradictories. This logical error results in the construction of false dichotomies. Few would dichotomously organize the world into the Lost and the Found or the Light and the Dark, but it is all too easy to bifurcate society into Immigrants and Non-Immigrants, Rural and Urban, moderate and extremists. Even male and female turns out to be a false dichotomy, as we will see.

From contrary predicates, we can readily construct contrary propositions. Contrary propositions cannot both be true; however they can both be false. When propositions are contradictory, they must have opposite truth values; if one is true, the other is false. An act that is good cannot be evil; however an act may be neither good nor evil. If a man lives in a rural area, then he does not live in an urban area (not both true); however both contraries can be false. The man may live in an area that is neither urban nor rural (it may be suburban, for example, or he might live on a houseboat that travels national canals). Thus 'Eric lives in the country' and 'Eric lives in the city' are contrary propositions and not contradictory ones. The contradictory of 'Eric lives in the country' is 'Eric does not live in the country'. It is *not* 'Eric lives in the city'.

We form contrary propositions from such *opposite* attributes as the ugly and the beautiful, the lost and the found, the interesting and the uninterest-

ing, the winners and the losers. With contraries there is a middle. Neglecting that middle can distort our understanding, restrict our imagination, limit our choices of action and policy, and bias our relationships. I stress here dichotomies that are false because the either-or is not exhaustive. There are, however, at least six different ways in which dichotomies can be false. (I have argued this elsewhere.) They can fail to be exhaustive, fail to be exclusive, fail to be either exclusive or exhaustive, fail because they are constructed around ill-defined terms, fail because there are off-the-spectrum items, or fail because of indeterminacy. But here we will keep things relatively simple and stick to the matter of non-exhaustiveness.

The Pythagorean Table of Opposites, cited with approval by Aristotle, included:

Limited/unlimited
Male/Female
Good/Evil
Light/Dark
Right/Left

Recalling the argument from Opposites in Plato's *Phaedo*, we might add Life and Death.

Thinking of current philosophical disputes, we can add:

Subjectivist/Objectivist
Relativist/Absolutist
Realist/Constructivist
Feminist/Non-feminist
Analytic philosophy/continental philosophy
Dualist/physicalist

Under the title "Sense, Nonsense, and the Senses: An Inquiry into the Powers of the Human Mind," Hilary Putnam discussed baneful divisions in philosophy, attributing some of them to a phenomenon of *recoil*. What happens here is that two positions are defined, with one of them being a kind of 'mirror image' of the other. (They may, for example, share a common assumption that is false, in which case they do not exhaust the possible array

of positions). Supposing that there are only two possible views, a thinker feels forced into one by his strong rejection of the other.[1] He feels repelled, recoils, and is driven to the *opposite* position.

Graham Priest has used dichotomous constructions to order that contradictions inevitably emerge in philosophy; this is all a softener for what later emerged as para-consistent logic. In a book entitled *Beyond the Limits of Thought,* Priest employs in his premises dichotomous constructions that are easy to dispute. These include:

Determinate/indeterminate
Sayable/not sayable
Expressible/inexpressible
Intrinsic/extrinsic

Though not written for this purpose, Priest's book seems to be an excellent source for errors of contrariety. Terms that should be understood in a kind of spectrum way (the concepts admit of qualifications and degrees, as with *safety* or *health*) are treated as contradictory opposites. Consider, for example, the expressible and the inexpressible. Are there not feelings and ideas that can be partially, though not fully, expressed? A mode of expression suggestive of bifurcation turns out to involve degrees. The following quotation from Nancy Jay begins to seem apt: *As a fundamental principle of formal logic, this A/not-A dichotomy is wonderfully simple and supremely all-encompassing. But it is necessarily distorting when it is applied directly to the empirical world, for there are no negatives there.*

Priest's oppositions are easily interpreted as *contraries*. He arrives at the conclusion that philosophy inevitably leads to contradictions only by treating them as contradictories.[2]

Let us stipulate that 'P' refers to a predicate, 'Pa' refers to its contrary, and 'notP' refers to its contradictory. Then 'x is P' and 'x is Pa' are contrary statements: both these statements may be false, but both cannot be true. The statements 'x is P' and 'x is not P' are contradictory statements. We can

[1] Hilary Putnam, "Sense, Nonsense, and the Senses: An Inquiry into the Powers of the Human Mind", *Journal of Philosophy* 1994, 91, 445-417.

[2] I am indebted to Colin Hirano for challenging discussions of this work.

use this apparatus to represent the relationship between many of the terms above. It would work for these pairs.

Winner/loser P, Pa
Good/evil P, Pa
Light/dark P, Pa
Male/female P, Pa

A person may be neither a winner nor a loser; a character may be neither good nor evil; at twilight it is neither light nor dark. A hermaphroditic (inter-sex) person, or a person in transition between male and female may be neither male nor female. These contrary predicates, though *opposites*, do not provide the basis for constructing contradictory statements or exclusive disjunctions. There are degrees, anomalies, and borderline cases. We might carelessly assume a bifurcation and claim that any given item must be either P or Pa and cannot be both. But such a supposition would be a mistake. When we consider such pairs, represented here as P and Pa, we cannot straightforwardly use them to construct an exclusive disjunction.

The logical principle of excluded middle does just that: it excludes the middle, and it does not hold for contrary propositions. The problem is, here, that often there really are middles (the moderately successful person who is neither a winner nor a loser; the suburb that is neither urban nor rural; the shop at the front of one's home that is neither private space nor public space; the citizen born abroad who moves to his 'homeland' in mid life; the baby born with both ovaries and a penis). If we classify in binaries so as to exclude these middles, we have a distorting system that encourages us to ignore realities that may be important.

To express contradictory opposition, we need to use words so as to articulate opposite in the sense of logical denial. Thus:

Beautiful/not beautiful P, not P
Good/ not good P, not P
Light/not light P, not P
Male/not male P, not P

We do get exhaustive categorization with logical denial, though some-

times at a cost. There is a sense in which the negative here is infinite; it can include anything and everything — except, of course, exactly those items that fall in the original category.

Consider: there are various ways of not being male. A person might for instance be female, which for human beings is the standard way of being non-male. (You might think a woman is a not-man or, as Aristotle somewhere said, "a woman is defined by a certain lack.") But this 'lack' defines too large a category to be filled by females alone; there are many 'not-mans' who are not female. A person might be, or be counted as, non-male due to hermaphroditism or trans-sexuality or having been falsely identified as male or being pregnant. (A 'man' who had been a 'woman' maintained his vagina and uterus and was able to become pregnant and carry a child. Was this a pregnant man? So it was said.) An animal might be non-male because it is self-reproducing. One can of course stipulate a criterion of maleness, providing a cut-off point. (No pun intended!) Such-and-such is male and the rest is other (female). The point is this: if the infant's penis is more than two centimeters in length, the infant is male (or surgically adapted to be such), and if the penis is less than two centimeters in length, the infant is not male and is deemed female and is surgically reconstructed as such.[3]

A more technical example is that of deductive and inductive arguments. A theorist might give some independent meaning to the term 'inductive,' defining it perhaps in terms of empirical generalization or reasoning from experienced cases to unexperienced ones. If that is done, and a distinct meaning is also given to the term 'deductive', it will turn out that 'deductive' and 'inductive' are *contrary* predicates. There will be a middle: many arguments will turn out to be neither inductive nor deductive. These include analogy arguments based on consistency principles, conductive arguments, abductive arguments, and narrative arguments.[4] That is to say, if the predicates 'inductive' and 'deductive' are contraries, then 'inductive/deductive' distinction does not provide an exhaustive categorization, for arguments.

[3] The male/female dichotomy for human beings has generally been constructed and enforced – medically, surgically, and socially. Exceptions may be as much as 2% of the population, but until recently our thinking and our social practice has not sought to allow for them. I am endebted to Judith Grossman for discussion of these cases.

[4] I argued this point in "The Great Divide" (*Problems of Argument Analysis and Evaluation*. Foris/de Gruyter 1987) and the theory is developed in my textbook *A Practical Study of Argument* (Wadsworth/Cengage, 7th edition, Belmont, CA, 2010).

Indeed, to erect a dichotomy around 'deductive' and 'inductive' will be to distort one's theory of argument. This classificatory system will omit to consider relevant variety in arguments, and it will be reductive. It will exclude a middle that really does exist and should not be excluded.

Now many tradition-minded theorists will be unhappy with this conclusion and will seek to avoid it. Here's how: define 'deductive' and then define 'inductive' as 'non-deductive'. Any argument will then be either deductive or inductive – though it might be hard to tell which. It either IS deductive, or it ISN'T deductive –and that's it. (It can't be both and it can't be neither).

In general, for any characteristic that you can place on some sort of a continuum, you can take a point on that continuum and say something like 'to the left it's A and to the right it's not –A.' You can at that point use your stipulation to construct contradictory predicates. But, as John Dewey pointed out long ago, in such constructions the negative term and carries little information. You discover little about an argument if you find out that it is *non-deductive*.

Bifurcation can be achieved. We can find it, or we can impose it –or both. Now it will often be a contestable matter whether a pair of semantically opposite predicates should be represented as P/Pa or as P/not-P. Consider for instance:

Safe/unsafe
Nature/nurture
Natural/supernatural
Competitive/cooperative
Absolutist/relativist
Conceivable/inconceivable
Knowable/unknowable

With regard, say, to the knowable and the unknowable, consider an item that is knowable to some extent, but not fully. Is this thing *knowable*, or is it *unknowable*, or is it *knowable to some degree*? If we wish to allow this last possibility, incorporating a third category, then we would represent the knowable/unknowable as P/Pa, a relation of contraries. If we do not, we will construe it as P/notP, a relation of contradictories.

I propose here, and have argued elsewhere, that a true dichotomy should be understood as an exclusive disjunction. If, around two predicates, we can construct a true dichotomy, then every item that they classify must have *one or the other*, and *no item can have both*. With regard to statements in natural languages, we can ask whether Non-Contradiction and Excluded Middle should apply. The answer will affect our formalization of those statements. If we represent a statement as x is P and another statement as x is notP, we are representing our decision that the second predicate is the contradictory opposite of the first. The item x is either P or it is notP and there is no further possibility. To such statements, the principles of non-contradiction and excluded middle will apply. If the natural language predicates are contrary, the corresponding statements should not be formalized so as to be contradictories.[5]

We can, then, distinguish between the opposition of contraries and that of contradictories. This distinction, while highly important, is easily neglected – and the costs can be great. We have considered here two kinds of *logical* opposition. Clearly a position or claim a position may be explored and supporting evidence and arguments examined without anyone committing the Error of Contrariety. Debates, critical discussions, and argumentatively conducted inquiries need not involve any such mistake. Often, though, they do, and it seems likely that excluding middles, where middles exist, will contribute to polarization. A logical pathology is to distort by simplistic bifurcation; we often do this by failing to consider all possibilities, by failing to take into account context, the limitations of our knowledge, or the contestability of our terms.

Social Opposition

We may turn conflicts of claims into conflicts between people, resulting in social opposition.[6] Socially, oppositional roles may acquire extraneous ele-

[5] Dichotomies can be false for a variety of reasons. A constructed dichotomy may be false because it is not exhaustive; that is mainly what is being discussed here. It can also be false because it is not exclusive, because it is neither exclusive nor exhaustive, or because it is fundamentally misconstrued, erected on a faulty assumption or on the basis of faulty definitions of key terms.

[6] One certainly could not say that all enmity or all hostility is undesirable. Obviously

ments of hostility and enmity. My sense is that social pathologies of opposition are many and that there are important ways in which logical and social pathologies may support each other. I will consider here some of the ways in which logical pathologies contribute to social ones.

Socially, people may be opposed and have 'opponents' in various ways and to various degrees. We may consider opponent roles in a variety of contexts including those of argument and debate; social institutions such as court, parliament, and debate, organized around opposing roles; and political conflict, in its most extreme form waged by violence. Opposition may involve commitments to positions or claims which are in different ways conflicting or opposite; such opposition may or may not be antagonistic and adversarial.

1. Struggles for dominance in argument

Consider here a person and her opponent, call them X and Y. Let us say that X puts forward an argument and Y is responding, and is making a critical response to that argument. X argues *for* the claim C; Y argues *against* this claim C. We can ask: is Y simply against C in that he accepts a contrary proposition? Or does he accept a contradictory proposition? Or does he, perhaps, have doubts about the argument for C? The claim that he is 'opposed' does not make this clear, and there are many possibilities. In questioning X's position and arguments, Y is in an oppositional role. This role in questioning her conclusion need not involve any opposition to X as a person – though often that slide is made.

In critical discussions people often go do more than considering evidence and reasons for and against a claim that has been put forward. They engage in the argumentative process, often with considerable passion. Often the discussion acquires a decided competitive overtone, as both proponent and opponent seek to dominate and 'win' by showing that they are right and the

this is a huge topic and an ethically sensitive one. But let me stipulate here that while opposition of roles in a court, Parliament, game, or debate may be functional as contributing to needed criticism, enmity in the sense of hostility toward the other, and dichotomization and polarization of human beings is *prima facie* counter-productive, destructive, and undesirable.

other party is wrong. The dynamic acquires a *motif* that some of my (male) colleagues love to joke about: I am right; therefore you are wrong. What may have begun as a theoretical discussion or policy debate becomes a competition – often one with decidedly adversarial overtones. X and Y, who are reasoning back and forth, and considering one another's arguments with regard to a claim C, come to struggle for the 'top' position, of winner in the debate. Each wants to prevail over the opponent. The proponent and the opponent are then competing for dominance in a game that is played as a zero sum game. They have constructed it in that way: they argue for opposed claims, one and only one can win and the other will be defined as a loser and may even see himself as humiliated because he didn't 'win.' It is this kind of intellectual adversariality and struggle for dominance that feminist philosophers criticized some years back. They identified the highly competitive and aggressive style, characteristic of some circles in philosophy, as macho and competitive, prevalent in a male-dominated profession, and unattractive to many women.[7]

2. Polarization around two positions

Colloquially it is often said that there are 'two sides' to every question.[8] There is often a pro and con; debates are typically constructed as though there are two sides. However, two positions represented by persons in oppositional roles may in various ways, and for various reasons, fail to exhaust the possibilities. A logical reduction into two sides can distort discussions of social policy. Often public debates may be structured around simplified alternatives – as when we think of 'pro' and 'con' and assume that if you are *for* one of just two alternatives you must therefore be *against* the other. Some versions of the debate over abortion have this characteristic. Policy options are discussed as though there are just two: a *pro choice* policy according to which there is no restriction on a woman's choice and a *pro life* policy according to which the embryo and fetus are regarded as persons and

[7] See Maryann Ayim, "Violence and Domination as Metaphors in Academic Discourse", 1988.

[8] See my "Are There Two Sides to Every Question?", 1988.

any intentional termination of pre-birth life counts as murder. Simplified and polarized debates of this kind typically omit interesting intermediate positions. They omit to consider third positions such as (in the case of abortion law) permissiveness up to some date and regulation after that.

3. Roles that are taken too far

Many institutions and practices involve oppositional roles: courts, debate, and Parliament being three obvious examples. In parliament we have the government and the opposition; in law, the prosecution and defense; in debates there are those who oppose and those who support a proposition; theorists of critical discussion use the terms *proponent* and *opponent*. Claims are put forward and defended –and criticized – by people who employ arguments at least some of the time. Oppositional roles are needed for the progress of discussion and investigation and, in legal contexts, for fairness and procedural justice. These roles presuppose opposition in the sense of criticism; some persons put forward claims, and it is the role of other persons to submit those claims to scrutiny. Oppositional roles have important social functions and – interestingly — require cooperation in a number of significant respects. In principle people can occupy and perform in these roles in ways that are calm and pacific; opposition of this kind need not involve elements of competitiveness and a quest for domination and it certainly need not involve insult and hostility. And yet as we know so well, court, parliament, debates, and academic discussions may be conducted in a highly competitive and combative way, featuring intense rivalry and such hostile elements as name-calling and recourse to *ad hominem* and Straw Man fallacies. Shouting, insults, and (in some countries) even physical fighting may be involved. In the winter of 2003, the *New Statesman* reported that some women members of the British House of Commons were taking testosterone treatments so that they could participate in the combative debates required for their political careers. The opponent, defined as such because of social roles, becomes a competitor and even an enemy. If debates are polarized and intermediate positions neglected, this dynamic is of intense competition is more likely to occur and worse when it does occur.

4. Struggles to the death

Some conflicts involving enmity become intense to the point where they are struggles to the death, resulting in war and, in the very worst cases, massacre and genocide. Here opposition becomes a matter of Us and Them at its most intense. Sides are polarized so that there is great pressure to be on one side or the other. If middle or outsider roles exist, they will be precarious. The idea is to win victory by the application of physical force. The survival of the 'us' is at stake. The enemy people need to be demonized to justify the struggle. If they have to be de-humanized, or even eliminated, so be it — because 'we' are now in jeopardy and must do whatever it takes to ensure our security and survival. We may here of think of Aryan and non-Aryan here, of Serb and Croat, and of Tutsi and Hutu.

And here is an appalling example from my own country. Canadian forces are engaged fighting the Taliban in Afghanistan; their role is publicly contested by many who fail to understand why young Canadian men and women are dying in this far-away place and why Canada, which they wanted to understand as a peacekeeping nation, was suddenly engaged in fighting a war. Arguably, this context is one in which the security of our country is threatened, but the threat is not immediate and to many Canadians it is not obvious. Canadian Chief of Staff General Rick Hillier did not like skepticism about the Afghan mission one little bit. He spoke out strongly in support of the military role and once, rather notoriously, referred to the Taliban as "scumbags." Asked why he used this language (CBC radio "As it happens," April 15, 2008) General Hillier said well these people were the worst of the worst; they were, after all, killing Canadian men and women in the armed forces. He said he was right to use the word "scumbags" to 'tell it like it is', rally the troops, and inform the public. When Hillier announced his resignation in April, 2008, he was praised as a soldier's soldier, who had rallied the troops immensely, and was one of the few strong leaders in Canadian political life. Personally, I would submit that de-humanizing rhetoric is dangerous and not heroic.

Concluding Comments

Socially people can be opponents in different senses, with different degrees

and kinds of competition and hostility. I don't wish to dispute the value of criticism or oppositional roles, but rather to warn against intensifying them so as to contribute to false polarization and harmful adversariality. My suspicion is that the relationship between logical opposition and social opposition works in two directions. I have suggested that when we commit the logical error of contrariety, that mistake contributes to polarization in the social sense. But the relationship probably goes the other way too: if we see others as our opponents, we are more likely to exaggerate the differences between their positions and our own, resulting in logical inaccuracies. There are various forms of logical opposition and of social opposition. Here, I have boldly labeled some of these as pathological, and I have engaged in a preliminary discussion of how they might be related. Obviously there is much more to be said.

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On the Alleged Failure of Informal Logic*

Sobre el pretendido fallo de la lógica informal

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Abstract: In the past 10 years there have been suggestions from several quarters that informal logic should change its name or at least yield the floor to a successor which, it has been suggested, might be called 'philosophy of argument' (Blair 2009) or 'semi-formal logic' (Walton 2008). Behind these suggestions lies the belief that informal logic has, at it were, failed to penetrate the philosophical establishment (Johnson and Blair 2000, 101; Woods 2000, 160). In this paper, I want to contend the claim that informal logic has failed to penetrate the philosophical establishment. With regard to this alleged failure, I pose a series of questions. *First*, exactly what does the claim mean? In order to assess it, it will be necessary to make reference to some conception of informal logic —and that proves to be difficult because there are many. Accordingly, I propose the account that I favour. *Second,* I want to ask: What is the evidence for it? What sorts of reasons have been offered? *Third,* if this claim is true, then *why* is it true? What explanations can be given? *Fourth,* I then look at evidence to the contrary, evidence that suggests that informal logic has not altogether failed to penetrate the philosophical establishment.

Keywords: Informal logic, failure, achievements, pedagogy, theory.

Resumen: En los últimos 10 años, han habido sugerencias desde diferentes esquinas sosteniendo que la lógica informal debería cambiar su nombre o al menos abrir la puerta a lo que podría ser llamado como 'filosofía del argumento' (Blair 2009) o 'lógica semi-formal' (Walton 2008). Detrás de estas sugerencias se encuentra la creencia de que la lógica informal ha fallado en penetrar el establishment filosófico (Johnson y Blair 2000, 101; Woods 2000, 160). En este trabajo, quiero desafiar esta pretensión de que la lógica informal ha fallado en penetrar el establishment filosófico. En relación con esta pretensión, dispongo de una serie de preguntas. Primero, exactamente ¿qué significa la pretensión? Para abordarla, será necesario hacer referencia a algunas con-

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cepciones de la lógica informal –lo que prueba lo difícil que es por la existencia de muchas definiciones. Luego, propongo una definición respecto de la que estoy a favor. Segundo, pregunto: ¿Cuál es la evidencia para esta pretensión? ¿Qué tipo de razones han sido ofrecidas? Tercero, si la pretensión fuera verdad, entonces ¿Por qué es verdad? ¿Qué explicaciones pueden darse? Cuarto, muestro la evidencia en contrario, evidencia que sugiere que la lógica informal no ha fallado en penetrar el establishment filosófico.

Palabras clave: Lógica informal, fallo, logros, pedagogía, teoría.

Introduction

In the past 10 years there have been suggestions from several quarters that informal logic should change its name or at least yield the floor to a successor which, it has been suggested, might be called 'philosophy of argument' (Blair 2009) or semi-formal logic (Walton 2008). Behind these suggestions lies the belief that informal logic has, at it were, failed to penetrate the philosophical establishment (Johnson and Blair 2000, 101; Woods 2000, 160).

In this paper, I want to contend the claim that informal logic has failed to penetrate the philosophical establishment. Such a blanket judgment overlooks some degree of success when success is measured in terms of the goals of the Informal Logic Initiative. With regard to the alleged failure of informal logic, I pose a series of questions. *First*, exactly what does the claim mean? In order to assess it, it will be necessary to make reference to some conception of informal logic—and that proves to be difficult because there are so many. Accordingly, I propose the account that I favour. *Second,* I want to ask: What is the evidence for it? What sorts of reasons have been offered? *Third,* if this claim is true, then *why* is it true? What explanations can be given? Alternatively, if it is not true, then what accounts for the belief that it is true? *Fourth,* I want to look at evidence to the contrary, evidence that suggests that informal logic has not altogether failed to penetrate the philosophical establishment.

The Informal Logic Approach

In my (2006), I showed that there were a great many ways in which informal logic has been conceived. In this paper I adopt the definition that we proposed originally in (1987) which was slightly modified in (2002):

> By 'informal logic,' we mean to designate "a branch of logic whose task is to develop non-formal standards, criteria, procedures for the analysis, interpretation, evaluation, criticism and construction of argumentation in everyday discourse."[1] (Johnson and Blair 1987,148; 2002, 358)

Note the following points about the (2002) version of the definition. First, we take informal logic to be a branch of logic, or a sub-discipline within logic, which in turn has its home in philosophy. Some will be uneasy with this claim on the grounds that informal logic is not logic (Woods, 1980; Woods, 2000, 149-50). Second, we note that the definition is too narrow because it limits the inquiry to arguments in everyday discourse, omitting what Weinstein (1990 calls "stylized arguments" (121). Third, we also discuss the meaning of the phrase "non-formal" which appears in the first instance to be both circular and vague but which we believe, when properly interpreted, helps clarify the nature of the inquiry.

Evidence for the Claim

Let me then ask: is this claim that informal logic has not succeeded in penetrating the philosophical establishment true? It seems fairly clear that in certain respects, informal logic has not been successful in penetrating the philosophical establishment (understood in a certain way). The sorts of considerations I have heard cited in support of this claim are as follows:

- There is no Ph.D. program that specializes in informal logic, in the way that there are programs that specialize in formal logic, epistemology etc.
- Informal logic is not generally listed as desirable AOS or AOC in job advertisements for philosophers.
- Mainline histories of logic and resources in philosophy tend to ignore it,

[1] As has been noted, one problem with this definition is its apparent circularity—defining "informal" with non-formal. To my mind this is really a less serious problem than the failure to clarify the sense of "formal" as negated by the "in." See below for my attempt to do that. The evolution from the (1980) articulation is partly the result of the influence of Finocchiaro (1984)—though he takes informal logic to be a theory of reasoning, whereas we take it to be a theory of argument.

though some resources, like *The Oxford Companion to Philosophy* and *The Cambridge Dictionary of Philosophy*, include it.

– Informal logic has not made a significant impact on the philosophical scene—unlike formal logic which was closely allied with the Positivist Research Program.

From these sorts of considerations, it is clear that those who make this claim have something fairly specific in mind by the phrase "the philosophical establishment." They take Ph.D. programs and their specializations as important indicators of what areas are important; these in turn are revealed in what universities call for in their job searches. So when one looks at the sorts positions advertised in "Jobs for Philosophers" in the APA Bulletin, one does not find informal logic, one concludes that informal logic has not penetrated the philosophical mainstream.

Possible Explanations for the Alleged Failure

Let us suppose that there is some truth to this claim. What are some possible reasons?[2] Lacking empirically grounded feedback, I offer some possible explanations.

1. *Ignorance:* The simplest explanation would be ignorance. One reason to think that informal logic has not penetrated "the philosophical establishment" would be that it is largely unknown. Woods considered an explanation like this in his (2000, 160-161) when he claimed that those who work in this area tend to publish in their own journals and do not attempt to publish their work in mainstream philosophical journals. In the early days, there was something to this view, although exceptions are now too numerous to

[2] A recent philosophy Ph.D. who does work in argumentation once said to me (private conversation, 2006) that one good way to find out why would be to ask those who work in the mainstream about informal logic, determine their awareness or lack of it, and inquire as to the reasons. A colleague sympathetic to informal logic said to me (in private discussion) the reasons for his reluctance to teach informal logic are that the products of informal logic appear soft, unsystematic, lacking in rigour when compared with those of FDL. "If I teach them formal logic, I am teaching them something solid and supported by a strong theory. If I teach them informal logic, that is just not so."

mention— going right back to Woods and Walton's work on fallacies in journals in the 70s and 80s much of which was published in mainline journals. In 1984 Nicholas Rescher, then-editor the *American Philosophical Quarterly,* solicited Johnson and Blair to write a paper for that journal (Johnson and Blair, 1985). I do not think this reason cannot go very far toward explaining the alleged failure. Moreover, since the Association for Informal Logic and Critical Thinking (AILACT) came into existence in 1983, it has organized sessions on informal logic and critical thinking at the annual meetings of the Eastern, Central and Pacific Divisions of the American Philosophical Association.

2. *Association*: The very name of the enterprise has likely been an obstacle to its being taken seriously in some quarters. Most philosophers in the analytic tradition were exposed to formal logic in their graduate training, and continue to rely on it in their practice. What are they to think of something called informal logic? First, "informal" suggests a causal[3] approach to logic— whereas most analytic philosophers prize rigour and systematicity.[4] Second, the name suggests an antipathy to formal logic. Undeniably there was some such animosity in the early days, but that has largely disappeared (see Walton, 1990; Johnson, 1999). It is now recognized by informal logicians that both formal logic and informal logic have important roles play in our overall task of evaluating reasoning (Walton 1990; Johnson 1998). They are complementary to one another. Third, the name appears negative, defining the inquiry in terms of what it is not, not in terms of what it is.

My rejoinder to this criticism is to wonder, first of all, if philosophers really are that much influenced by the name. My next thought is to wonder what name might have worked better. Other names have been suggested: *Natural logic:* but this is already in use by Grize (1982) for a very different project. *Practical logic:* possibly but perhaps too connected to the idea of practical reasoning, which would cover some of the sorts of argument dealt with by informal logic, but not all. *Applied logic:* Blair and I used this name

[3] As one high-powered analytic (but unnamed) philosopher once said to me: "Oh yes, you do casual logic…" smirking as he said it.

[4] Again it is important to add the rider: "as they understand these ideals." Hitchcock who regards informal logic as a sub-discipline within philosophy notes "its unfortunate connotation of sloppiness and lack of rigour" (2000, 130).

to designate the course we created at the University of Windsor in the early 1970s (see Johnson 2009) but later, we set this term aside for its implicit suggestion that what we were doing was applying formal logic. *Ordinary logic*: this was already used by Ennis for the title of a logic text—but I wonder if this is any better. Recently some have suggested *Philosophy of Argument* (Govier 1999; Blair 1999; Blair 2003). But see (Blair 2009) for his most recent, more cautionary view.

A second association that may pose an impediment is that between informal logic and *fallacy/fallacy theory* which some philosophers regard as just so much logical and philosophical backwater. This may have been the case when Hamblin wrote his famous 1970 critique, but only someone ignorant of the work done in the intervening years could continue to maintain this view, especially in light of the Woods and Walton research mentioned above, and the series of monographs that Walton has produced on the individual fallacies (Johnson and Blair. 2002, 372). Informal logic is also associated with the *critical thinking* initiative to which many philosophers tend to have one of two reactions. They think that philosophy has a copyright on the practice of critical thinking, so there is really nothing more to say about it. Philosophy is thinking critically; full stop. To teach people to think critically, you teach them philosophy. Thus no need for an informal logic. But this is just snobbishness on the part of the philosopher—the old imperialism, which believes that philosophy, is the master discipline. Philosophers are just about as "critical" as any other thinkers, and it has been well-evidenced that they have their own set of blinders (resistance to ESP, to Freudian psychoanalysis) etc. The other reaction is that critical thinking is mainly a pedagogical initiative with little implication for philosophy as a discipline.

3. *Prejudice and tradition.* Whatever else one cares to say, informal logic (in the sense I discussed here) is an inquiry that has brought a fresh perspective on argument/ation.[5] But traditional ways of thinking about argument, beginning with Aristotle, have a deep hold on the philosophical mind. Blair and I claimed that that from the vantage of informal logic, "arguments are historical events, expressed in natural languages, and inherently social,

[5] Here I am reflecting a kind of ambiguity about exactly how to denominate the focus of the inquiry. The terms "argument" and "argumentation" are deeply imbedded and are used in different ways by different theorists.

dialectical and pragmatic (1996, 164-65) whereas for formal logic, "arguments are decontextualized sets of sentence or symbols viewed in terms of their syntactic or semantic relationships" (165).

I think that many philosophers (particularly those in the so-called analytic tradition) have a deep attachment to the idea of logic as the study of universal and necessary consequence (valid implication). Deductivism and formalism are both connected to well-known and very important initiatives in philosophy and so any attempt at *replacing or decentering* them (which is what the Informal Logic Initiative—at least as I understand it here—proposes to do) faces an uphill struggle.

Moreover in the first half of the 20th century, the major developments in logic were formal and occurred in the area where logic and mathematics interface. In *Manifest Rationality*, I referred to this as the mathematicization of logic (104-05). It's fairly clear that that initiative has run its course; I don't think anyone takes the logicist problematic seriously, yet the memory lingers on, in the texts[6] and, still in many cases, the default approach to teaching logic is through formal logic.[7]

4. *Perception*: Informal logic has been perceived as largely a pedagogical enterprise, classroom oriented, and one that is not sufficiently funded by theory (Massey, 1981). It is true that the Informal Logic Initiative began as an attempt to reform the teaching of philosophy, particularly in philosophy, at the undergraduate level. But over time theoretical issues emerge and are dealt with. I have argued (2000) that informal logic reverses the typical pattern of development in which theory comes first and then filters down into the textbooks. It is worth noting that the formal logic approach to peda-

[6] From a graduate student working on argumentation: "Saturday, I had a brief meeting with NN, who was home for the holidays. She confirmed my impression after a meeting with NN1, the department's chair, one week before: *deductive chauvinism.* I literally found myself in an argument with him on the value of deduction for both claims to knowledge and actions …"

[7] From a logic instructor in Houston, Texas: "Thanks for the lead, but Robert Churchill's text is indefinitely out of print due to the common three-year cycle of textbooks and to some publisher issues, he indicated to me. I will have to use a deductivist text, possibly Copi's *Essentials of Logic*, and develop some ancillary materials on issues such as acceptability vs. truth, non-deductive support, soundness vs. cogency, and so forth. For this course, I can't pick a primarily informal logic text and ignore the emphasis on symbolic logic called for in the catalog description; and there is no 5050/ hybrid text out there. My usual lament: It's a deductivist world, at least down here, for now."

gogy (FDL) was "downloaded" from theoretical developments in logic and the foundation of mathematics which were undertaken in the latter 19th century to deal with the crisis there. Its originators—Frege, Russell/Whitehead—were concerned with the nature of logic and its relationship to mathematics: they had very little interest in argumentation (as informal logic understands it) or in the teaching of logic. In informal logic, the issues and theoretical literature have largely been stimulated by attempts to forge better practices of argument analysis and evaluation and argument construction. The result is that the theoretical literature has grown out of reflection on that practice (Johnson, 2006, 249). The perception that informal logic has been historically underfunded by theory may make it of less interest to many philosophers. However, this perception is not altogether accurate, as we shall see.

In his 2000, Woods cited two other factors that might explain the situation: The low threshold in journals, and what he calls Benign Pluralism—that informal logic has become a sort of fraternal organization where people are not inclined to criticize each other's views (2000:160). That might have been true at one point, but certainly no such claim can be made today. Criticisms of work by informal logicians by other informal logicians are not hard to come by. Woods (1989) criticized Johnson for adopting FDL as an acronym; Gilbert (1997) criticized informal logic for its narrow view of argument; Blair (2005) was critical of informal logicians who think of argument largely in terms of its persuasive function, while ignoring other uses. Goddu (2007) criticises Walton's version of the linked-convergent distinction.

Woods also made the point that even mathematical logic typically rates no more than a mandatory one semester course in Ph.D. education (2000, 160). And in the same vein, I would note that even so well-established a field as modal logic is rarely mentioned as AOC or AOS. So if the perception that informal logic has failed to penetrate the philosophical establishment is based on such propositions, then it is suspect.

However, it is possible that the best reason that informal logic has not attracted much attention from the philosophical community is that informal logic is just wrongheaded—or a dead end—philosophically. It has not brought forth the kinds of products that these philosophers find attractive. Specifically, it lacks the types of "methods of logic" that formal logic a la Quine (1961) can claim. That is, formal logic offers a method, indeed various methods, for deciding whether an argument is valid. (Note: this claim is

not without its problems… but let them pass for the moment). In fact, there are several methods for determining validity of an argument form. But all those methods will yield the same verdict. And the fundamental methods in formal deductive logic are *algorithmic.* So that the issue of argument evaluation reduces to whether or not the premises are true. But, it is believed, no logic can help decide these matters. Informal logic, on the other hand, so the thinking goes, has not developed anything like a suitable method for testing the link between the premises and conclusion of the sort which it supposes (discussed above). So perhaps the charge that is levelled against informal logic can be put this way. The Informal Logic Initiative has not succeeded because it has not developed the sorts of methods formal deductive logic has, and/or because those methods are not algorithmic. To which the answer can only be: true, but not relevant. Take, for example, the notion of relevance, which plays a crucial role in some theories of evaluation proposed by many informal logicians. Research in AI in the 60s attempted to discover a formal approach to problem solving and while they were enormously interesting developments, the consensus is that they failed largely because of difficulties having to do with relevance. Similarly, it seems unlikely that informal logicians will ever develop an algorithm to determine when the premises are sufficient; ultimately this is a matter of judgement. Still it is possible to provide both clarity and guidance about how to wrestle with such matters. See Blair 1991.

In his critique, Massey (1981) claimed that informal logic was not rigorous; and that it mistakenly opposes formalism. This latter view is shared by some who are sympathetic to both informal logic and the formalist impulse; e.g., Barth and Krabbe (1982), and Woods (1989). But as Blair and I have said on a number of occasions, much depends on how one takes the term "informal." Since this point is crucial, I will here repeat the way I explained it in *Manifest Rationality*:

> An obvious point is that "informal" takes its meaning in contrast to its counterpart—"formal." And yet this point manages not to be made for a very long time, and hence the nature of informal logic remained opaque, even to those involved in it, for a long period of time. Here is it helpful to have recourse to Barth and Krabbe (1982:14f) where they distinguish three senses of the term "form."[4]

By "form$_1$," Barth and Krabbe mean the sense of the term which derives from the Platonic idea of form, where form denotes the ultimate metaphysical unit. Barth and Krabbe claim that most traditional logic is formal in this sense. That is, syllogistic logic is a logic of terms where the terms could naturally be understood as place-holders for Platonic (or Aristotelian) forms. In this first sense of "form," almost all logic is informal (not-formal). Certainly neither predicate logic nor propositional logic can be construed as term logics. However, such an understanding of informal logic would be much too broad to be useful.

By "form$_2$," Barth and Krabbe mean the form of sentences and statements as these are seen in modern logic. In this sense, one could say that the syntax of the language to which a statement belongs is very precisely formulated or "formalized"; or that the validity concept is defined in terms of the logical form of the sentences which make up the argument. In this sense of "formal," most modern and contemporary logic is "formal." That is, such logics are formal in the sense that they canonize the notion of logical form, and the notion of validity plays the central role normatively. In this second sense of form, informal logic is not formal, because it abandons the notion of logical form as the key to understanding structure and likewise abandons validity as constitutive for the purposes of the evaluation or argument(ation).

By "form$_3$," Barth and Krabbe mean to refer to "procedures which are somehow regulated or regimented, which take place according to some set of rules." Barth and Krabbe say that "we do not defend formality$_3$ of all kinds and under all circumstances." Rather "we defend the thesis that verbal dialectics must have a certain form (i.e., must proceed according to certain rules) in order that one can speak of the discussion as being won or lost" (19). In this third sense or "form", informal logic can itself also be formal. There is nothing in the informal logic enterprise that stands opposed to the idea that argumentative discourse should be subject to norms, i.e., subject to rules, criteria, standards or procedures.

Regarding rigour—As Blair and I (1985, 1991) and Govier (1987, 1999) have argued, much depends here on how one understands the ideal of rigour. A rigorous proof of a mathematical theorem is one thing; a rigorous police investigation quite something else. Formal logic understandably aims at

something like the former type of rigour; informal logic, understandably, aims rather at something like the latter.

In this section, I have offered a number of possible explanations for the alleged failure of informal logic to penetrate the philosophical establishment. In the next section, I look at some evidence to the contrary,

Evidence to the Contrary: Has Informal Logic Failed? Some Signs of Success

To evaluate the degree of success of the Informal Logic Initiative, one must keep in mind it goals. Certainly in the first instance our primary goal was to change college and university level instruction in logic in North America. Informal logic originated as a pedagogical initiative. And I believe there is reason to think we have had some success there, as I will shortly indicate. But very quickly several things became apparent. The first was that we would be facing significant theoretical issues that would have to be confronted. Second, we became increasingly aware of those also pursuing the study of argumentation though from different vantage points. Those who were interested in promoting critical thinking or thinking skills were interested in argument because they saw it as a crucial focus of their approach.

And later we discovered that other theorists were pursuing the study of argumentation from different disciplinary perspectives. In his important 1990 paper, Wenzel argued that there are three distinct perspectives on argumentation: the logical which focuses on argument as product; the dialectical which focuses on argument as procedure, and the rhetorical which focuses on argument as process.

At a certain point, then, it became clear to us that our theoretical requirements would have to be nourished by and connected with inquiries taking place from these other perspectives. In other words, our theoretical ambitions were now larger than just influencing how philosophers and logicians thought about arguments. We wanted to, for example, alert those who took a rhetorical perspective that there was now more on offer from logic than formal logic. Therefore, in order to assess the success or failure of the Informal Logic Initiative, one must not only consider its impact on phi-

losophy instruction and on philosophy in general but as well must also consider the results within this broader grid of work in argumentation theory.

1. *Informal Logic on the pedagogical front*

The evidence suggests some success here. When we began work in this area, our primary purpose was to change undergraduate instruction in logic— to make it more "relevant," more practical and user friendly—in line with Kahane's initiative. And if one compares logic instruction as it existed in the 1950s and 1960s with the current situation, it seems clear that the Informal Logic Initiative has enjoyed some measure of success. A wide variety and range of introductory textbooks now exist and in a great many of them informal logic plays a significant role. See, for example, Govier's *A Practical Study of Argument* first published in 1985 (7th ed., 2009).

This has been a hugely successful introductory text which has a healthy dose of informal logic. As far as the courses themselves, see Blair (2006) for his discussion of what has been achieved in this area. The results of his survey of how introductory logic courses are taught at major institutions suggests less success than one might have thought. Not surprisingly, Canadian institutions in which there are those sympathetic to informal logic (York, Toronto, Queens, McMaster) fare better in his survey.

On this front, this author's view is that the Informal Logic Initiative has enjoyed significant success in reshaping how introductory logic is taught. More attention has been paid to pedagogy; — a healthy variety of types of courses and types of textbooks and methods and approaches has changed how students are taught introductory logic at the university and college level. See Johnson and Blair: *Teaching the Dog's Breakfast* (2009). Informal logic is not solely responsible for these developments, but it certainly has played an important role.

2. *Informal logic on the theoretical front*

What success has informal logic had at this level? Here is where Binkley (1987) and Walton (1998) and others have stated that informal logic lags behind. Woods has pointed out (2000) that he and others have had no trouble whatsoever in getting their papers published in mainline journals of

philosophy. To the degree that Woods fits the profile of someone who takes informal logic seriously, then this perception that the contributions have not been taken seriously seems overstated. Walton's monographs on the various fallacies have enjoyed favourable reception in mainstream journals. Moreover, I am inclined to challenge this view by looking at some of the achievements, as I shall shortly undertake

In the last 50 years, there has been a proliferation of interest in and approaches to the study of argumentation, or what has come to be known as Argumentation Theory—a multidisciplinary approach to the study of argumentation. Here a commonly invoked view that can be traced back to the 70s is that there are three different types of approach to the study of argumentation: the logical approach which focuses on argument as product, the dialectical approach which focuses on argument as procedure and the rhetorical approach which focuses on argument as process.[8] In what is known as Argumentation Theory, informal logic is recognized as an important representative of the logical approach.

3. *Achievements directly or indirectly attributable to informal logic*

To discuss what has been achieved, I will adopt the Johnson and Blair definition according to which "informal logic is that branch of logic that seeks to develop non-formal standards, criteria and procedures for the analysis, interpretation, evaluation, critique and construction of argumentation in everyday discourse [plus stylized argument, or argumentation in the disciplines]. So let me now attempt to discuss in broad strokes some achievements in those categories.[9]

ANALYSIS. By analysis, I understand such matters as: (i) the definition or understanding of argument/ation; the extension of the term "argument"; (ii) how to understand the elements, ingredients of an argument; (iii) how to understand the structure of argument; (iv) how to display the structure of argument; (v) the typology of argument: how many types of argument there are. There is a great deal can be said about contributions from infor-

[8] The *locus classicus* is Wenzel (1980) but see Johnson (2009) for some caveats.

[9] This survey is not systematic but impressionistic, anecdotal and partial meant to indicate the sorts of developments that have occurred. The framework I use here is similar to that in Johnson and Blair (2000) Johnson (2000) and Johnson and Blair (2002).

mal logic in each of these categories. Here I will be able to only briefly touch on some significant points.

(i) *Definition of 'argument.'* From the beginning, informal logic challenged the traditional notion of 'argument' defined as "a sequence of propositions one of which –the conclusion— is supported by the others–the premises) which is too abstract and artificial. The abstractness stems from the reference to the propositions and the absence of any clear indication of the purpose for which this structure is produced. The artificiality stems from the pristine sanitized nature of the examples put forth as arguments in traditional logic texts, such as this sort of example:

> If Argentina boycotts the alliance, then Bolivia will withdraw. If Bolivia withdraws then Chile will also. Therefore if Argentina boycotts the alliance, Chile will withdraw.[10]

Very few arguments that occur in argumentative contexts are so nicely and neatly laid out as this example. In real life, in the controversies that engage us about e.g., global wearing, very few arguments are so neatly constructed. Often the arguments found in the discourse around us—newspaper editorial—are imbedded in texts which contain various sorts of material (asides, etc) from the argument which must be extracted. Beginning with Kahane (1971) the informal logic approach focused on real arguments as they are found in natural language. (But see Goddu (2009) for a different view.) Informal logic sees arguments as situated in a context and as purposeful. It has therefore sought a more robust conception of argument (Johnson, 1984) and there is a rich literature on this topic.

On the issue of how to define 'argument,' how to understand the very idea of argument, a great deal has been written on this important topic and there has been healthy discussion of how to define argument. Hitchcock (2006) gives a thorough account that covers what many informal logicians have developed.

(ii) *Extension of the scope of argument*: Part of the Informal Logic Initiative has involved a concerted effort not simply to develop a more robust understanding of argument, but as well to extend the range of the term 'ar-

[10] See (2000) p. 170. See also Hansen (2002, 264-65).

gument'. Traditional logic tended to focus only on verbal arguments encoded in text. But informal logicians have insisted from the beginning that the focus of logic instruction should be on real arguments as they occur in natural settings, real life examples.

Here we must mention the increasing attention paid to argument in a dialogical setting. For the most part, informal logicians have tended to focus on arguments, particularly as they occur in natural language settings like editorials and journals. But it is also possible to view an argument as a process – as a dialogue between two parties—and here the focus will not be on criteria but rather on rules. Dialogue logics first emerged in the 1960s. Partly as a result of the influence of pragma-dialectics, informal logicians have increasingly been interested in dialogical or dialectical aspects of argument. See Walton and Krabbe's *Commitment in Dialogue* (2005) for an example.

Another issue has been whether or not there can be visual arguments. Kahane (1971) included a study of advertising because of its persuasive power. He treated advertisements as if they were arguments, and this eventually led to the view that we must embrace visual argumentation. Groarke (1996) argues that visual arguments should be embraced. Gilbert (1997) has also argued for inclusion of emotional arguments as well as kisceral (intuitive) and gestural (accomplished by gestures) arguments. The logical conclusion of this desire to broaden the application of argument is perhaps best captured in the title of the book—*Everything's an Argument* (2003) which view, however, the authors readily acknowledge is an overstatement.

(iii) *The elements of argument.* Traditional formal logic had a relatively simple conceptual scheme that can be traced back to the Aristotelian syllogism: the major premise, the minor premise and the conclusion. Later when the form of formal logic changed and it became propositional rather than term logic…the terms 'major' and 'minor' dropped out… but along came the idea of a missing premise (which gets associated with the enthymeme from Aristotle—with which it has little connection. Thus the argument: Socrates is a man, therefore he is mortal is said to have the missing premise (or assumption) that all men are mortal—the proposition that is required to make the argument deductively valid. In any event we can say that the Aristotelian major premise/minor premise/conclusion view has been displaced by premise/ missing premise/conclusion view.

For the formal logician, structure is understood as the logical form—an idea that goes back to Bertrand Russell. Take the following version of the much invoked (paradigmatic) argument: "If Socrates is a man, then he is mortal. Socrates is a man. Therefore he is mortal." This is an argument whose form is valid. For formal logic every argument in natural language can be "translated into" logical form[11] and once in it is has been put into logical form, there are methods for testing it for validity.[12]

How does the informal logician see the elements of argument? She continues to use the terminology of premise conclusion. However, because the focus is on real-life arguments, its examples tend to exhibit more complexity. In the first instance, the premises are seen not as propositions but rather as assertions or claims. Second, these arguments are often incomplete and so missing elements must be supplied. Here we find a significant role for interpretation. Third, in real life arguments, there is often what comes to be called "clutter" (Johnson, 1981); that is material which though it has been included in the author's presentation of the issue, is not strictly speaking, part of the argument. Thus, the author may have to explain the meaning of some term, or the author may digress with an aside, which may or may not be explicitly noted. Such material has to be "pruned" so that the elements of the argument stand forth. Again this task involves interpretation. Fourth, these arguments often have different kinds of premises.

Take the following fairly simple argument:

(1) Jones missed the train, so (2) he will be late, which shows that (3) he is not punctual.

From the point do view of the informal logician, (1) supports (2) which supports (3). Now though there are two premises, the informal logician notes that these are two very different kinds of premise than appeared in the Socrates example. There the first two statements together supported the third, which can be represented as (1) + (2)➜(3). In this case, the structure is quite different. (2) is the main premise for (3) which is the conclusion; but (1) is a premise for (2) which is, at once, both a conclusion and also a

[11] Though this step is attended by many problems that have been discussed going back to Bar Hillel. See Johnson and Blair (1980 27).

[12] But there are problems here, see Massey (1981).

premise. Thus in this argument, we have a main premise (2) and a subordinate premise (1). In fact, there are two arguments here: what will be called the main argument which I represent (2)➜(3) and an subordinate argument (1)➜(2). And in addition it appears that in the move from (1) to (2) the author has made use of a proposition that does not make an appearance in the argument which will not be easily expressed but the unstated thought would go something like this: missing the train will cause one to be late. And again in the movement form (2) to (3) there is an assumption that being late on this occasion indicates that one is not punctual.

Now one will notice that we have selected as the so-called assumption (or missing premise) that proposition which would make the argument deductively valid. The whole issue of *how to supply missing premises* for natural language argument is a vexing one (Scriven, 1976; Govier, 1987). For the time being, we note that on the matters of the elements of argument, the informal logic approach sees more: it sees different kinds of premises and conclusions (to be discussed below—and this will ultimately have a bearing on issues about how to understand the structure of argument.)

(iv) *The structure of argument.* Here informal logicians have been very active. Let me refer back to the argument above and to how I represented it: (1)➜(2)➜(3). What does this arrow represent? This is an extremely complex issue, but for the time being let me simply say that the arrow means something like "is offered as support for." That is, it is understood that in an argument we have first of all premises that are put forth as true and which secondly are supposed to offer support for some other proposition (the conclusion).

Now let us ask: How many types of supporting relationship are there? Another way of asking this is to think of arguments as consisting of the premises and some sort of inferential connection to the conclusion and then we would ask: how many types of inference or inferential relationships are there?

This question comes to life just to the degree that one breaks free of the view inherited from the centuries and the traditional view–the default position being that that relationship is one that we now call deductive. It is the relationship that Aristotle uses in his definition of "syllogism," as I noted in my 2008:

> Still it seems that serious damage has already been done in the *Prior Analytics*. There Aristotle defines syllogism as: "discourse in which, cer-

> tain things having been supposed, something different from the things supposed results of necessity because these things are so"[13] (24b18–20). Notice two points. First, this rendering is very close to how we would define "validity" today. Second, the Greek term "syllogismos" has been variously translated "reasoning," "deduction," "argument, and inference!" This variability complicates matters, because these are not all the same. Deduction is a type of reasoning but there are other types of reasoning. Argument is not the same as inference, though in this century, perhaps largely owing to Copi's equation (1954), there has been a tendency to relate the two very closely (see Pinto 2001, 34-35).

The first challenge to this default position occurred with the recognition of what is called inductive inference. Consider this example: (1) All the crows that have been observed are black, therefore (2) all crows are black. Represent this as (1)➜(2). It seems to most that the arrow here must represent a different type of inferential connection that the one above. That is, if we take the arrow here to represent necessary connection, the inference expressed above is invalid. Yet many want to claim that the inference is a good one…which means that the arrow must be understood differently –here it designates probable connection and this connection is what is studied by inductive logic. So, the thinking goes there are at least two types of inferential link: deductive, in which the conclusion is necessitated by the premises (this relationship often called entailment, or implication) and inductive, in which the conclusion is rendered probable by the premises— and accordingly two types of logic. The Informal Logic initiative arises when one asks: Is the deductive-inductive distinction exhaustive? Can there be a third type of inferential relationship? This takes us to the question of typology, so we move forward to that.

(*v) The typology of argument.* Most importantly, informal logic is associated with the search for a third type of inferential relationship between

[13] Here is the entry from the *Stanford Encyclopedia of Philosophy*: "All Aristotle's logic revolves around one notion: the deduction (*sullogismos)*. A thorough explanation of what a deduction is, and what they are composed of, will necessarily lead us through the whole of his theory. What, then, is a deduction? Aristotle says: A deduction is speech (*logos*) in which, certain things having been supposed, something different from those supposed results of necessity because of their being so. (*Prior Analytics* I.2, 24b18-20). Each of the "things supposed" is a **premise** (*protasis*) of the argument, and what "results of necessity" is the **conclusion** (*sumperasma*).

premises and conclusion (Johnson and Blair, 2000; Johnson, 2006. 248-49). That is, in addition to deductive and inductive inference, there develops a widespread belief that there exists a third type of inferential connection, that there are arguments where the link between the premises and the conclusion is neither deductive nor inductive. (See 1980, 22-23). In her 1984 paper, Govier calls attention to Wellman (1971) in which certain types of reasoning are termed "conductive." Wellman has in mind cases of moral reasoning: "You promised to take me to the movie, so you should take me to the movie." Here one wants to say the inferential connection is neither deductive nor inductive; for it is not an issue of probability or generalization.

In 1987, Govier further developed Wellman's notion of conductive inference. Other candidates for this third type of connection: probative inference (Scriven 1987), plausible inference (Rescher 1977); presumptive reasoning (Walton 1995). The principal questions here are whether these various and disparate initiatives can be unified, and it is far from clear that this will be possible. If they can, then the next question is whether there exists anything like a logic of this sort of inference/argument (Pinto 2001; Blair 2007)). That has been one of the defining issues around which the Informal Logic Initiative has crystallized.

Returning now to the issue of structure, Thomas (1973) building on Beardsley (1950) introduces some new distinctions that get picked up: he distinguishes several types of structure that arguments may take. Arguments have a *convergent* structure when several independent reasons support the same conclusion; a *divergent* structure when the same statement functions both as a reason for another and as a conclusion for yet another; a *serial* structure when the same statement is both a conclusion supported by another premise, itself a premise for a further conclusion; to which Thomas adds the idea of a *linked* argument which occurs when "a step involves the logical combination of two or more reasons" (36). Thus one alternative to the traditional way of modeling the structure offered by formal logic (in terms of logical form) is this new approach that considers different ways in which premises lead to their conclusion. For more on this matter, see Freeman (1991); Snoeck Henkemans (1992); and Walton (1996).

A radically different and highly influential approach to structure is offered by Toulmin in *The Uses of Argument*. In this work Toulmin questions what he calls the geometrical model (what we have been using thus far) and

offers a radically different mode of analysis of argument based on what he calls a jurisprudential model. Behind this is the idea that a jurisprudential model will be a better one for helping us understand the structure of the sorts of argument that we encounter. Toulmin developed an entirely different approach to understanding the structure of argument. In this model, grounds are cited for the conclusion. The movement from the *grounds* to the *conclusion* is secured by what Toulmin calls a *warrant* for which there is a backing. The Toulmin model also includes a specific role for a *modal* qualifier attached to the conclusion: possibly, etc; and as well, for the case in which the arguer fends of a *rebuttal.*

This model has had a great deal of influence in informal logic and Argumentation Theory. Particularly important is the notion of a warrant about which Hitchcock has stated: "In my view, it [the concept of a warrant] is the most important contribution since Aristotle distinguished premises from conclusion." (1996, 275).

(vi) Displaying the structure of argument. As ideas of structure become more and more complex, the issue of how to represent the arguments schematically or in diagram form becomes increasingly complex. Different methods of displaying the structure of arguments have been developed by Thomas (1973), Scriven (1976), Johnson and Blair (1977) Toulmin (1979) and later Freeman (1988) which offers a synthesis. (See Johnson and Blair (2002) for a more detailed account of these). Attention has also been given to the task of how to portray sequences of argument. See Horne (1998) and Yoshimi (2004). Finally a noteworthy development has been the creation of software programs for diagramming arguments. The first of these is Araucaria, from Chris Reed and Glen Rowe. The authors describe it as follows:

> Araucaria is a software tool for analysing arguments. It aids a user in reconstructing and diagramming an argument using a simple point-and-click interface. The software also supports argumentation schemes, and provides a user-customisable set of schemes with which to analyse arguments. Araucaria has been designed with the student, instructor, and researcher in mind. It is sufficiently straightforward to be useful to students learning how to reconstruct arguments, diagram them, and apply argumentation schemes. It is sufficiently flexible for instructors to provide their own examples, sample analyses, and alternate sets of argu-

> mentation schemes. Finally, it is also sufficiently powerful to be of use in research, particularly in providing examples of argument analyses to support claims. [Retrieved from http://araucaria.computing.dundee.ac.uk/]

One can see in their description the importance of argumentation schemes, which play a central role in this approach. A second contribution to software for the diagramming of arguments is that of Van Gelder whose approach to argument mapping was developed for teaching critical thinking. [http://timvangelder.com/2009/02/17/what-is-argument-mapping/]

INTERPRETATION. We noted above that at several junctions that interpretation is needed. What material belongs to the argument and which material is extraneous: How is this to be determined? How are the assumptions or missing premises to be determined? These are all complex questions that require interpretation. Of all of the elements in definition, this one has received the least explicit and thematic attention.

EVALUATION. Here we might include the following items: (i) The question of what standards or criteria (not drawing a distinction between them here) to use for the evaluation of argument has been a crucial one for informal logic; (ii) the revitalization of the fallacy approach; (iii) the development of argument/ation schemes; (iv) the role of audience in evaluation; (v) the issues of presumption and burden of proof. Here I will go into some detail about evaluation. For discussion of the others, see Johnson and Blair (2002).

(i) *Criteria for the evaluation of arguments.* As indicated above, traditional logic sees the evaluation of arguments as a matter of deciding whether the argument is valid. The appraisal of the premises is thought to be an extra logical property, requiring not so much logic as pertinent knowledge and information. Under the umbrella of informal logic, a number of different approaches to the evaluation of argument have been developed.

(A) The fallacy approach sees argument evaluation largely in terms of the detection of fallacy. A good argument is one that is free of fallacy. Kahane (1971) typifies this approach. The fallacy approach continues to be in wide use, and the work that has been done by informal logicians on this topic has been adverted to above. Instructors are now more careful to avoid the negativism (Hitchcock ,1995) that often accompanies the fallacy approach.

(B) The RSA (for Relevance, Sufficiency and Acceptability) approach was

first developed in Johnson and Blair's *Logical Self-Defense* (1977,1983). This approach originated when we extracted the criteria that were implicit in the fallacy approach. That led us to the view that a good argument is one that satisfies the criteria of relevance, sufficiency and acceptability. This approach was subsequently adopted by Govier, *A Practical Study of Argument* (1985) and rebaptized the ARG approach–and since then many have used some form of this approach (See Johnson 2000, 137, n.). It should be noted Johnson later opts for an approach that includes truth as an additional criterion (2000, 195 ff.).

Hitchcock (1996) has criticized the RSA approach for its failure to provide clear accounts of the fundamental criteria of relevance, sufficiency and acceptability. It is true that there is no widely accepted theory of relevance, though that does not mean that there have not been important strides in our understanding of this criterion. There is a rich literature on relevance that has been developed in the last 20 years by informal logicians and argumentation theorists: Walton 1984; Hitchcock 1992; Blair 1992; Bowles 1989; Woods 1995, 2003. It is likewise true there is no theory of sufficiency. See Blair (1992) regarding acceptability, the literature is fairly extensive. I recommend Freeman (2005) *Acceptable Premises: An Epistemic Approach to an Informal Logic Problem.* See also Blair 2007 where he offers his most recent thoughts about these criteria.

(C) The (P+I) approach sees an argument as composed of premises and an inferential link between the premises and conclusion. A good argument is one which has true premises and a good inferential link. This is for example instantiated in the approach taken by formal logic where the inferential link is limited to validity and where the premises must be true. This approach also lies at the core of the 7-step method proposed by Scriven in *Reasoning* (1976). Informal logicians who take the (P+I) approach typically make two amendments. First, many, following Hamblin (1970), substitute acceptability for truth. Second, the requirement for a deductive link is "softened"—a third type of connection is posited, a third type of inferential connection between premises and conclusion that is neither deductive nor inductive, as was discussed above in the section on typology. Johnson and Blair (2000) take this issue to be central to the Informal Logic Initiative.

Recently interest in the idea of conductive argument, first raised by Govier (1987) has generated renewed interest.

(D) The Toulmin approach (discussed above) reflects his distinctive approach to understanding structure which regards as the crucial step in evaluation to locate an argument within its field where the appropriate warrants and backing will be found.

(E) The approach known as 'Argumentation Schemes' emerged in the wake of criticisms of the fallacy approach (see Walton 1996) but I consider this a variation of the fallacy approach.

Thus if I am right there are five quite different approaches to analyzing arguments that can be found within the Informal Logic Initiative.

CRITICISM. Some informal logicians distinguish between evaluation and criticism. In evaluation one seeks mainly to determine whether the argument is a good one or not, whether it meets the standards. If it does not meet the standards, then the argument fails. In criticism, on the other hand, one seeks to call attention to both the strengths and weaknesses. In evaluation, as soon as one sees a mistake in the argument, one's evaluation is complete: the argument is not a good one. When one is engaged in criticism, one mistake is not necessarily regarded fatal, especially if the argument's strengths are judged more important. Criticism is more difficult because it requires discrimination (Johnson and Blair 1983; Johnson 2000).

One final matter to be discussed here is the issue of the *arguer's dialectical obligations*. The easiest way to frame this matter is to invoke the commonplace that one key indicator that an argument is a good argument is that it can withstand strong objections. That is, in some cases the argument will elicit a response… a criticism or an objection. It seems that the arguer has some sort of obligation to respond to these objections. … That is what is meant by a dialectical obligation. And to be successful, an arguer must meet his dialectical obligations. However this important matter has received little attention. (See Johnson 2000, 2008.)

ARGUMENT CONSTRUCTION. First, it should be noted that in traditional introductory logic texts, there was rarely any consideration given to this task. See Copi (1954). Even the early texts associated with informal logic—what Blair and I called texts that belonged to what we called "New Wave" texts—paid no attention to this task. In the first edition of *Logical Self-Defense* there was nothing about the construction of argument. In the second edition (1983), we devoted one chapter [Chapter 8] to this important topic. The stimulus for this change was provided by our growing aware-

ness of what we call there the dialectical process of argument (xvi). I believe we were also becoming more aware of the work done on argument construction (invention) in the areas of rhetoric and speech communication.

Now everyone will agree that in order to construct a good argument you must consider possible objections and alternate positions. Here one may take Solomon's *Introduction to Logic* (1989) as instructive. There Solomon is giving the student guidelines about how to write a philosophy paper. The fourth is "*Argue* your case…." The fifth is "Anticipate objections to your position and to your arguments, and take the offensive against rival positions." This remark shows tacit awareness of what I am calling the arguer's dialectical obligations. In (1999) I offered the following observation:

> It is remarkable that later in the book when he introduces basic logical theory, Solomon falls back on the … doctrine that a good argument is a sound argument, an argument with true premises and a valid form. No mention at all of the need for the arguer to anticipate and deal with objections, no sense whatsoever that his earlier advice about how to construct an argument had any application when it comes to the evaluation of them.[14]

I know of no better way of indicating the importance of informal logic's emphasis on the practice of argumentation –not just that of ordinary arguers, but skilled ones, like philosophers —than to point to this glaring gap between sound argumentative practice—in which the need to anticipate objections is recognized—and logical theory. The official story about the evaluation of arguments emanating from formal logic is completely silent about this important aspect. Formal Logic (insofar as taken as theory of argument) does not reflect or capture practice in this important respect. How, one wonders, is this possible? But that is a question for another time and place.

[14] I believe this illustrates the gap between the official theory (soundness) and the critical practice that Solomon himself knows so well and in fact encourages students to follow. See my (1997) for more on the gap.

Conclusion

In this paper I have attempted to respond to the allegation that informal logic has failed to penetrate the philosophical establishment. I have taken the view that there is some truth to this claim and offered some hypotheses that might help explain it. But I have argued that the success of the Informal Logic Initiative cannot be measured or judged solely by its success in penetrating the philosophical establishment, nor even by its original mission of changing the way that introductory logic courses were taught in universities in North America, because in the course of its development, the scope of its mission has broadened to embrace more theoretical goals, most especially that of making contributions to the development of Argumentation Theory.

Formal logic has its origins with Aristotle but its recent development begins with Frege, 1879, and takes a leap forward with the publication of the *Principia Mathematica,* 1910-1913 (that's a 34 year period) after which formal logic is gradually is "downloaded" into textbooks—a 20th century phenomenon. It is in that setting that the doctrine I dubbed FDL emerges: the view that what constitutes a good argument is one in which the premises are true and the form is valid, although there is precedent for this view in Aristotle's syllogistic. This is the doctrine that becomes imbedded in the introductory logic textbooks used by philosophy departments across North America in the 50s and 60s. So the process whereby FDL became the default approach took some 50 years to develop.

If we date the developments in informal logic from 1970, the project is now some 40 years on. It is difficult to replace traditional ways. Progress has been made. Perhaps the judgement regarding informal logic's lack of success is just a tad premature.

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Constructive Controversy: Rhetoric as Dissensus-oriented Discourse

Controversia Constructiva: La retórica como discurso de disenso orientado

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Abstract: Current theories of argumentation underestimate the difference, emphasized already by Aristotle, between theoretical and practical (action-oriented) argumentation. This is exemplified with the argument theories of Toulmin, pragma-dialectics, Habermas, Walton, and Perelman. Since antiquity, rhetoric has defined itself, not as argument designed to "win," but as action-oriented argument. Several distinctive features of action-oriented argument are identified. One is that its warrants include value concepts in audiences, implying an element of subjectivity in argument assessment. Between individuals, but also inside each individual, several conflicting value dimensions are typically involved, not just the dimension of truth-falsity, which makes sustained, reasonable dissensus inevitable.

Keywords: Rhetoric, practical argumentation, deliberation, incommensurability, dissensus.

Resumen: Las actuales teorías de la argumentación desestiman la diferencia, enfatizada ya por Aristóteles, entre argumentación teórica y argumentación práctica (acción-orientada). Esto se ejemplifica en teorías como las de Toulmin, la pragma-dialéctica, la de Habermas, Walton y Perelman. Desde la antigüedad, la retórica se ha definido como un argumento orientado a la acción, y no como un argumento diseñado para "ganar". Se pueden distinguir muchas características de la retórica en tanto forma argumentativa orientada a la acción. Una es que sus garantías incluyen conceptos ya valorados por la audiencia, que implican un elemento de subjetividad. Entre los individuos, pero también dentro de cada individuo, varios conflictos de valor están envueltos, no solo en la dimensión verdad-falsedad, que hacen del disenso algo razonablemente inevitable.

Palabras clave: Retórica, argumentación práctica, deliberación, inconmensurabilidad, disenso.

All those of us who are interested in the theory of argumentation cannot and should not try to describe all kinds of argumentation with one model or one theory. I believe that numerous misunderstandings and mistakes which argumentation theorists have been guilty of, in the past as well as today, can be put down to a misguided attempt to develop one great theory that is supposed to account for all the essential characteristics of all argumentation.

It is not that there is anything wrong *per se* with such strong and comprehensive theories of an entire domain. It would be wonderful to have one if it worked. But such theories rarely do; nevertheless we often let them mislead us into making naive initial assumptions which we cling to and do not really question or investigate because we are too busy working on our theory so that it may be thought to cover the entire domain.

To be more specific, I will claim that there are certain fundamental differences between argumentation about what is true, on the one hand, and on the other hand, argumentation about what to do. Philosophers since Aristotle have designated this same difference with the terms theoretical reasoning vs. practical reasoning. Historically, philosophers have been predominantly concerned with theoretical reason, but at least many of them have been aware of this difference. Arguably, however, many thinkers and educators who have made argumentation their chief interest have tended to forget this difference in their eagerness to cover the whole domain of argumentation with one theory.

I will first comment briefly on a few of the leading theories and theorists of argumentation. My view is that what each of these has given us is essentially *either* a theory that applies well to theoretical argumentation, *or* a theory that applies well to practical argumentation. But all of them have believed that one grand theory could encompass the essential features of argumentation as such; none have thought that here were fundamental differences between theoretical and practical argumentation. Hence, they have done little to explore these differences. I will try to do a little more.

The argumentation theory of Stephen Toulmin, centered on the famous argument model (Toulmin 1958), is a case in point. The model has been used to map and to teach all kinds of argumentation, whether theoretical or practical, and perhaps especially practical argumentation, since that is what students in schools and colleges most call for and need. This has been done, also by Toulmin himself (cf. Toulmin *et al.*, 1979), despite the fact that

Toulmin's theory and model were primarily meant to elucidate argumentation as it occurs in science and scholarship. That becomes clear when we read *The Uses of Argument* in the context of those of Toulmin's other writings (e.g., 1961, 1985, 1990, 2001) whose focus is his campaign against the Cartesian idea of deductive certainty and universality as criteria for reasoning in all scientific fields. Instead, Toulmin argues that each science, each field, has its own rules and warrants; hence there are many different *kinds and degrees* of validity in reasoning, depending on field. On the other hand, it is arguably a common feature of scientific and scholarly reasoning in any field that its basic building blocks are those found in Toulmin's famous model: claims, grounds, warrants, backing, qualifiers and rebuttals. If so, the model captures essential features of any true piece of academic reasoning, including those attempted by students in papers and theses, etc. And thus the most natural educational use of the model is in the teaching of academic writing.

This claim (which has been developed in Hegelund and Kock, 2000, 2003a) may be supported with a few examples of how the model usefully illustrates, on the one hand, the way academic writing in a given field, in order to qualify as such, ought to contain instantiations of the six elementary components of argument; on the other hand, for each theoretical field, how the instantiations of them will be different. For instance, in historical scholarship an argument will typically use so-called sources as grounds to argue for a claim about the past. The warrant here will typically be what historians call source criticism (*Quellenkritik*, as Leopold von Ranke called it). Warranted by proper source criticism, historical data will give a certain kind and degree of validity to a claim. The theoretical backing for these warrants has been formulated by Ranke and others thinkers who have theorized about historical method.

Another example: In quantitative fields where statistical tests and the like are used as grounds for a claim, the warrants that confer a specific kind and degree of validity on them consist in statements about the internal and external validity of the samples and other aspects of study design, about the appropriateness of the tests used, etc. Backing for these warrants is supplied by theoretical thinking, much of it developed by Sir Ronald Fisher and later scholars in statistics. In all scholarly fields, we must also have qualifiers, rebuttals and other types of discussion of reasonable objections, etc. So

the Toulmin model well reflects what is expected of scholarly argument in a given field, while also allowing for the differences between concepts and norms of validity across fields.

But by the same token it is also clear that Toulmin's model is less well fit to represent what we call practical argumentation, i.e., arguments about what to do. For one thing, such reasoning typically does not discuss its own warrants; the explicit discussion of warrants, possibly with backing and all the rest, is precisely what sets academic reasoning apart. Students given the Toulmin model in order to analyze a piece of everyday practical reasoning will often look in vain for these typically academic elements, and they may then, in frustration, endow a more or less arbitrary sentence in the text with the status of "warrant." This illustrates our general thesis: theoretical reasoning is a species apart; taking a model meant to capture the essential features of theoretical reasoning in science and scholarship and expecting it to perform as well in practical and everyday argumentation is problematic.

It may be objected that much of Toulmin's later thinking (in particular in Jonsen & Toulmin, 1988, as well as several smaller works, such as 1981) does focus on a distinction between theoretical and practical reason. This is particularly so where Toulmin engages questions of medical ethics; here, theoretical and practical reason are described as "two very different accounts of ethics and morality: one that seeks eternal, invariable principles, the practical implications of which can be free of exception or qualifications, and another which pays closest attention to the specific details of particular moral cases and circumstances" (Jonsen & Toulmin, 1988, 2). Notice again Toulmin's persistent anti-universalist stance in the rejection of "invariable principles" and his respect for "particular moral cases" and "casuistry" (a term that inspired the book's title); but where the emphasis in *The Uses of Argument* was on the distinctness of warrants in each cognitive field, the distinction that he and Jonsen now draw accentuates the individual case where action must be decided on. Warrants according to the 1958 model, while field-dependent, are general and cannot provide decisions in the hard cases that, e.g., medical ethics encounters. One reason why this is so is that specific cases cannot always be subsumed with certainty under any given principle (or warrant): "presumptive conclusions can have 'certitude' only when the relevance of the concepts or terms involved is not in doubt" (1988, 327). Another difficulty is that in any given case, several principles (war-

rants) may be relevant simultaneously, requiring reasoners to "strike equitable balances between varied considerations in ways relevant to the details of each particular set of circumstances" (1988, p. 306). The existence, in practical reasoning, of conflicting considerations that are simultaneously valid, is, as we shall see below, a major difference between practical and theoretical reasoning. In fact Toulmin had been aware of these kinds of difficulties ever since his first book, *An Examination of the Place of Reason in Ethics* (1950), which has, for example, the following statement: "Given two conflicting claims … one has to weigh up, as well as one can, the risks involved in ignoring either, and choose 'the lesser of two evils.' Appeal to a single current principle, though the primary test of the rightness of an action, cannot therefore be relied upon as a universal test: where this fails, we are driven back upon our estimate of the probable consequences" (1950, p. 147). But the fact remains that the theory and model for which he is most famous belong to a line of thought and a segment of his career where his overriding concern was the field-dependency of warrants in theoretical reasoning.

Pragma-dialectics (most recently and authoritatively set forth in van Eemeren and Grootendorst, 2004) is another influential theory in our time which has the advantage of capturing features (or rather: norms) of theoretical argument – yet I argue that it too has problems with practical argument. One of its main tenets is that argumentation is always in principle a critical discussion between a protagonist and an antagonist, where the protagonist seeks to defend a thesis against he antagonist's objections and critical questions. This view is inspired by the critical rationalism of Karl Popper and provides a useful model of the way academic argumentation *ought* to proceed. Another tenet is that the goal of critical discussion is always to resolve a difference of opinion between protagonist and antagonist, i.e., to reach consensus. This too reflects the way things ought ideally to be in scholarly discussion, because scholarly discussion is essentially theoretical argumentation. But for practical argumentation this model does not hold, as we shall see.

An important thinker about argumentation who has received too little attention from argumentation theorists is Jürgen Habermas. He, unlike the pragma-dialecticians, is strongly aware of differences between various types of claims that people may argue for. In what we call practical argumenta-

tion we do not argue, as Habermas makes clear, about the truth of propositions, but about actions, and so the warrants that we appeal to are not propositions that we hold to be true, but norms of action that we hold to be *right*. The rightness of certain norms is a very different kind of validity claim (*Gültigkeitsbedingung*, as Habermas calls it), from the truth that validates constative speech acts. And both are different from the sincerity that validates expressive self-representations and from the adequacy of value standards that validates evaluative expressions.

Argumentation theorists would do well to heed the distinctions that Habermas lays down here. Of particular importance in this context is Habermas' insistence that the validity claim of a proposal for action is not the truth of a premiss but *rightness* according to some norm. However, his main thrust is to say that even though a proposal for action makes a different kind of validity claim, it is still subject to a 'communicative rationality' whose goal is for the discussants to reach consensus on right action thanks to the paradoxical "unforced force of the better argument". So, regarding the orientation towards consensus, Habermas essentially holds the same view as the pragma-dialecticians and sees no difference between the various types of speech act that he has defined. He sums up his theory as follows:

> actions regulated by norms, expressive self-representations, and also evaluative expressions, supplement constative speech acts in constituting a communicative practice which, against the background of a lifeworld, is oriented to achieving, sustaining, and renewing consensus – and indeed a consensus that rests on the intersubjective recognition of criticizable validity claims (1997, 17).

Habermas, in his thinking about communicative action, anticipated the pragma-dialecticians by insisting that argumentation should be guided by certain procedural rules of reasonableness or rational communication; these rules exist to ensure that the speech acts performed by discussants do not obstruct the inherent goal of the argumentative dialogue: consensus; and they primarily require that discussants are under no force or constraint except the paradoxical "unforced force of the better argument."

According to Habermas all this should equally be the case in theoretical

argumentation *and* in practical argumentation. But while there is certainly a need for norms of reasonableness in practical argumentation, for example in public political debate, it does not follow that the goal of such debates is or should be consensus, nor that the compliance with such norms will lead towards consensus. In taking this view, one confronts formidable opposition among present-day thinkers. Not only is there the pragma-dialectical school and the many argumentation theorists who tend to go along with it; in addition, a broad range of political, philosophical and rhetorical thinkers in our time who have attempted to ground the legitimacy of democracy in deliberation and debate have assumed that the inherent aim of deliberation is consensus. Besides Habermas, this includes, in various ways, political theorists like Joshua Cohen (e.g., 1989, 1993, 1998), Joseph Bessette (1994), and Seyla Benhabib (e.g., 1994, 1996), or a rhetorician like Thomas Goodnight (e.g., 1993).

What unites all these theories is the idea that in practical argumentation as well as in theoretical argumentation, if we have a truly rational, critical discussion, we will eventually or at least tendentially approach a resolution to our difference of opinion; in these theories, the right action exists as a potential inference from the accepted premisses and the agreed rules of reasonable discussion.

Another version of a theory that sees practical argumentation as merely a special kind of inference has been proposed by Douglas Walton. As one of the few philosophical argumentation theorists today, Walton recognizes practical argumentation as a separate domain (Walton, 1990; 1996a, p. 11-13, 176-180; 1996b; 1997b). What many other theorists have overlooked is the simple fact that in practical reasoning people argue about an action, not about a proposition or assertion. But my objection to Walton's analysis is that he never decisively abandons the assumption that practical reasoning is about propositions, and so he never questions the assumption that what we argue for in practical reasoning follows as a conclusion or inference from a properly applied argument scheme, the way a proposition follows from its premisses by inference. Consider the following formulations: "In a practical inference, the conclusion is an imperative that directs the agent to a prudent course of action" (1996a, 11); "it concludes in an imperative that directs the agent to a course of action" (1990, xi). Here we have, as in propositional logic, the notions of "inference" and of a "conclusion," as well as two

additional indications of the binding nature of this conclusion: it is an *imperative* which *directs*. Walton's model of practical reasoning, and hence also of how to evaluate arguments in that domain, is an inference model: what to do follows as an inference. However, as Walton has emphasized in many contexts, the inference in practical argumentation is *presumptive* or *defeasible*. If there is a good argument for doing something, it follows that we should do it – *unless* there are other considerations which then cancel out the argument. It is, as he would say, subject to defeat; what was a valid argument becomes defeated or invalid. In other words, a good argument in practical argumentation is good if the conclusion follows from it – presumptively, that is.

Although Walton has done much to elucidate practical argumentation, this is a serious problem in his theory: arguments in practical argumentation *either* trigger an inference, *or* they are invalidated. I shall argue that practical argumentation is not like that (for a fuller version of this critique, see Kock 2007).

To be sure, a recent development in Walton's work on practical argumentation (see, e.g., Walton 2006) takes a long step towards repairing the shortcomings of his earlier conception. In particular, he now clearly recognizes that the conclusion in what he calls "deliberation dialogue" is a *proposal*, not a proposition, and that a proposal is a distinctive kind of speech act, of which he then presents a careful analysis. Also, the same paper contains, among other things, a valuable overview of the criteria and critical questions that may be invoked in deliberation dialogue and in the evaluation of it. The dependence of deliberation on values is theorized, and so is the existence of simultaneous pro and con arguments. However, the paper does not recognize that the notions of inference and presumption in deliberation are called into question by this new approach, and most of the distinctive features of argumentation in deliberation dialogue which will be discussed below, and all of which are corollaries of the basic properties just mentioned, remain largely unaddressed.

The last leading theorist I will mention in this overview is Chaïm Perelman. He differs from all the others in the sense that what his theory is really about is practical argumentation. This is not quite clear in *The New Rhetoric* (Perelman & Olbrechts-Tyteca 1969), which often claims to be a theory of *all* argumentation. This work is somewhat vague on the distinc-

tion between argumentation for truth and argumentation for action, and hence it repeatedly describes argumentation, the domain of rhetoric, as what we do to gain "adherence to a thesis". But in Perelman's later writings (e.g., 1979, which is titled "The New Rhetoric: A Theory of Practical Reasoning") he is more explicit that what he is concerned with is indeed "practical reason" – defined as "the actual process of deliberation that leads to decision making in practical fields such as politics, law, and morals" (1083) or as "finding good reasons to justify a decision" (1099). He even states explicitly that "it is highly unlikely that any reasoning from which we could draw reasons for acting could be conducted under the sign of truth" (1086).

When Perelman defines rhetoric or argumentation as reasoning about actions decisions, he is in unison with the dominant rhetorical tradition itself. For Aristotle, what we do in rhetoric is to deliberate, βουλευειν, and he makes it clear that "the subjects of deliberation are clear; and these are whatever, by their nature, are within our power and of which the inception lies with us," in other words, what we may decide to do. The same idea is stated repeatedly in his ethical writings: "We deliberate about things that are in our control and are attainable by action" (1112a). A similar demarcation of the realm of rhetoric occurs in most of the later sources, such as the *Rhetorica ad Herennium*, which states: "The task of the public speaker is to discuss capably those matters which law and custom have fixed for the uses of citizenship," or Boethius, to whom the subject matter of rhetoric is explicitly "the political question." (A fuller discussion of the action-based definition of rhetorical argument in the rhetorical tradition itself is found in Kock 2009.)

We may note here that most modern argumentation theorists who have discussed rhetoric have misunderstood what the classical conception of rhetoric is. They see rhetoric as that kind of argumentation where the main object is to win the discussion, not to find the truth. But rhetoricians primarily define their discipline as concerned with argument about actions; and that is why, in a sense, rhetorical argumentation is unconcerned with truth, since actions are neither true nor false.

What we have seen now is that a series of leading thinkers in the field of argumentation are all guilty of a hasty generalization: they all believe *either* that all argumentation works pretty much along the lines of theoretical argumentation, *or* (in the case of Perelman in *The New Rhetoric*) the other

way around. I will no try to point out some deep differences between these two basic domains.

We may start with the well-known observation that practical argumentation so often leaves out explicit statements of the warrant and its backing. This is because the grounds we give in practical reasoning for a proposed action are typically different from those used in theoretical argumentation. These grounds are generally alleged *advantages* of doing the action or alleged *drawbacks* of not doing it. And an advantage relies for its warrant on something we assume is already present in our audience: a *value concept* we believe we share with that audience. If we say that a given plan will bring peace to the Middle East, we take for granted that our audience values peace in the Middle East, and peace generally. If a friend or family member suggests that we watch a DVD of the film *American Pie* tonight, we might argue against this by saying that *American Pie* is vulgar, thereby taking for granted that the circle of friends or family members share a negative valuation of vulgarity. In other words, the ultimate warrants in practical argumentation are value concepts, and these we often assume are already present in our interlocutors, so that we do not have to establish them, not even make them explicit.

This is why practical reasoning about worldly concerns is full of *enthymemes.* That is Aristotle's term for a premiss which is assumed to be present in the hearer's mind – and just that is the original meaning of the word. The feature that an enthymeme is often left unexpressed is not essential (for an authoritative statement of this view, see Burnyeat 1996). An enthymeme is something which is already in the *thymos*, i.e., "in the soul," of the hearer.

So warrants in practical argumentation are value concepts located in audiences. From this follows another fact which some theorists find scandalous (notably the pragma-dialecticians, in several statements), namely that these warrants are *subjective*: they vary across individuals. Some individuals might think that vulgarity, although quite bad, is not *such* a bad thing, so they might agree to watch a film which has some vulgarity in it if it also has other, redeeming qualities. Others again might actually find that the kind of vulgarity to be found in *American Pie* is in fact appealing, not appalling.

Another example illustrating the same point, but this time on the level

of national policy, might be laws which curtail people's right to privacy in order to promote security against terrorism. Some individuals might resent such laws, feeling that their loss of privacy far outweighs the alleged gain in security; but others might have it the other way around. This shows that different individuals may not endorse the warrants invoked in practical argumentation with the same *degree of strength*. The strength of the value concepts on which practical argumentation relies for its warrants is subjective; in a slightly less provocative term, it is audience-relative. This is a fundamental fact in practical argumentation, yet several leading thinkers in state-of-the-art argumentation theory have failed to recognize it and have roundly condemned those theorists, notably Perelman, who have provided a place of honour in their theories for this fact. (We can now see that the reason Perelman provided a place for it is that his theory is really about practical argumentation, whereas the theory of his harshest critics – the pragma-dialecticians – is really about theoretical argumentation.) The failure to recognize this is one instance of the grave misunderstandings caused by an underlying failure to respect the distinction between theoretical and practical reasoning.

Although value concepts are not held with equal strength by all individuals, it is probably true that most people in a culture do have most of their value concepts in common. Yet each individual probably also holds some values *not* shared by a majority. And just as importantly, we have seen that they do not agree on the *relative* priorities between the values that they do share.

Yet another complication is that the set of values held by a given individual, and even that subset of these values which are shared by practically everyone in the culture, are not necessarily in harmony with each other. The philosopher Isaiah Berlin has talked about the "pluralism" of values, meaning that "not all good things are compatible, still less all the ideals of mankind." For example, he points out "that neither political equality nor efficient organization nor social justice is compatible with more than a modicum of individual liberty, and certainly not with unrestricted *laissez-faire*; that justice and generosity, public and private loyalties, the demands of genius and the claims of society can conflict violently with each other" (1958, repr. 1998, 238).

Of course this is something that ordinary human beings have always

known in an intuitive way. Practical philosophers, such as Cicero, who was a rhetorician as well, have known it too. He writes:

> between those very actions which are morally right, a conflict and comparison may frequently arise, as to which of two actions is morally better — a point overlooked by Panaetius. For, since all moral rectitude springs from four sources (one of which is prudence; the second, social instinct; the third, courage; the fourth, temperance), it is often necessary in deciding a question of duty that these virtues be weighed against one another. (*De officiis* 1.63.152.)

But philosophers, beginning with Plato and including many in recent decades who have become argumentation theorists, tend to theorize as if all values *were* compatible and did *not* clash. Or at least as if the lack of compatibility between them was no real problem. They tend to think, for example, that if we can agree that something is good, then it follows that we must have it, or do it. Philosophers have concentrated on figuring out what it meant for a thing to be good, and on arguing about what things are truly good in a general sense, and have given less thought to situations where many different things are indeed good, but where we cannot have them all at the same time. However, this is a kind of situation we face every day in our lives.

True enough, some philosophers have indeed worked on this issue, but their thinking has either run along the lines of Plato's insistence that virtue and well-being are in fact one and the same value, or they have, like Jeremy Bentham and John Stuart Mill, believed that they could order all human action by applying the rule of the greatest happiness for the greatest possible number. That would indeed be convenient, but it would require what Mill calls a "common umpire" to settle the claims between the incompatible values. In other words, there would have to be a universally agreed common unit or denominator so that the advantages a given action might have in regard to a certain value might be objectively converted into happiness and weighed against the unhappiness caused by the drawbacks the action might have in regard to another value; for example, for legislation involving an invasion of privacy, that drawback would have be objectively measured against the alleged advantage of reducing the risk of terrorist acts, and in-

creasing the chance of solving terrorist crimes to a certain unknown degree. Unfortunately, and obviously, such a common denominator does not exist and could never be constructed; the very construction of it would be just as controversial as the debatable legislation itself. What we cannot do is what the philosopher John Finnis describes in the following words: "Aggregate the pluses, subtract the minuses, and pursue the option with the highest balance." (1998, 216.) It is impossible because the relevant arguments in any practical issue usually belong to different *dimensions*. There *is* no common denominator or unit by which they can all be objectively compared and computed. They are, to use a mathematical term, incommensurable.

So we have at least three fundamental reasons why practical argumentation works in a different way from theoretical argumentation: There is, first, the *subjectivity* of the value concepts which are the necessary warrants when we discuss what actions to take; secondly, there is the *incompatibility* of all human values, and thirdly, we now also face what some recent philosophers have recently called their ultimate *incommensurability* (see, e.g., Griffin 1977, Raz 1998, Finnis 1998). There *is* no objective or philosophical way to compute the advantages and drawbacks of proposed human actions and weigh them up against each other.

This does not mean that all possible actions are equally good, or that there is no point in discussing what to do, or in choosing one action over another. What it means is merely that we have no *objective* method of *calculating* what to choose. In fact, if we had such a method, we would have no choice; our "choices" would be made for us beforehand. Choice means precisely that we may legitimately elect to do either one thing *or* another. But that there is choice surely does not mean that we might as well not choose anything, or that there is no reason to debate our upcoming choices. The point is that each individual has the right to choose, and that no one has the right or the authority to choose on everyone's behalf. Nor is there any way for philosophy to determine in a compelling manner (i.e., by inference) what the right policy is.

Yet individuals must choose, and choice makes it desirable that they have in fact balanced or weighed the advantages and drawbacks of the possible decisions facing them or their society. Now this 'weighing' process, while it is not possible in an objective or inter-subjective way, is still necessary *and* possible for the individual. The balancing process in matters where a body

of individuals must choose between actions within their power is called deliberation. This is an appropriate term, since it comes from the Latin word *libra*, meaning a pair of scales. Given the individual's value concepts (which we remember are in principle subjective) and the choices as they appear to him, one of the alternatives may eventually, after weighing the advantages and drawbacks, appear preferable to him. The same alternative may not appear preferable to his neighbour, or to the majority of citizens. But then the individual is free to try to influence his neighbours so that they may eventually come around and see things his way. This kind of influence is usually exerted by means of language and is called rhetoric.

The three distinctive features of practical argumentation just enumerated: the subjectivity of the values on which it depends, their incompatibility, and their incommensurability, as well as the approach to these notions taken in the rhetorical tradition, have been more fully discussed in Kock (2003b) and Kock (2007).

We may now look at some distinctive features of practical argumentation not captured by models or theories designed for theoretical argumentation. Let us remember the categorical difference between what we argue about in the two domains. Theoretical argumentation is about propositions that may be true or false. Practical argumentation is about what to do, and whatever we do does not have the property of being true or false. We argue about proposals, not propositions.

First, the status of reasons is different in the two domains. Practical pro and con reasons, as we saw, represent advantages and drawbacks of competing policies; they remain valid and are not made invalid even if one policy is chosen over another. We choose a given policy because we place a high value on its alleged advantages, but the possible drawbacks inherent in that policy do not lose their validity or cease to exist.

Let us take one simple example drawn from the micro-politics of family life. One family member, let us call him F, wants to buy a large Chesterfield armchair for the family room. He argues that such a chair is highly comfortable and suitable for TV watching and generally chilling out. Another family member, let us call her M, strongly opposes the plan. She agrees that such a chair is comfortable, but argues that it is ugly, heavy and very expensive indeed. F happens to acknowledge these drawbacks but thinks that the expected comfort to be had in the chair outweighs them. M thinks they do not.

The example shows how the primary pro and con reasons in deliberative argumentation have the status of advantages and drawbacks as perceived by the arguers. Notice that both F and M may well agree on all the advantages and drawbacks of the chair. For both of them, they are inherent in the plan to buy the chair. However, they disagree on *how much weight* to assign to them. And no advantages or drawbacks are refuted even if one plan conclusively defeats the other. If the scheme is conclusively abandoned, the armchair does not cease to be comfortable. If the family actually buys the chair, it remains heavy and expensive. (It is a little different with the alleged ugliness of the chair. Ugliness is an aesthetic quality, and aesthetic argumentation is a category in itself with intricacies which we will not get involved with at the moment.)

In theoretical argumentation, by contrast, pro and con reasons are only important by virtue of their probative or inferential force (or, with a word used by 'informal logicians' and derived from the same verb as "inferential": their *illative* force); that is, they are important for what may perhaps be *inferred* from them, i.e., what they point to, signify or suggest, not for what they *are*. Once the issue has been decided one way or the other, the reasons supporting the discarded position lose their relevance. For example, until a few years ago doctors used to believe that ulcers were caused by stress and acidity; when two Australian doctors, Marshall and Warren, in papers in the early 1980's, suggested that ulcers were caused by bacteria (later named *Heliobacter pylori*), they were generally disbelieved. The bacteria known around 1980 could not survive in the acidic environment of the stomach; this seemed to suggest that *no* bacteria could survive there, hence ulcers could not be caused by bacteria. However, it was soon found that certain bacteria, including the *heliobacter*, could indeed survive in the stomach. Thus the illative force of the original reasons was simply cancelled; it lost its validity. Marshall and Warren's theory is now generally accepted; they received the Nobel Prize in 2005, and millions of patients have been cured of their ulcers. This example shows how the relevance of facts used as reasons in theoretical reasoning resides in what these facts point to, signify or suggest, that is, in their illative force, not in those facts themselves.

Second, we see that in practical argumentation both pro and con reasons may be relevant simultaneously. In other words, the advantages and drawbacks indicated by the pro and con reasons may be real and remain so.

In theoretical argumentation the pro and con reasons may also be real in themselves, but the two opposite states of affairs indicated by the pro reasons and the con reasons, respectively, may not both be real simultaneously.

Third, this means that in practical argumentation no party can be logically *proven* to be either right or wrong. This is tantamount to saying that reasons in practical argumentation can never in principle be "valid" in the traditional sense of *entailing* their conclusion, nor can they be "sufficient" to entail a conclusion. No reasons in practical argumentation *entail* the proposals for which they argue. No reasons are "sufficient." No matter how many reasons you may muster for your proposal, your opponent is never *compelled* by those reasons to accept it. Put another way, in practical argumentation all reasons are, in principle, weights among other weights on a pair of scales. This means that in practical argumentation a set of reasons *P*1 through *P*n may very well be both true, relevant and weighty, and yet the conclusion (i.e., the proposal for which they argue) is not "true" (as we have noted, proposals cannot be true or false), nor does it follow by any kind of inference or entailment. Whether or not to accept the proposal is a matter of choice for each individual audience member. In theoretical argumentation, conclusive inferences do exist, and scholars and scientists are trying to find them all the time. The theory that no bacteria can live for long in an acidic environment like our stomach has been conclusively refuted.

Fourth, the strength or weight of reasons in practical argumentation is a matter of degrees. Advantages and drawbacks come in all sizes. Along with this comes the fact that practical argumentation typically persuades by degrees. An individual may gradually attribute more weight to a given reason, so he or she may gradually become more favorably disposed towards the proposal. Not so in theoretical argumentation. A medical scientist is not free to say that the existence of *heliobacter* in the stomach carries little weight in regard to whether bacteria can live in that kind of environment.

Fifth, in practical argumentation arguers should have no problem in granting that their opponents may have relevant reasons. The drawbacks that my opponent sees in my proposal may in fact be relevant, just as the advantages that I see in it, and the ones that my opponent sees in *his* proposal. Arguers may be more prone to adopt this attitude when they realize that just because you acknowledge the relevance of an opponent's reasons, this does not entail that you adopt his proposal. In theoretical argumenta-

tion one reason against a thesis may defeat it. Unfortunately public debaters seem to believe this is also the case in practical argumentation, and so they tend to deny that their opponents have any relevant reasons at all, even when they patently do.

Sixth, this brings us to a crucial difference between practical argumentation and theoretical argumentation. As the armchair example shows, two opponents in practical argumentation will not necessarily tend towards consensus, let alone reach it, even if they follow all the rules we may devise for responsible and rational discussion. They may legitimately support contradictory proposals, and continue to do so even after prolonged discussion.

In theoretical argumentation, prolonged and rule-obeying discussion must eventually or tendentially lead to consensus. Doctors who believe that bacteria cause the majority of ulcers and doctors who believe that they don't cannot both be right. But one of the parties has to be right. There is a truth somewhere about the matter, and the goal is to find it. So prolonged disagreement in, e.g., medical science over an issue like that is an unstable and unsatisfactory state.

Rules of critical discussion, as we find them in particular in pragma-dialectics, are devised to ensure that discussions proceed toward the goal which pragma-dialecticians as well as Habermas and his followers postulate for them: a resolution of the difference of opinion, or in another word: consensus.

We should have such rules by all means. We all know the depths to which public political argumentation often descends. But again, individuals may legitimately differ over some practical proposal, and *continue* to do so, even after a prolonged discussion that follows all the rules. This is due to the fact that although most norms in a culture are shared by most of its members, not all their norms are the same, and furthermore everyone does not subscribe to the same *hierarchy* of norms. In other words, as we saw in the armchair example, for some people an appeal to one norm carries more weight than an appeal to another norm, whereas for another individual it is the other way around – even when they in fact share both norms. Hence they may never reach consensus on what to do, no matter how reasonably they argue.

So in practical argumentation consensus is not the inherent goal, and it becomes legitimate, in a sense not accounted for by Habermas, for both

individuals in such a discussion to argue in order to achieve success for his or her proposal, rather than consensus. In deliberation, dissensus is not an anomaly to be corrected. Instead of trying to prove the opponent wrong the wise deliberative debater will often acknowledge that the opponent has some relevant reasons, but nevertheless try to make his own reasons outweigh them in the view of those who are to judge. This kind of discourse is the essence of rhetoric.

Seventh: The last characteristic of practical argumentation we shall look at has to do with what we just saw. In practical argumentation arguers argue in order to persuade individually. The weight of each reason is assessed subjectively by each individual arguer and spectator, and each individual must also subjectively assess the aggregate weight of all the relevant reasons; it follows from this that what will persuade one individual will not necessarily persuade another. In theoretical argumentation, by contrast, there is an underlying presumption that whatever is valid for one is valid for all. Admittedly, it is also a fact that a theoretical proposition will only be accepted by some, not by all; but the presumption of any philosophical theory is that it is presents a truth which is valid for all. Practical arguers make no such presumption, but hope to persuade *some* individuals to adopt the proposal they support. That is also why we tend to have a vote on practical proposals, but not on propositions. A majority cannot decide what the truth is; but it can decide what a body of people will do.

So the nature of practical argumentation is controversy, not consensus. It is good if antagonists can find a way to what John Rawls (1993) calls an overlapping consensus, but they might not, and it is legitimate that they remain at odds. In theoretical argumentation continued dissensus means that uncertainty still prevails, and debate must continue until consensus is reached. In practical argumentation dissensus may persist indefinitely because values differ, and this is legitimate.

But why have argumentation at all if not in order to find consensus or at least move toward it? What other purpose could argumentation between two antagonists possibly have? And how could it have such a function, whatever it is?

To answer these questions one has only to think of a factor that is curiously left out of most current theories of argumentation as well as theories of the public sphere and deliberative democracy: the audience. It is prima-

rily for the sake of the audience that debates between opponents in practical argumentation make sense. A public sphere consists not only of participants, but also, and primarily, of spectators. They are individuals who are all, in principle, entitled to choose freely which of two or more alternative policies they find preferable. In order to choose they need information on their alleged advantages and drawbacks, on how real, relevant, and weighty they appear in the light of their respective value systems.

A crucial factor in this assessment is that both debaters must always answer what their opponent has to say. Any reason either pro or con offered by one debater must have a reply from the opponent, who should either acknowledge its relevance and weight or give reasons why its relevance and/or weight should be downgraded. Listening to this kind of exchange will help each audience member form his own assessment of how relevant and weighty the reasons on both sides are. This is how continued dissensus and controversy may be constructive without ever approaching consensus.

It is an old assumption in rhetorical thinking that rhetorical debate is constructive not only in helping debaters motivate and perhaps propagate their views, and not only in helping audience members build an informed opinion, but also in building society. Isocrates and Cicero are among the chief exponents of this vision. We cannot all agree on everything, but we can build a cohesive society through constructive controversy.

It is worth noting, in conclusion, that in political science and philosophy there is a growing body of scholarship and opinion arguing for a conception of democracy based on a recognition of dissensus rather than consensus. For example, Rescher (1993) is resolutely pluralist and anti-consensus, in theoretical as well as practical reasoning. There are determined "agonists" such as Honig (1993) and Mouffe (e.g., 1999, 2000, 2005), as well as thinkers who emphasize the centrality of "difference" in democracy (such as Young, e.g., 1997). Gutmann & Thompson take a balanced view, emphasizing deliberation as well as pluralism: "A democracy can govern effectively and prosper morally if its citizens seek to clarify and narrow their deliberative disagreements without giving up their core moral commitments. This is the pluralist hope. It is, in our view, both more charitable and more realistic than the pursuit of the comprehensive common good that consensus democrats favor" (2004, 29). Dryzek too is cautiously balanced in arguing that the ideal of deliberative democracy must recognize dissensus: "Discur-

sive democracy should be pluralistic in embracing the necessity to communicate across difference without erasing difference" (2002, 3). All these thinkers acknowledge the need for continued exchange among citizens of views and reasons, despite the impossibility (or undesirability) of deliberative consensus.

Few seem to realize that rhetoric has always existed in this democratic tension: we cannot force agreement, but we can and should present reasons to each other for the free choices we all have to make. As Eugene Garver has said: "The more we take disagreement to be a permanent part of the situation of practical reasoning, and not something soon to be overcome by appropriate theory or universal enlightenment, the more rhetorical facility becomes a central part of practical reason" (2004, 175).

Continuing dissensus is an inherent characteristic of practical argumentation. In the rhetorical tradition this insight has always been a given. In contemporary political philosophy it is by now perhaps the dominant view. Argumentation theory should not be so specialized that it remains ignorant of these facts.

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Discurso escolar y argumentación. Acerca de algunas estrategias en la construcción del *ethos* disciplinar de Ciencias Sociales[1]

Educational discourse and argumentation. Strategies in the construction of disciplinary ethos in the Social Sciences

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Resumen: El objetivo de este trabajo es estudiar algunas estrategias lingüísticas que contribuyen a la configuración del *ethos* discursivo (Ducrot, 1984; Amossy, 1999) del libro de texto de Ciencias Sociales, escrito en español. En un corpus de manuales escolares de nivel Secundario publicados entre 2004 y 2006 en la Argentina, se abordan, en primer lugar, las marcas de persona y los diferentes roles (Tang y John, 1999) que asume el autor y, en segunda instancia, se caracteriza un mecanismo discursivo de uso recurrente en estos libros, al que denominamos "sistema de señalización" y cuyo fin es asistir al destinatario lego en el proceso de lectura. A partir del análisis se descubre que, por un lado, prevalecen las estrategias de despersonalización, que configuran una explicación con pretensiones de objetividad y neutralidad propias del género y, por otro lado, la alta frecuencia de recursos de personalización, sumada a los roles de guía y didacta que suele asumir el autor, muestra la preocupación de esta disciplina por auxiliar al lector. Se concluye así que el *ethos* de los libros de textos de Ciencias Sociales evidencia la tensión entre discurso académico y escolar y, a partir de ésta, funda su especificidad y modela un *ethos* pedagógico particular.

Palabras clave: libro de texto, Ciencias Sociales, *ethos* pedagógico, marcas de persona, roles discursivos.

Abstract: In this paper, we study some linguistic strategies that contribute to the configuration of a discursive *ethos* (Ducrot, 1984; Amossy, 1999) in a Social Sciences

[1] Este trabajo forma parte de los proyectos de investigación PICT 32995 (2007-2009) y UBACyT F 020 (2008-2010), dirigidos por la doctora María Marta García Negroni, que analizan los aspectos polifónicos y argumentativos del discurso académico en relación con su producción, corrección y edición.

textbook written in Spanish. Based on a corpus of secondary school textbooks published in Argentina between 2004 and 2006, we analyze person cues and different authorship roles (Tang y John, 1999), as well as a discursive mechanism used recurrently in these types of textbooks that we name as "signaling system". The function of this system is to assist a layperson addressee in its reading processes. From our analysis we show that, on the one hand, the prevalence of impersonal strategies configures explanations presented as objective and neutral, both genre-characteristic claims. On the other hand, we find that the high frequency of personalizing resources, added to the roles of guide and pedagogue frequently assumed by the author, show the concerns within the field to help the reader to understand the explanations presented. We conclude that the *ethos* of Social Sciences textbooks evidences a tension between academic and school discourse and, based on this tension, the *ethos* finds its specificity and models another particular pedagogic *ethos*.

Keywords: textbook, Social Sciences, pedagogic ethos, person cues, discursive roles.

1. Introducción

El manual escolar se constituye como un género altamente complejo, debido no sólo a la interacción de los discursos de base de las diferentes disciplinas que lo componen, sino también a la *recontextualización del saber* (Bernstein, 1975) que estos discursos provenientes de los ámbitos académicos presentan en relación con su nuevo espacio de circulación, su función pedagógica específica y sus destinatarios privilegiados.

Considerando el carácter polifónico y genérico complejo del manual escolar, el presente trabajo, enmarcado en el Análisis del Discurso en general y con un enfoque enunciativo (Ducrot, 1984 y Ammosy, 1999) en particular, propone el abordaje de la dimensión argumentativa y la construcción del *ethos* disciplinar en libros de texto de Ciencias Sociales. Desde esta perspectiva, el *ethos* puede entenderse como la imagen que el locutor construye en el discurso de sí a través de diferentes elecciones lingüísticas (Amossy, 1999).

Para abordar la construcción del *ethos* discursivo, se analizarán las secuencias expositivo-explicativas en tres libros de textos argentinos del área de Ciencias Sociales, correspondientes a noveno año de la Educación General Básica o segundo año del nivel Secundario[2], publicados entre 2004 y

[2] La Reforma Educativa –a partir de la Ley Federal de Educación de 1993 y los lineamientos curriculares formulados en los CBC (Contenidos Básicos Comunes)– estableció

2006, y pertenecientes a las editoriales de mayor venta y circulación en el mercado (Santillana, Puerto de Palos y Estrada).

A partir del estudio de ciertos fenómenos polifónico-argumentativos, relacionados particularmente con las estrategias utilizadas para la construcción del autor y del lector, se busca caracterizar la configuración del *ethos* discursivo de la disciplina de Ciencias Sociales, rastreando las tensiones inherentes entre las tradición discursiva académica (Bolívar, 2005) de base y el discurso pedagógico propio del libro escolar.

2. *Ethos:* de la retórica al análisis del discurso

En este apartado, primero, nos referimos a los orígenes de la noción del *ethos* en la Retórica, y luego exponemos cómo se transforma la noción en el campo del Análisis del Discurso y qué relación se establece con los roles de género (Tang y John, 1999).

2.1. *Ethos* y retórica

El estudio de la Retórica se remonta a la antigüedad clásica. Para Platón (428/7-348/7 a.C.), consistía en la manipulación del auditorio*,* mientras que Aristóteles (394-322 a.C.) la definía en un sentido más amplio: como la facultad de considerar en cada caso lo que puede ser convincente. Así, según Aristóteles, la Retórica no se concentraba sólo en su fin (persuadir a un auditorio) sino en su proceso: la puesta y el estudio de las técnicas argumentativas. Es así que para él la Retórica puede entenderse como la exposición de argumentos que buscan persuadir, o bien como la facultad de ver en cualquier situación los medios disponibles de persuasión. La teoría aristotélica hace especial hincapié en la caracterización de las tres dimen-

una nueva estructura curricular: la Educación General Básica, compuesta por tres niveles (EGB 1, EGB 2, EGB 3), a los que se sumaban tres años de nivel Polimodal. Si bien, la reforma se dispuso para toda la Argentina, en la Ciudad de Buenos Aires se siguió con la antigua estructura (nivel Primario y Secundario). Por eso, los libros de noveno año para EGB corresponden también para segundo año de nivel medio. A su vez, la Reforma subsumió en el área curricular de las Ciencias Sociales las disciplinas de Historia, Geografía e Instrucción Cívica.

siones de la Retórica: el *ethos* o disposición, que se asocia con los atributos del orador; el *pathos* o pasión, que se relaciona con los sentimientos del que escucha, es decir con el auditorio al que se busca seducir y convencer, y el *logos* o razonamiento, que tiene que ver con el lenguaje y las proposiciones, y cuyo estudio Aristóteles jerarquiza. Sin embargo, el filósofo plantea que para convencer al auditorio no basta con que el argumento sea categórico y veraz, sino que resalta la importancia del *ethos*, es decir de la actitud de quien produce el discurso. Así, el orador debe mostrarse creíble y confiable para que la persuasión se realice con éxito:

> Según Aristóteles, para resultar confiable, el productor del discurso deberá mostrar un carácter propio de la *epieíkeia* o moderación. Es más: para que su discurso sea creíble, el tema y el estilo han de ser decorosos (en el sentido latino del término) de modo que resulten apropiados al *ethos*. En suma, la persuasión se centrará en dos ejes: el de la moderación y el del decoro (Ramírez Gelbes, 2008, 1).

Más tarde, Quintiliano (30-100?) afirmará que *la* Retórica consiste en el arte de hablar con propiedad. A través de esta noción observamos que el eje de la Retórica se desplaza: de centrarse en el auditorio *(pathos)* según Platón, o en el lenguaje *(logos)* de acuerdo con Aristóteles, pasa a focalizarse en el orador *(ethos)*, es decir en cómo habla el enunciador para lograr su intención.

Ya en la época contemporánea, a mediados del siglo XX, Perelman *et al.* (1958) realizan un nuevo tratado de Retórica, y la define como un conjunto de técnicas discursivas de persuasión que buscan lograr la adhesión de los sujetos. Una vez más, la definición vuelve a centrarse en el *auditorio (pathos),* es decir a quienes debe convencerse. En este nuevo tratado hay, entre otras novedades, una redefinición del auditorio (noción de auditorio universal) y la explicación de las distintas técnicas agrupadas en: cuasilógicas (identidad, definición, analiticidad y tautología, etc.), las fundadas sobre la estructura de lo real (nexos, dobles jerarquías y diferencias de orden) y las que fundan esta estructura (ejemplos, ilustración y modelo; analogía y metáfora; disociaciones de las nociones, etc.). Pero una vez, la retórica se reduce a la argumentación entendida como la clasificación de técnicas argumentativas de persuasión.

2.2. *Ethos* y Análisis del Discurso

Respecto de la temática del sujeto y la subjetividad, los trabajos de Benveniste (1974) y Kerbrat-Orecchioni (1989) pueden considerarse pioneros en el ámbito de la lingüística al asignarles un lugar central en el análisis a la inscripción del locutor en el discurso y a la construcción de una imagen de sí. Por otra parte, Goffman (1969, 1973, 1974), dentro del marco de una perspectiva interaccional, adopta la metáfora teatral y habla de los roles o rutinas que desempeñan los hablantes según la situación social y propone la noción de "representación de sí". Plantea la existencia de modelos de acción preestablecidos y regulados socio y culturalmente. En este sentido, un estatus o un lugar social no es algo material que se tiene y después se exhibe, sino que es un modelo de conducta apropiada, "coherente, adornado y bien articulado", que se debe representar y llevar a cabo.

Pero es recién a partir de la teoría polifónica de la enunciación (Ducrot, 1984) donde se percibe realmente un interés por analizar al locutor en el discurso y las distintas modalidades que puede adoptar. Ducrot (1984) apela a la noción de *ethos* para explicar la distinción entre locutores, así distingue el ser del mundo (locutor λ) del sujeto hablante (locutor L), al que se le atribuye el *ethos*:

> Acudiendo a mi terminología, diré que el *ethos* es atribuido a L, el locutor como tal: por ser fuente de la enunciación se ve ataviado con ciertos caracteres que, por contragolpe, tornan aceptable o rechazable esa enunciación. Lo que el orador podría decir de sí mismo en cuanto objeto de la enunciación, concierne en cambio a λ, el ser en el mundo, y no es éste quien está en juego en la parte de la Retórica a que me refiero (Ducrot, 1984 en 1986, 205).

Dentro de esta concepción, el *ethos* está inscripto en el lenguaje, en tanto que ya no se corresponde con el individuo real y externo a la actividad discursiva (Amossy, 1999). Es decir que el *ethos* se configura en el discurso mismo por medio de elecciones lingüísticas realizadas por el sujeto de la enunciación. Asimismo, para dar cuenta del sentido, Ducrot (1984) plantea que, a partir de la existencia de una pluralidad de 'voces' –esto es de puntos de vista diversos–, el responsable de la enunciación adopta actitudes diver-

sas. A su vez, el *ethos* discursivo se relaciona con la imagen previa que puede tener el auditorio del orador. Cuando esta representación es retomada por el orador en su discurso, se constituye como *ethos* previo o prediscurso que, según sus intereses, puede mantener, reforzar o anular (Amossy, 1999).

Con el fin de estudiar el *ethos* en los libros de texto, seguiremos los conceptos de Ducrot y Amossy, pero, además, tendremos en cuenta la variedad de roles e identidades que puede asumir el autor de un texto especializado. Tang y John (1999), que abordan los *roles de género* específicamente en el artículo de investigación, consideran que el autor académico puede desempeñar en un mismo texto distintos roles según los objetivos particulares que persigue. Distinguen seis tipos de roles:

1) *representante genérico*: el autor se construye como representante de un grupo amplio (por ejemplo puede ser el representante de la comunidad científica mediante la primera persona plural inclusiva);
2) *guía*: conduce al lector en el texto, mostrándole alguna parte del texto o el paratexto;
3) *arquitecto*: organiza el texto, anticipando alguna parte del texto;
4) *relator*: narra el proceso de investigación;
5) *evaluador*: manifiesta su punto de vista respecto de las ideas de otros autores, y
6) *productor*: se asume como responsable de la tesis y de los resultados del trabajo.

Específicamente en el libro de texto podemos encontrar los roles de *representante genérico, arquitecto y guía del texto*, como expondremos a lo largo del análisis. Los otros roles están ausentes, por un lado, porque el autor de los manuales escolares expone el saber de un "otro" reconocido y legitimado socialmente y, por ello, no puede posicionarse como *relator* de una investigación ni productor de una *tesis* propia. Por el otro, con la pretensión de generar un efecto de objetividad, el autor evita introducir evaluaciones sobre el saber que expone y, en consecuencia, no suele desempeñarse como *evaluador*. No obstante, podemos proponer y caracterizar dos roles particulares que ejerce el autor de libros de texto, que es el de *expositor* y el *didacta.*

En el rol de *expositor*, el autor asume una función que, sin dudas, se

considera principal en estos libros: la de explicar "veraz" y "claramente" los conceptos. Por ejemplo:

> a) Se sabe, por análisis realizados, que el cinc que se utiliza en el laboratorio no es puro, sino que tiene un 15% de impurezas que no intervienen en las reacciones químicas.
> b) Para completar el análisis de los números cuánticos, es preciso tener en cuenta el **Principio de Exclusión** enunciado por el físico austríaco Wolgang Pauli (1900-1958), que afirmó: "Un átomo no puede tener dos electrones con los cuatro números cuánticos iguales, por lo que en un orbital, que tiene los mismos números n, l, m, se pueden encontrar como máximos dos electrones, cada uno de ellos con spin opuesto".

En ambos ejemplos, el autor, en tanto expositor del saber, explica diversos conceptos y nociones. Sobre la base del despliegue de diferentes estrategias –que en los ejemplos hemos subrayado para que se puedan identificar claramente–, como el uso de formas despersonalizadas ("*Se* sabe" del ejemplo a, y "*Para completar* el análisis de los números cuánticos, *es preciso tener en cuenta*" del ejemplo b) y la cita directa (en el ejemplo b), introduce la teoría. Estos ejemplos, además, nos permiten observar que el rol de expositor puede contribuir a la conformación de un *ethos* que demuestra control, orden y experticia y, por ende, la explicación del libro se percibe como objetiva, neutra, sencilla y confiable. Al respecto, Hyland (2000) postula que el libro de texto busca reducir la multiplicad de discursos y constituirse como una voz única –la de la autoridad y portadora del saber y la "verdad"– a través del despliegue de diferentes recursos, como descripciones objetivas y desembragadas, una notable ausencia de discusión y confrontación –que lo diferenciaría del discurso académico–, y la presentación de los contenidos bajo la forma de "resultados". En efecto, el libro escolar intenta construir discursivamente una "verdad" con el objetivo de ofrecerles "credibilidad profesional" a los docentes y de construirse en tanto "autoridad reconocida" para los alumnos (Hyland, 2000).

En cuanto al rol de *didacta*, el autor formula su discurso atento al proceso de enseñanza que está ejecutando. En este sentido, pone en juego estrategias que le permitan auxiliar y monitorear al lector-alumno para que logre un aprendizaje exitoso. Veamos estos ejemplos:

c) Recuerden que las temperaturas disminuyen a medida que nos alejamos del Ecuador.
d) Se debe recordar que, al contrario, que los relacionantes, los incluyentes no desempeñan función sintáctica alguna dentro de la preposición.
e) Tengan en cuenta que las áreas de montaña de la Argentina son áridas en el norte y en el centro, y húmedas en el sur.

A partir de la ejecución de diferentes acciones, como la referencia a temas ya estudiados (ejemplo c), la relación entre conceptos (ejemplo d) o la adición de nueva información (ejemplo e), el autor auxilia al destinatario para que logre una comprensión más profunda de la explicación. Así, recurre a ciertas estrategias lingüísticas, como el uso de construcciones impersonales para atenuar la asignación explícita de tareas al destinatario ("Se debe recordar" en el ejemplo d) o, por el contrario, a la interpelación directa para entablar una supuesta relación más cercana y amena con el lector ("Tengan en cuenta" del ejemplo e). El rol de *didacta* contribuye a formar un *ethos* que demuestra una actitud consejera e, interesado en el lector, coloca el foco de atención en la dimensión interpersonal.

3. Las marcas de persona. La construcción del autor y del lector en la explicación

Es sabido que la identidad autoral de los libros de texto actuales es colectiva, ya que las tareas de redacción, producción y edición están a cargo de un amplio grupo de profesionales (autores, editores, correctores, diseñadores, etc.). Pero, además, en los libros de Ciencias Sociales hay equipos de autores especialistas que se encargan de escribir los capítulos de cada disciplina: Historia, Geografía y Educación Cívica. Asimismo, cada libro tiene al menos dos editores, que generalmente se encargan de realizar el seguimiento de una disciplina: Geografía e Historia (o de dos disciplinas, si se ocupa también de Educación Cívica). Debido a ello, descartamos la presencia de formas en primera persona del singular, en tanto no existe la figura del autor como tal. Las marcas de agentivación, entonces, son señaladas a partir de la primera persona del plural (*nosotros*) y se evidencian en desinencias verbales, pronombres personales y adjetivos posesivos. Asimismo, el em-

pleo de estas marcas muchas veces refiere al lector, que es moldeado en un movimiento discursivo simultáneo: a la vez que se produce la construcción del autor se genera también la del destinatario, como demostraremos a lo largo del abordaje. En efecto, la imagen discursiva del autor se configura también en la relación que establece con el lector.

El uso de las estrategias lingüísticas presenta diferentes grados de personalización, que analizamos a continuación en orden decreciente de personalización[3].

A) *Estrategias de personalización*

1) **Uso de primera persona del plural excluyente**: coincidente con los autores y que excluye a los lectores. Con esta estrategia, el autor se dirige al lector construyendo un supuesto diálogo. Como vemos en los ejemplos 1 a 3, la marca de agentivación que indica la presencia del autor es la primera persona del plural, presente en las desinencias verbales ("contamos" y "mostramos"), mientras que la apelación al lector se evidencia en los pronombres personales de segunda persona del singular ("te").

> Ej. 1 En este clima político, como ya te contamos, se produjo en el Senado el debate sobre la corrupción de funcionarios del Estado, que protegían los manejos irregulares de los frigoríficos extranjeros, sesión en la que intentaron asesinar a Lisandro de la Torre. CSS183

> Ej. 2 Parece que los antiguos militantes –muy fieles e identificados, sea con un partido o con otro– decidieron "sacarse la camiseta" del partido. ¡Hasta los propios líderes partidarios lo hicieron! Y esto tuvo sus consecuencias. Te contamos algunas: ... CSS273

[3] Para referirnos a los libros analizados usaremos la inicial de cada editorial, a saber: **E**: Estrada, **S**: Santillana, **P**: Puerto de Palos. Todos los ejemplos se presentarán de la siguiente forma: primero aparecerán las iniciales de la disciplina (**CS**: Ciencias Sociales, **H**: Historia; **G:** Geografía), luego la de la editorial (**E**: Estrada, **S**: Santillana, **P**: Puerto de Palos) y finalmente el número de página correspondiente. Las palabras o frases entrecomilladas o destacadas en negrita o bastardilla las transcribimos según como figuran en los textos originales. En todos los casos el subrayado es nuestro y se utiliza para marcar el elemento o la estrategia que se está abordando.

> Ej. 3 En el siguiente esquema te mostramos cuáles son los principales actores involucrados en esa actividad en nuestro país. CSS79

Los ejemplos 1, 2 y 3 pertenecen a la editorial S y son los únicos casos de este tipo hallados en el corpus. En ellos, el autor, en sus diferentes papeles de *didacta, expositor* y *guía*, ejerce las tareas de "relatar" un episodio histórico, "señalar" que cierta información ya ha sido comentada y "mostrar" datos en un esquema. A través de estas estrategias lingüísticas, se construye el imaginario de diálogo didáctico, y la explicación se percibe como más amena y coloquial. En estos ejemplos, observamos especialmente la "interdependencia" de los roles de *didacta* y *expositor*, en el sentido de que para realizar una *explicación* más exitosa el autor desarrolla *estrategias didácticas* de acercamiento y complicidad con el lector.

2) **Uso de primera persona del plural inclusivo condescendiente**. Mediante esta forma se incluye al lector y al mismo autor como partícipes del proceso de aprendizaje. El efecto que se logra es minimizar el peso de la responsabilidad que se le asigna al destinatario sobre una acción, por eso es "como vimos" y no "como viste", o bien atenuar la imposición emanada de una orden: es "observemos", y no el imperativo "observá". El autor también emplea esta forma para posicionarse como *guía* o *arquitecto*. Así, hace referencia a otra parte del texto, ya sea a páginas o capítulos anteriores o posteriores, por ejemplo, con las expresiones "hemos visto", "como vimos", "ya mencionamos", "veremos", "estudiaremos" y a elementos paratextuales, como imágenes, mapas, gráficos, etc., que introducen datos y colaboran en la comprensión del texto. Para ello, se usan expresiones formadas con verbos de percepción visual, como *ver* u *observar* (Gallardo, 2004b: 37), por ejemplo: "podemos observar", "veamos estos ejemplos".

Pero además, aunque en menor cantidad, el autor se constituye en tanto *expositor*. Recurriendo al uso de "verbos de acción intelectual" (Gallardo, 2004b: 37), el autor colabora y participa en el proceso de aprendizaje. En el ejemplo 4, observamos que el verbo "resumamos" funciona como una marca textual que le indica al lector que la siguiente parte funciona como síntesis o recapitulación del tema:

> Ej. 4 Resumamos lo expuesto hasta ahora. CSE24

También encontramos algunas formas de la primera persona del plural con la función metalingüística de denominación[4]. Con el valor del nosotros de condescendencia, que construye un movimiento retórico de complicidad con el lector, se promueve que "el destinatario asuma la lengua por su cuenta y se transforme en el locutor del discurso" (García Negroni y Ramírez Gelbes, 2008) y, al menos dentro del texto, domine la terminología propuesta, como lo muestra el siguiente ejemplo:

> Ej. 5 Esta forma de reproducir en la sociedad es lo que denominamos sistema capitalista. CSS129

3) **Uso de primera persona del plural inclusivo con referencia genérica**. El autor incluye al lector en grupos amplios de pertenencia y asume el rol de representante fundamentalmente de dos colectivos: los argentinos (por ejemplo, "nuestro" país) y los ciudadanos (por ejemplo, "participamos"). También, en algunas ocasiones, se utiliza el nosotros con referencia genérica para incluir y hacer partícipe al lector de una situación hipotética, desfocalizándolo y evitando atribuirle directamente la acción, por ejemplo:

> Ej. 6 Si viajamos por ruta entre una ciudad y la otra, el recorrido llega a ser de alrededor de 5.000 kilómetros. SCS21

En efecto, en este caso la acción de viajar se generaliza y se hace extensible a todo aquel que "viaje por ruta entre una ciudad y otra".

B) *Estrategias de despersonalización*

Por otra parte, encontramos distintos tipos de estrategias de despersonalización (Gallardo, 2004a y 2004b y García Negroni, 2008a y 2008b) que, al encubrir la fuente de enunciación, diluyen la responsabilidad del autor y construyen un discurso con pretensiones de objetividad y neutralidad. En

[4] Para ampliar el tema sobre los comentarios metadiscursivos de denominación en libros de texto, puede consultarse Tosi (2009).

estos casos, se suele dejar indeterminado al responsable de la acción como analizamos a continuación.

4) **Uso de pasivas con ser y se**. A través del despliegue de estas formas, el autor se construye como guía del lector. Por un lado, recurre a estas formas para diluir la responsabilidad que posee el destinatario en el proceso de aprendizaje. Se trata de acciones cognitivas, que suelen introducirse con verbos propios de procesos mentales ("se estudió", "se identifican" en los ejemplos 7 y 8, respectivamente), o acciones de remisión a elementos paratextuales, con verbos de percepción visual ("se observan" en 9). Por ejemplo:

> Ej. 7 Por eso, como se estudió en el capítulo 2, un manejo apropiado de los recursos naturales genera problemas ambientales. GP84

> Ej. 8 En el mapa de la página siguiente se identifican las cuencas que se encuentran en el sector continental y las que se extienden en los fondos marinos de la plataforma continental del mar Argentino. CSS92

> Ej. 9 En las pirámides **A, B** y **C** se observan las variaciones: la tendencia general para el país consiste en la paulatina reducción de las tasas de fecundidad (tabla **D**) y natalidad, lo que se observa en la disminución de la base de la pirámide... GP55

Por otro lado, también se utilizan frases pasivas con *se* y *ser* para atenuar la presencia del autor (como es el caso 10) y presentar acciones como absolutas, correctas y verdaderas, como "no se puede justificar jamás el método de la violencia" en 11:

> Ej. 10 De este modo, en un lapso relativamente corto, se realizaron elecciones democráticas en varios países americanos, que se detallan en el cuadro **A**. HP130

> Ej. 11 Se pueden analizar los motivos y objetivos de los grupos terroristas, y hasta encontrar válidos sus reclamos. Sin embargo, no se puede justificar jamás el método de la violencia. CSS290

5) **Usos de estructuras impersonales con infinitivo**. Estas estructuras también dejan indeterminado al agente de la acción –que generalmente es el lector– y posicionan al autor como *expositor* del saber. Generalmente, se utilizan para presentar proposiciones como verdades ya que queda indeterminado el agente de la evaluación:

> Ej. 12 Es muy interesante analizar el conjunto de partidos de un país, o sea su sistema de partidos. ¿Por qué? Porque... CSS273

En este ejemplo la apreciación de que algo "es muy interesante" se enuncia como una sentencia veraz y absoluta y queda indeterminado al agente de la acción, es decir no se define quién piensa que es interesante analizar los partidos de un país, aunque se trata claramente del autor.

6) **Uso por metonimia**. Mediante esta estrategia se les atribuyen a ciertos recursos gráficos –imágenes, fotos, esquemas, cuadros o elementos propios del área, como líneas de tiempo en Historia y mapas en Geografía– las acciones propias del autor. Así, el mapa "muestra" (ejemplo 13), la imagen "ilustra" (ejemplo 14), la línea de tiempo "marca" (ejemplo 15), el esquema "representa" (ejemplo 17) y los datos del cuadro "dan idea" de la importancia de un hecho (ejemplo 18). Respecto del caso 16, este es diferente del resto porque, según observamos, se introduce la referencia abreviada entre paréntesis. Únicamente, se incluye el nombre de la figura sin explicitar el verbo de la acción. Es sólo: "(imagen C)".

> Ej. 13 Como muestra el mapa **A**, estos cambios favorecieron el comercio de América latina, que empezó a proveer al mundo de todos estos productos. HP39

> Ej. 14 Como ilustra la imagen **A**, en 1948, el gobierno adquirió los ferrocarriles británicos, ya que Inglaterra no tenía otra forma de pagar su deuda con la Argentina. HP140

> Ej. 15 La línea de tiempo **D** marca los principales acontecimientos ocurridos en Rusia desde entonces. HP 77

> Ej. 16 Por un lado, la inmigración europea de fines del siglo XIX y principios del siglo XX (imagen C), en el cual predominaron, primero, los europeos del oeste y, luego, los del este. GP51

> Ej. 17 El siguiente esquema representa las etapas básicas del complejo de las oleaginosas, que incluye la producción primaria, el procesamiento industrial, la comercialización y distribución de los productos hasta el consumidor final. CSS71

> Ej. 18 Los datos del cuadro de esta página también permiten tener una idea de la importancia de las distintas ramas industriales. CSE83

En todos los casos, se trata de atraer la atención del lector hacia los recursos gráficos para guiarlo en su lectura y destacar la importancia de la información que éstos aportan, ya sea como mecanismos que facilitan la explicación o como pruebas fehacientes de la verdad expuesta en la exposición. En los ejemplos 13 y 14, el adverbio "como", que "indica conformidad con el punto de vista introducido" (García Negroni, 2008a), refuerza el valor que poseen la imagen o el mapa como evidencias del saber enunciado en la explicación.

7) **Uso de nominalizaciones**. A partir de esta estrategia también se oculta la fuente de enunciación, como observamos en el siguiente ejemplo:

> Ej. 19 La información de la página anterior se refiere a las condiciones del tiempo en días determinados en algunos lugares del país. CSS41

C) Resultados del análisis

En el cuadro 1 mostramos la cantidad de formas de subjetividad rastreadas en las secuencias expositivo-explicativas de los libros de Ciencias Sociales de nuestro corpus. Mientras que las formas personalizadas representan casi un 40% del total, las despersonalizadas son más abundantes y suman un 60%. No obstante, el uso de las formas personalizadas es muy alto y alcanza

casi el mismo porcentaje que el de las pasivas con *se* y *ser* (40%), que constituye la estrategia lingüística que suele emplearse convencionalmente en los segmentos explicativos de los discursos especializados. A pesar de las diferencias según las editoriales –por ejemplo, S se caracteriza por presentar mayor cantidad de formas personalizadas–, las marcas explícitas de agentivación tienden a aparecer básicamente en los roles de *guía* y *representante* (cuadro 2). Se trata de roles de compromiso bajo, pero que cumplen propósitos específicos de control. Por un lado, en tanto *guía* el autor muestra al lector la información textual o paratextual, con el objetivo de asegurar la comprensión y controlar que el proceso de adquisición se realice con el mayor éxito posible. Por otra lado, al hacer una referencia genérica a los ciudadanos de su país, el autor de Ciencias Sociales cumple el papel de formador de los ciudadanos y de contribuir a la construcción de la "identidad argentina" (Romero *et al.,* 2004 y Cucuzza, 2007, entre otros[5]). En este sentido, Arnoux (2007) destaca la orientación argumentativa de la explicación en el manual escolar que "asigna valores y regula los sentidos del texto" (Arnoux, 2007: 34) y sostiene que el texto escolar interviene en la representación ideológica, no sólo a través de operaciones cognitivas sino emocionales"[6] .

Si bien, como adelantamos, en las secuencias expositivo-explicativas se menciona al autor de manera explícita, lo cual supondría un grado mayor de compromiso, su aparición no es muy significativa, pues sólo registramos tres casos en un mismo libro.

[5] Diversos autores, como Romero *et al.* (2004) y Cucuzza (2007), entre otros, han analizado cómo los libros de Historia han contribuido a formar ciudadanos y a constituir la identidad "argentina".

[6] Así, la narración escolar tiene una función ideológica de regulación y selección pues implica "un dispositivo de memoria y olvido: seleccionar lo que debe ser recordado y ocultar lo que puede perturbar el sentido de la selección operada" (Arnoux, 2007: 99).

Cuadro 1. Formas personalizadas y despersonalizadas en las secuencias explicativo-expositivas de la escena genérica de los libros de Ciencias Sociales.

Casos totales	Formas personalizadas	Formas despersonalizadas			
	Primera persona del plural (nosotros)	Pasiva se y ser	Impersonales con infinitivo	Metonimia	Nominalización
186	72	75	9	29	1
100%	38,70%	40,32%	4,80%	15,59%	0,5%

Cuadro 2. Uso de formas personalizadas en las secuencias explicativo-expositivas de los libros de Ciencias Sociales. Primera persona del plural (nosotros).

Casos totales / Cs. Soc.	Genérico	Condescendencia	Autor
72 (100%)	20 (2,7%)	49 (68%)	3 (4,16%)

En cuanto a las marcas de impersonalidad, el porcentaje de la metonimia es importante y considerable. Tanto esta estrategia como el uso de las pasivas con *se* y *ser* tienen la función de remitir a diferentes dispositivos paratextuales que funcionan como elementos metodológicos propios de las Ciencias Sociales y consolidan al autor en su rol de *guía*. La remisión desde la explicación a ciertas zonas paratextuales, como cuadros, mapas, líneas de tiempo, etc., muestran la importancia que tienen estos elementos para el área, porque no sólo clarifican o aportan más información, sino que en muchos casos funcionan como pruebas de verdad y evidencia del saber expuesto. El uso de estas formas de impersonalidad oculta las acciones del agente, ya sea la del autor (éste no muestra datos, sino que lo "hace", por ejemplo, un gráfico) o las que se le adjudican al alumno, como observar una imagen, leer un cuadro de barras, etc. En este sentido, la normativa curricular oficial destaca la importancia de los recursos visuales y hace hincapié en:

> El conocimiento y la utilización con creciente seguridad de una serie de instrumentos y técnicas (entrevistas, fichas de observación, lectura y elaboración de gráficos, cuadros, preparación de textos escritos y orales), cada vez más complejos, que habilitan tanto para el registro organizado

> de la información como para la comunicación de la misma y que serán seleccionados de acuerdo a los interrogantes y propósitos del estudio encarado (Ministerio de Cultura y Educación de la Nación, 1995).

Entonces, para guiar al lector se utilizan marcas de agentivación (nosotros de condescendencia), pero también de impersonalidad (pasivas con *se* y *ser* y metonimia), con el fin de propiciar la lectura de diferentes recursos gráficos. Es decir, que desde la explicación misma se persuade al destinatario para que efectúe la consulta a los elementos paratextuales. Así, la voz del saber alojada en la exposición legitima el valor y la importancia de los recursos visuales para la enseñanza en tanto apoyaturas de la explicación y "transmisores" de contenidos.

4. *Ethos* y paratexto

Desde hace varias décadas, y gracias a los avances en el diseño gráfico, la presencia de distintos recursos visuales en los libros de texto se ha acrecentado considerablemente. Este fenómeno también se ha registrado en el discurso especializado:

> Hay quienes han creído ver en esta tendencia un rasgo característico de las Ciencias Naturales (Cleveland, 1984); no obstante, algunos autores han señalado que el aumento del uso de recursos visuales también se ha extendido a Ciencias Sociales (Arsenault, Smith y Beachamp, 2006) (Gallardo, 2008, 12).

En efecto, la explicación en el libro de texto de Ciencias Sociales, siguiendo las transformaciones discursivas en el discurso académico de referencia, se construye a partir de la combinación de recursos lingüísticos y visuales, que ha producido la inclusión y proliferación de diferentes formatos, como cuadros, esquemas e infografías.

Puntualmente, respecto de la utilización de imágenes en los libros de texto, en un primer período, a partir de principios de siglo XX y hasta después de la década del 60, éstas desempeñaban un rol decorativo y no ejercían ningún tipo de función narrativa o explicativa:

> Las tres palabras clave (texto, imagen, actividad) penetraban diariamente en el vocabulario de los docentes y en los libros escolares, y la imagen se ve pronto dotada de virtudes mal definidas. Se le ofrecen espacios que antes se destinaban a los textos, pues se cuenta con que su simple presencia baste para educar la mirada, la sensibilidad estética y la inteligencia del escrito (Chartier, A. M. y Hébrard, 1994, 420).

Por el contrario, análisis recientes (Palmucci en Vallejos Llobet, 2004; Carbone; 2004, Cruder, 2008) dan cuenta de que, en la actualidad y especialmente luego de la Reforma Educativa argentina de los noventa, la imagen ha dejado de cumplir una función predominantemente decorativa en los libros escolares y se ha constituido como recurso de apoyo para la enseñanza. Incluso, en algunos casos comunica contenidos diferentes, complementarios y hasta indispensables para entender el texto. Al respecto, Alvarado (1994) sostiene que la gráfica se puede utilizar para brindar un tratamiento lógico de la información:

> Las publicaciones científicas y los libros de texto, por su parte, incluyen otros tipos de ilustraciones aparte de las fotografías y los dibujos: *esquemas* y *gráfica*. La gráfica exige un tratamiento lógico de la información que rara vez es tarea del editor; lo más usual es que el autor acompañe el texto con los gráficos, diagramas y textos pertinentes (Alvarado, 1994, 36).

En nuestro corpus, observamos el incremento de elementos paratextuales, ya sea icónicos –como imágenes– o conformados por la conjunción de elementos verbales y visuales –como cuadros o mapas–, o predominantemente verbales –como es el caso de recuadros con discurso ajeno–. Respecto de este último caso, vale aclarar que, debido a la pretensión de construir una explicación monódica, los libros analizados no suelen incluir las voces ajenas en los segmentos expositivo-explicativos, sino en zonas paratextuales: en recuadros o destacados.

Tengamos en cuenta que, según Palmucci (2004), "el conjunto de los elementos visuales compromete al espectador en la lectura: la relación entre las fotografías, los esquemas (…) debe ser decodificada por el lector" (Palmucci, en Vallejos Llobet, 2004: 147) y, en consecuencia, la inserción del receptor en la construcción del significado vuelve al texto más dinámico y atractivo. Pero, para la autora, en vez de facilitar la comprensión "pueden

constituir dificultades para quienes se limitan a leer en uno u otro código o para quienes no tienen en cuenta las relaciones entre las imágenes" (ibíd:147). Para contrarrestar esta dificultad, en dos libros de nuestro corpus –en E y P–, rastreamos una estrategia discursiva que asiste al lector en el establecimiento de relaciones entre explicación y paratexto: en los segmentos de teoría encontramos referencias (señaladas con letras) que remiten a recursos gráficos de la misma página o la siguiente. Así, se construye lo que denominamos *un sistema de señalización,* en donde el recurso verbal o visual complementa los conceptos desarrollados, agrega discursos ajenos o bien representa ciertos contenidos abstractos relacionados con la teoría central.

Mediante tal "sistema de señalización" el autor cumple con una función didáctica y desempeña el rol de *guía* del lector en tanto sugiere un orden o un recorrido de lectura. A través de llamadas –que pueden estar localizadas dentro o al final de un párrafo en la explicación central y ser enunciadas mediante letras o con el nombre del destacado en cuestión, como "Info Plus"– se indica la remisión a diversos recursos gráficos. Según observamos en la imagen 1 (ver anexo) del libro P, se trata de imágenes, o bien de secuencias explicativas o discursos ajenos ubicados en el recuadro "Info Plus". Por su parte, cada página par de E suele introducir dentro de la explicación referencias, mediante letras, que remiten a diferentes elementos –secuencias explicativas, fotografías, esquemas, mapas, tablas y discursos académicos– de la página impar correspondiente, que completan la información (como observamos en la imagen 2, ver anexo).

Por un lado, los recursos colaboran en la comprensión de la explicación y, al constituir fuentes de investigación histórica, geográfica y del civismo, no sólo funcionan como evidencias del saber expuesto, sino también acercan a lo alumnos a algunas de las fuentes de conocimiento de la disciplina[7]. Por el otro, los recuadros con discurso ajeno muestran la tradición discursiva académica y ofrecen una atractiva diversidad de voces ajenas. Vale destacar que en un trabajo sobre artículos científico-académicos de la disciplina de Historia, García Negroni (2008a) señala que el *ethos* de Ciencias Sociales

[7] Al respecto, los CBC recomiendan: "El conocimiento de los diferentes tipos de materiales a través de los que se obtiene y procesa información acerca de la realidad social (material cartográfico, fuentes sobre el pasado, estadísticas y registros cuantitativos, textos e imágenes proporcionados por los medios de comunicación). Los mismos serán trabajados en relación tanto con el tipo de información que ofrecen como con los lenguajes y recursos expresivos que los distinguen" (Ministerio de Cultura y Educación de la Nación, 1995).

se manifiesta "preocupado por mostrar el conocimiento disciplinar" (García Negroni, 2008a: 27) a partir de referencias al discurso ajeno. En este sentido, observamos que el discurso del libro de Ciencias Sociales exhibe y hace ostensibles las voces ajenas, pero las ubica en recuadros, separándolas y diferenciándolas de la propia voz del autor en los segmentos expositivos. En los ejemplos 20 y 21, se reproducen recuadros con discursos ajenos, ubicados en el lateral de la página, en una zona paratextual y subsidiaria de la explicación.

Ej. 20 **Info Plus**
La recuperación de las libertades en Japón

"Después de largos años de un militarismo autoritario, era necesario que [...] nacieran también en el Japón las libertades públicas de las democracias occidentales, lo que exigía, por tanto, una reforma profunda de las estructuras sociales. Una de las primeras medidas tomadas por el "Comando Supremo de las Potencias Aliadas" fue la derogación de las leyes que habían limitado –bajo el gobierno de los militares– los derechos fundamentales del individuo. Los prisioneros políticos fueron liberados, la libertad de expresión y la de opinión restablecidas, los poderes de la policía –considerables antes de la guerra– fueron seriamente limitados. Los partidos políticos volvieron a hacer su aparición en el escenario nacional".
Lucien Blanco (comp.), *Asia contemporánea*, México, Siglo XXI, 1976. HP98

Ej. 21 **Documentos**

Constitución de la Ciudad Autónoma de Buenos Aires
Artículo 1. La Ciudad de Buenos Aires, conforme al principio federal establecido en la Constitución Nacional, organiza sus instituciones autónomas como democracia participativa y adopta para su gobierno la forma republicana y representativa. [...]
Artículo 2. La Ciudad de Buenos Aires se denomina de este modo o como "Ciudad Autónoma de Buenos Aires".
Artículo 3. Mientras la Ciudad de Buenos Aires sea Capital de la República, su Gobierno coopera con las autoridades federales que residen en su territorio para el pleno ejercicio de sus poderes y funciones. [...]
SCS 23

En ambos ejemplos, las citas actúan como pruebas de la información mencionada en la explicación central, pero sin generar ningún tipo de polémica o controversia. Así, como en la mayoría de los casos, el autor utiliza el discurso ajeno para ejemplificar, avalar y enriquecer la explicación. En muy pocas ocasiones se refiere a otros textos para refutarlos o disentir con ellos, como sí sucede en los textos académicos de Historia[8] .

5. Consideraciones finales

De acuerdo con el análisis que hemos desarrollado, los libros de Ciencias Sociales presentan diferentes estrategias lingüísticas para conformar un *ethos* escolar disciplinar específico. El análisis de la conformación del autor y el lector mostró que, si bien prevalecen las estrategias de despersonalización, que constituyen una explicación con pretensiones de objetividad y neutralidad propias del género, los recursos de personalización son frecuentes y se utilizan generalmente para auxiliar al lector. Los roles que cumple fundamentalmente el autor son, por un lado, el de *representante cívico*, que es una configuración tradicional en las propuestas editoriales de las Ciencias Sociales y, por el otro, el de *guía*, pues muestra su interés por asistir y auxiliar a los lectores. Asimismo, el *sistema de señalización,* desplegado por dos propuestas editoriales, y el uso frecuente de la metonimia indican la importancia adjudicada por la disciplina a los recursos gráficos, que plasma a su vez los lineamientos de la normativa curricular oficial.

El recurso gráfico es utilizado, entonces, como aval de la explicación y ofrece credibilidad profesional, porque muestra que el autor maneja no sólo el saber académico (Bolívar, 2005) sino también las metodologías pedagógicas actuales, como recurrir a diversos soportes de información. La creación del efecto de alteridad convoca tanto al estudiante como al docente, pues les ofrece una supuesta multiplicidad de puntos de vista –brindada por los cuadros, las líneas de tiempo, los discursos citados, etc.– pero que, sin embargo, terminan por legitimar el saber construido en la explicación.

Por otra parte, refiriéndonos a la tradición discursiva académica, debe-

[8] Para profundizar el análisis sobre la introducción de la voz ajena en artículos científicos de ciencias "blandas" y "duras", puede consultarse García Negroni (2008a y 2008b), y en los textos escolares, Tosi (2008).

mos tener en cuenta que el *ethos* de Ciencias Sociales se construye a partir de la preocupación por mostrar el conocimiento disciplinar (García Negroni, 2008a). En este sentido, el discurso de los libros de texto analizados conforma un *ethos* interesado en avalar la explicación mediante la incorporación de diferentes voces, que a su vez acercan a los alumnos a las fuentes de conocimiento del área disciplinar. Es a partir de la inclusión de estos recursos donde se percibe la tensión con el discurso académico, porque con la intención de garantizar un aprendizaje exitoso, que contemple la correcta consulta del material paratextual por parte de los lectores, los autores recurren a diferentes estrategias discursivas como los *sistemas de señalización* y las marcas de persona dentro de la explicación que conducen el proceso de lectura. Además, debido a la tradición del género "manual escolar" de propiciar una explicación supuestamente monódica y neutra, los libros de nuestro corpus no incluyen las voces ajenas en los segmentos explicativos, según hemos analizado, sino que lo hacen en los recuadros o destacados.

Finalmente, señalamos que el *ethos* de los libros de textos de Ciencias Sociales evidencia la tensión entre discurso académico y escolar y, a partir de ésta, funda su especificidad. Se trata de un *ethos* pedagógico que expone el saber objetiva y rigurosamente pero que, a su vez, que está preocupado por guiar al lector-alumno a través de diferentes fuentes y recursos gráficos. Mediante esta puesta discursiva, intenta atraer y persuadir a sus destinatarios.

Anexo

II. LA ARGENTINA:
LA UNIDAD NACIONAL (1852-1880)

A Sarmiento llevó a cabo su proyecto de modernización del Estado y las instituciones inspirado en ideas recogidas durante su viaje a Europa y los Estados Unidos.

B La política educativa de Sarmiento (arriba) incluyó la creación de numerosas escuelas rurales.

La construcción del Estado

En las dos décadas que siguieron a la unificación de Buenos Aires y la Confederación, el objetivo de los gobernantes fue imponer la autoridad del poder central. Los presidentes que se sucedieron a partir de 1862 tuvieron la tarea de construir este nuevo poder, así como el orden institucional. Durante la presidencia de Bartolomé Mitre, se estableció que el gobierno nacional residiría en la ciudad de Buenos Aires y se **nacionalizó la aduana**. Además, se creó la **Corte Suprema de Justicia**, el más alto tribunal del Poder Judicial de la Nación. Este poder se completó con la creación de las **Cámaras de Apelaciones** y el establecimiento de jueces federales en las provincias (**Info plus**).

En 1868, asumió la presidencia **Domingo Faustino Sarmiento** A. Durante su gobierno, se firmaron los **acuerdos de paz** con el Paraguay. También, se desarrolló el aparato institucional del Estado. Se modernizó y profesionalizó el **ejército nacional**, a partir de la creación del **Colegio Militar** y la **Escuela Naval**. Además, se mejoraron las comunicaciones internas y la integración del territorio con la prolongación de la red ferroviaria, la extensión del telégrafo en todas las provincias y la instalación de un cable submarino, que facilitó las comunicaciones con Europa y los Estados Unidos.

El proceso de consolidación territorial del Estado avanzó durante la presidencia de Nicolás Avellaneda. En 1879, se llevó a cabo la llamada "conquista del desierto". Esta campaña, comandada por el general Julio A. Roca, permitió incorporar la extensa región patagónica al territorio nacional.

La política educativa

Sarmiento impulsó la política educativa nacional. Durante su mandato, se crearon 800 **escuelas primarias** que, hacia 1874, permitieron la integración de cien mil alumnos al sistema educativo B. Además, continuó la política, iniciada por Mitre, de creación de **colegios nacionales** en las provincias, que dependían económica y curricularmente del Estado nacional. En las ciudades de La Rioja, Santa Fe, San Luis, San Salvador de Jujuy, Santiago del Estero, Corrientes y Rosario se instalaron colegios subvencionados por el Estado nacional, que fueron uno de los instrumentos diseñados para articular las relaciones con los gobiernos provinciales. Un aspecto importante fue la **formación de los maestros**, a partir de los más elevados criterios profesionales. En 1868, se fundó la Escuela Normal de Paraná y se subsidió la creación de la Escuela Normal de Preceptores, en Concepción del Uruguay. Otra ley estimuló la creación de una red de **bibliotecas populares** y, para impulsar las ciencias, fueron contratados varios científicos alemanes. Por su parte, en la provincia de Córdoba, se construyó el Observatorio Astronómico.

Portada del libro La educación popular, de Domingo Faustino Sarmiento.

El Código Civil

Una parte importante de la organización institucional se basó en la redacción de los códigos que rigieron la acción de la Justicia. El presidente Bartolomé Mitre encargó a Dalmacio Vélez Sarsfield la redacción del Código Civil, que reunió el conjunto de leyes que rigen los distintos aspectos de la vida en sociedad. Este código reguló la legislación de los derechos civiles establecidos en la Constitución, organizando la legislación sobre matrimonio, hijos, herencia y sucesiones, etcétera. También, se sancionó el Código de Comercio, que reguló sobre contratos comerciales, quiebras y el régimen de navegación. Ambos códigos rigieron a partir de 1871.

Imagen 1: *Historia de los tiempos contemporáneos –Siglos XIX y XX–.* Editorial Puerto de Palos, Serie en Estudio, 2006, 48.

A

Pedro E. Aramburu (derecha) y su vicepresidente, Isaac Rojas (izquierda). El golpe de 1955 fue particularmente bien recibido en las clases media y alta de la sociedad argentina. Integrantes de un fuerte sentimiento antiperonista y anticlerical, estos sectores consideraron al gobierno militar no como una dictadura, sino como un camino hacia la democracia.

B

No teníamos nada

No teníamos armas, no podíamos hablar, ni votar, ni hacer nada. No teníamos explosivos; el sabotaje era la única manera que teníamos de enfrentar esta banda que nos esplotaba. No teníamos libertad de prensa, nada. Todo lo que teníamos era el decreto 4161, que decretaba que con solo mencionar a Perón podíamos ir en cana. No podíamos tener ni siquiera una foto de Perón en nuestras casas. Así que recurríamos a los caños (bombas caseras).

Juan Carlos Brid, citado por Daniel Jomes, *Resistencia e integración*, Buenos Aires, Sudamericana, 1990.

C

Operación masacre

Los fragmentos reproducidos a continuación pertenecen al libro *Operación Masacre*, en el que el escritor y periodista Rodolfo Walsh reconstruye la historia del levantamiento de Valle y los fusilamientos posteriores.

"La primera noticia sobre los fusilamientos clandestinos de junio de 1956 me llegó en forma casual, a fines de ese año, en un café de La Plata donde se jugaba al ajedrez [...].

En ese mismo lugar, seis meses antes, se había sorprendido una madrugada el mismo trotecito con que empezó el asalto al cuartel de la segunda división y al departamento de policía, en la fracasada revolución de Valle. Recuerdo cómo salimos en tropel, los jugadores de ajedrez, los jugadores de codillo y los parroquianos ocasionales, para ver qué festejo era ese, y cómo, a medida que nos acercábamos a la plaza San Martín, nos íbamos poniendo más serios y éramos cada vez menos, y al fin cuando crucé la plaza, me vi solo [...].

Mi casa era peor que el café [...] porque había soldados en las azoteas y en la cocina y en los dormitorios, pero principalmente en el baño, y desde entonces he tomado aversión a las casas que están frente a un cuartel, un comando, o un departamento de policía. Tampoco olvido que, pegado a la persiana, oí morir a un conscripto en la calle [...].

Después no quiero recordar más, ni la voz del locutor en la madrugada anunciando que dieciocho civiles han sido ejecutados en Lanús, ni la ola de sangre que avega al país hasta la muerte de Valle [...].

Seis meses más tarde, una noche anfiteatro de verano, frente a un vaso de cerveza, un hombre me dice: «Hay un fusilado que vive».

No sé que es lo que consigue atraerme en esa historia difusa, lejana, enzada de improbabilidades. No sé por qué pido hablar con ese hombre [...]."

D

La intimidación

...ermencia de la Dirección Nacional de Seguridad a la población:

"La ley califica como sabotaje y reprime hasta con prisión perpetua el que destruyere, desorganizare, deteriorare o inutilizare en todo o en parte documentos, objetos materiales, instalaciones, servicios o elementos de cualquier naturaleza. [...] hace saber a la población que las fuerzas policiales y de seguridad han recibido instrucciones precisas para hacer uso de sus armas cada vez que sea necesario impedir la comisión de actos de sabotaje".

Noticias Gráficas, 7 de febrero de 1956, citado por Daniel Jomes, *Resistencia e integración*, Buenos Aires, Sudamericana, 1990.

ACTIVIDADES

1 **El texto de la página anterior menciona dos grupos en el seno de la coalición golpista de 1955. Indiquen de cuáles se trata y expliquen las características principales de cada uno.**

2 **Una de las siguientes preguntas no puede responderse con la información brindada en estas dos páginas. Indiquen la cual se trata y, luego, respondan a las siguientes.**

a. ¿Por qué Lonardi fue reemplazado por Aramburu?
b. ¿En qué consistió la resistencia peronista?
c. ¿Qué motivos esgrimió Aramburu para derogar la Constitución de 1949?
d. ¿Qué medidas tomó el gobierno de Aramburu contra el peronismo?
e. ¿Qué medidas tomó el gobierno militar con respecto a los sindicatos?

AMÉRICA Y LA ARGENTINA ENTRE 1950 Y 1978 **243**

Imagen 2: *Ciencias Sociales 9.* Editorial Estrada, Serie Entender, 2004, 243.

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Review of Douglas Walton, *Informal Logic: A Pragmatic Approach* (2nd ed.). Cambridge: Cambridge University Press, 2008, 347pp., $28.99 (pbk), ISBN 9780521713801.

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1. Introduction

Douglas Walton is justifiably well known in argumentation theory for his synthesis of perspicuous elements of the North American school of informal logic with those of the Amsterdam Pragma-dialectical school. The dialogical basis of Walton's theory traces back through Pragma-dialectics to Hamblin's early theory of agonistic logic. Walton's treatment of the fallacies descends from the Canadian tradition inaugurated by Johnson and Blair in *Logical Self Defense*. Walton's 1989 work, *Informal Logic: A Handbook for Critical Argumentation* was a concise presentation of the main contours of Walton's synthesis of these elements. The recently issued (2008) second edition of that work provides both newcomers to argumentation theory and experienced travelers an opportunity to encounter an updated version that incorporates insights gained from Walton's truly prolific work since the publication of the original. As in the case of its predecessor, the second edition of *Informal Logic* is a carefully crafted, concise, and largely up-to-date statement of Walton's theory. While it doesn't necessarily contain everything that a student in an introductory critical thinking course might need, and will not not satisfy those who are looking for a thoroughgoing philosophical defense of the finer points of Walton's theory, it does put forward a clear and powerful framework for the critical study of argumentation in Walton's characteristically lucid, conversational, and example-rich

presentation. Those familiar with Walton's other, more specifically focused works will benefit from this book in seeing how the insights developed in them all hang together as a theory of argument.

2. Overview

In terms of its layout, the book follows the same pattern as the original. The first chapter locates the study of arguments within the context of dialogues. A taxonomy of dialogue types is given, as is a set of rules for dialogues. As in the first edition, Walton chooses the critical discussion as the paradigm case for the discussion of arguments and fallacies. The importance of studying arguments in the context of dialogues is then defended by way of two examples of arguments whose fallacious nature can be properly diagnosed and responded to only if they are considered as part of a larger dialogue. The second chapter deals with what many would consider the second most common feature of critical discussions or persuasion dialogues after the giving of arguments—the asking and answering of questions. The third chapter outlines a concept of relevance for critical discussions. Chapter four deals with proper and improper usages of emotion in argumentation. It includes discussions of arguments from popularity, force, and pity. From there Walton moves on to discuss deductive validity in chapter five. Arguments *ad hominem* and appeals to authority comprise the subject matter of chapters six and seven, respectively. Chapter eight covers inductive arguments and fallacies, and the book closes with a chapter on natural language in which Walton discusses problems stemming from vagueness, ambiguity, and arguments from analogy.

Overall the book proceeds from topic to topic in a clear and understandable manner, but there are minor exceptions. One such is the placement of new material on questions in polling and advocacy, or push-polling. Walton places this material in chapter 2, on questions and answers. This is reasonable enough, but the material seems as though it would add more to the treatment of statistical syllogisms and their evaluation that Walton takes up in chapter 8. Additionally, as I read it, an important secondary aim of chapter 2 is to make a pragmatic case for the dialectical approach to analyzing arguments, since a monotonic style of analysis would have no produc-

tive way of dealing with questions (see below). The material on polling and advocacy, interesting and important though it is, does not seem to me to further this aim. Hence I don't think Walton would have lost anything to move it to chapter 8. In fact, it might have provided the reader with a timely reminder of the importance of looking at arguments through the lens of the dialogues in which we find them. This is only a minor complaint, though. The substance of what Walton has to say on these matters is unaffected by it.

3. Walton's pragmatic, dialogue-based approach

Walton's overall strategy in *Informal Logic: A Pragmatic Approach* is unchanged from the first edition. After setting out and defending his dialogue-based approach in the first three chapters, he then goes on to develop a view of the field that largely consists of the elaboration of argument schemes and associated critical questions. By and large, the defense of the approach is pragmatic: We ought to evaluate arguments as we find them embedded in dialogues, because if we do not we will be unable to explain exactly what is wrong with some important failures of argumentation that we intuitively recognize. The new subtitle of the book, "A Pragmatic Approach" (the old subtitle was "A Handbook for Critical Argumentation"), places this pragmatic concern front and center. Walton's additions to chapter 1 in the second edition, dealing with the straw man fallacy and fallacious argument from consequences, present an elegant and much improved defense of the overall approach. To commit the straw man fallacy is, in essence, to misrepresent the position of another. Once the other party is present in our thinking however, it is clear that we cannot really make sense of the problem that occurs in the straw man fallacy—as a problem of argumentation—, unless we situate the obligation to get the other party right within the context of dialogue. A perspective that focused exclusively on the inference from premises to conclusion would not be able to account for this sort of problem. Walton's example of fallacious negative argument from consequences quite neatly shows that what goes wrong in such arguments is not always attributable to the inference made from the premises to the unwanted conclusion, but in some cases must be explained in terms of the subtle shift in the type of dialogue from a *persuasion dialogue*, in which the goal is to settle

the question of whether or not a thesis should be accepted by the participants on rational grounds, to a *deliberation dialogue*, in which the goal of the discussion is to settle on a course of action. As these two types of dialogues orient to different goals, they have corresponding differences in governing rules, strategic considerations and admissible dialectical moves for the participants. To be unaware of this sort of difference is to find oneself at a distinct disadvantage in everyday discussions. These examples and others make a strong cumulative case for Walton's pragmatic approach. Granted, it is a case that most people already working within argumentation theory will not need, but for those who are new to the study of argument, or for those whose only exposure to logic is a traditional course in natural deduction, Walton's pragmatic case serves a very necessary purpose.

Apart from the improved defense of Walton's method in Chapter 1, by far the most changed discussions in the book vis-à-vis the first edition are the chapters on questions and appeals to authority. Important additions have been made to every chapter, though, including new sections on red herrings in the chapter on relevance, and on defeasible reasoning in the chapter on validity, to name just two. Throughout the book the writing, which was already good, has been improved with minor modifications that enhance readability and clarity. Many examples, too, have been updated, replacing less clear or out of date examples of the same concepts, ideas, or types of argument. All of these changes are salutary, draw on extensive work done by Walton himself and others in the interim between the two editions, and enhance the book overall.

Like its predecessor, however, there are sections of the second edition of *Informal Logic* that seem to want slightly clearer treatment. This to some degree is to be expected, just given the thorny nature of the study of argument itself. Additionally, it pays to think of the principal concern of the book as the setting out of a theory rather than a defense of that theory. In that sense, it is likely to appear to be incomplete to those who do not know Walton's other works. In many cases, the defenses and deeper explanations one might want of the ideas of *Informal Logic* are to be found in the books that appeared in the interim between the first and second editions, and which are listed in the bibliography. That said, there are still places where perhaps some further discussion would have been salutary. For purposes of brevity,

I shall focus only on two of these areas. These are the discussions of red herrings and defeasible reasoning in Chapters 3 and 5, respectively.

4. Red Herrings and Defeasible Reasoning

In chapter 3, which concerns relevance, Walton takes up the discussion of fallacies like red herring and *ignoratio elenchi*. The account that Walton gives of both is a highly truncated version of that developed in *Relevance in Argumentation* (2004). There, as here in *Informal Logic: A Pragmatic Approach*, Walton argues, correctly in my view, that red herring and wrong conclusion/*ignoratio elenchi* are two different fallacies. Red herrings are primarily the product of a strategy of diversion or distraction, whereas wrong conclusion/*igoratio elenchi* is most often due to missteps in reasoning that lead one away from one's intended conclusion. In the latter case the nature of the error is obvious—one simply argues badly. It isn't as clear in this work exactly what is wrong with red herring maneuvers. In *Relevance in Argumentation* Walton is explicit in pointing out that the nature of the mistake in a red herring is that it leads the dialogue away from the issue, the issue being the set of theses up for discussion. He mentions this here, but does not stress the dialogical nature of the fallacy as he does with, for example, the aforementioned straw man fallacy in chapter 1. Further complicating matters is that, in a figure on page 95 that is labeled "The Structure of Fallacies of Irrelevance", it looks as though all fallacies of irrelevance pertain to mistaken inferences from premises to conclusions. The dialogical nature of red herring would seem to put it outside of the general account suggested by the figure. Clearly this doesn't seem to be what Walton intends. Nor would it seem reasonable to attribute a purely inferential account of red herring fallacies to him, given his excellent and unproblematic dialectical analysis of the red herring fallacy in the earlier book. As an aside, one wonders why the role of questions in red herring fallacies is not explicitly covered here. Walton's one example (admittedly not one of his own construction) crucially involves a question as the opening move that leads to the fallacy. This seems a common enough phenomenon to merit further inquiry. In such cases, is the question a red herring, is the resulting argument the red her-

ring, or is it somehow the combination of both that merits the term? Interestingly, this question isn't addressed in *Relevance and Argumentation* either. I have no doubt that a philosophically robust version of Walton's theory that integrated the presentation and defense of his ideas would contain the resources to answer this question, but it is one that isn't answered here.

The second item about which a little more discussion would have been salutary concerns the distinction between valid and plausible or defeasible argumentation that Walton gives in a new section of chapter 5. The difficulties here turn on Walton's use of the term 'argument', which seems, on my reading, to be ambiguous between three possible readings. In the first of these Walton may mean by 'argument' simply, 'pattern of inference', whereas on the second reading Walton may mean by 'argument', 'premise-conclusion complex advanced by an individual in an exchange of reasons' or something of that sort. Thirdly, there is the definition of 'argument' given by Walton on page 142: "An argument is an interaction between two or more participants which involves a claim by each participant that his contention can be justified." This third sense seems in some ways to resemble what Pragma-dialectical theorists have in mind by the term 'argumentation'. (It is perhaps worth noting that in some cases they seem to move between argument and argumentation in a way similar to what Walton does here with the various senses of 'argument'.) When talking about deductive validity, Walton seems to be using 'argument' in the first sense—merely referring to patterns of inference such as are typically studied in deductive logic. When talking about the difference between deductive and plausible arguments, he seems to shift between the first and the second sense. In much of the rest of the book, he seems to assume something like the third sense of 'argument'. This ambiguity is problematic mainly in two areas: in the definition of validity, and in the distinction between deductive and plausible arguments.

With regard to deductive validity, it is clear from the context that Walton does not intend to apply the concept of validity to an interaction between persons, but to inferential relationships between statements. Hence there is an important disconnect between the definition of 'argument' on page 142 and usage of the term almost immediately thereafter in the elaboration of the concept of validity on page 143. Perhaps more problematic for Walton's dialectical point of view, however, is his account of the difference between

deductive and plausible argumentation. In that respect, on page 159, Walton says that the principle difference is that "deductive arguments are monotonic, meaning that no matter how much new evidence is added to the premises the conclusion still holds", whereas plausible or defeasible arguments are nonmonotonic, since "should new evidence come into the case, the argument that was formerly accepted as plausible may need to be rejected as defeated". Now, if Walton is using 'argument' in the first sense and if by 'deductive' he means only 'deductively valid', he is of course correct. Deductively valid inference *is* monotonic in precisely this way. If, however, Walton is using 'argument' in the second sense, then a technical, yet possibly misleading confusion arises. Monotonicity is usually thought of as the property an argument has when the conjunction of its original premises, *P*, and any new information consistent with *P* form a revised premise set that retains the inferential connection to the argument's conclusion as did the original premises, *P*, by themselves. As I said, if by 'deductive' Walton means only 'deductively valid', and by 'argument' Walton means only 'pattern of inference' then there's no problem. This is not the case if by 'argument' Walton means something more than just a pattern of inference. Even with deductively valid arguments there is also soundness to consider and while new items of information consistent with P won't change evaluations of validity, they could possibly change evaluations of soundness if they show that one (or more) of the premises at issue is false. Such cases are still monotonic albeit in a degenerate sense whereby the set comprised of the premises and the new information is inconsistent, and the inference follows from them deductively, but trivially. The point is that if we are looking at a participant's argument simply as the case she makes, overall, for her conclusion, then we are entitled to look beyond the validity of her arguments to the truth of the premises. Hence, monotonicity is perhaps not the best way to distinguish between deductive and defeasible forms of argumentation. In real argumentation, deductive arguments can be overturned by dialogical moves that challenge the truth of one or more of the premises, monotonicity notwithstanding. Hence the presentation of new information in a dialogue could show that the inferential connection between the premises and the conclusion of a deductively valid argument –though technically preserved– is nonetheless stripped of much of its probative force. If Walton is using 'argument' in the third sense, then the usefulness of monotonicity as the marker of the

difference between deductive and defeasible arguments is even less helpful, since arguments from the very beginning are *interchanges between two or more persons* and as such are not subject to categorization under concepts like 'deductive', 'valid', or 'plausible' at all as we commonly understand them.

Though this is a problem for Walton's exposition, it does not seem to me to be an insurmountable one for his overall theory. Really all he needs to do is be more explicit. Instead of saying that deductive *arguments* are monotonic, he could just say that deductive *validity* is a monotonic relationship and leave it at that. He does need to say at least this, however, as otherwise the reader could be misled into thinking that deductive arguments do not occur in dialectical settings, or that they can never be overturned in dialogue by new information. Clearly they can, as coming to know that one or more premises are false is a serious, and sometimes fatal, strike against an argument of any type. A better solution yet, and one which would preserve nearly everything of what he says in *Informal Logic,* would be to restrict the usage of 'argument' to the second sense I identify above, keeping in mind the understanding that arguments are necessarily embedded—and are only fully understood and evaluated within—the dialectical context within which they occur. At the end of the day, all arguments are artifacts of a dialectical exchange of some kind. To put it another way, arguments are to dialogue what proteins are to cellular tissue. There are other important ingredients in the make-up to be sure, but arguments are at or near the top of the list of the things that make up a dialectical exchange. Similarly, just as a bit of isolated protein doesn't make up a bit of cellular tissue, an argument in isolation does not make a dialogue. Indeed, it seems to me that this may be the conception that Walton really is trying to put forward anyway, especially when one takes into consideration the distinction he makes in chapter 5 between the semantic (truth-functional) and pragmatic (dialectical) aspects of argument on page 143. Whether or not the solution I propose is feasible for Walton, is beyond the scope of a book review to settle. The question of how best to define 'argument' is a large and vigorously contested one. Recently, new interest in this debate has been sparked by the notion of the "dialectical tier" of argument discussed in Ralph Johnson's *Manifest Rationality* (2000), though the contemporary debate reaches back at least to Daniel O'Keefe's notion of "Argument 1" and "Argument 2" from "The Concepts of Argument and Arguing" in *Advances in Argumentation Theory*

and Research (1982). Clearly, there's a lot at stake in how one defines 'argument'. Walton's usage of the term just wants clarification so that the reader can place him in relationship to the larger discussion.

If there is anything else to be said against either the second edition (or the first edition, for that matter) of *Informal Logic*, it is that for all of its many theoretical virtues and tightly-knit presentation, it is perhaps not the best textbook for undergraduate newcomers to the study of argumentation. It lacks many of the pedagogical features that new students need, e.g. exercises, a glossary, etc. Nor is it really full-blooded enough for an advanced graduate course that would be pursuing the topics covered in its pages with a more critical, theoretically trained eye. (Walton's more focused works, those like *Appeal to Expert Opinion* are more the sort of thing for that niche.) For that reason *Informal Logic* is better suited for the middle ground. It would be a good fit for an upper-division undergraduate or first year graduate course, in which one expects students already to be acquainted with the basic skills of identifying and extracting arguments from text, and the rudiments of formal analysis. The book would then be useful as a way of marking out the territory of some problem areas for more sustained philosophical investigation. As a gateway into informal logic and the study of argumentation for the traditionally trained student of deductive logic who has yet to discover the world beyond Copi, the second edition of *Informal Logic* continues the tradition of its predecessor in being a great first step into an important, exciting and fascinating new world.

Treating Kuhn's Gap with Critical Contextualism. Review of William Rehg, *Cogent Science in Context. The Science Wars, Argumentation Theory and Habermas*, Cambridge, MA: The MIT Press, 2009, X + 345pp., £29.95 (hc), ISBN 9780262182713.

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1. Introduction

Arguments are said to be valid/invalid, sound/unsound, good/bad, strong/ weak, convincing/ unconvincing. Normally without great concern for metaphysics, a *persuasive force* might be ascribed, either as an additional feature or perhaps entirely based on dialogical circumstances. Following Rehg, such terms remain somewhat useful, but their use can be recovered and improved by adopting 'cogent' and its cognates, especially when dealing with scientific argumentation which bears on public policy. In his critical contextualism, cogency links

> a normative idea, the strength or logical character of good reasons, with a psychological effect on audiences, namely, the perception of a persuasive force that is not easily resisted. Thus the idea of cogency sits at the boundary between psychological effect and rational content. Moreover, the broad association of 'cogency' with persuasiveness suggests that cogent arguments include not only logically valid deductions but also inductive arguments with sufficient probability (or plausibility) to persuade. (p. 6f.)

The central question of the book: "[W]hat is it that makes scientific arguments cogent, and how ought we reasonably to assess that cogency?" (p.

3f.) is an invitation to follow a prolific, well-read and integrative author into the details of cases studies (rather than their idealizations), while engaging critically with discourse theory. On occasion of Habermas's 80th birthday this year, Rehg's book is less a present than a comprehensive account of how to describe and assess, in an interdisciplinary manner, the quality of socially relevant scientific argumentation *without* invoking transcendental or *a priori* categories.

Comprising nine chapters, two postscripts and an introduction, the book is organized into three parts: Part I treats the social factor in argumentation and the post-Kuhnian rationality debates, a.k.a. "the science wars" (e.g., global warming, creationism), particularly their relativistic inclination. As a possible response to Kuhn's challenge, part II engages critically with the discourse theory of Habermas whose dialogical ideals, particularly their status as necessary but counterfactual idealizations, are found wanting. Part III contextualised these ideals (metaphorically speaking: pulling them down to institutional earth) and elaborates "a multidimensional conception of cogency that pulls (…) different approaches together, integrating logical, rhetorical, and sociological tools for purposes of cooperative critical assessment of scientific arguments" (p. 8), to be applied in what Rehg calls *critical science studies*.

Mostly based on excerpts, the following summarizes and provides elaboration of Rehg's ideas. Anticipating the evaluation (sect. 3): Rehg delivers on all accounts. If you have recently used the term 'relativism', perhaps with an attitude of joy, disgust or honest incomprehension, then this book is worth reading carefully. Its content is at least equally important to a number of fields, amongst them: argumentation theory, philosophy of science, political science, rhetoric, sociology, science studies and science journalism.

2. The chapters

In chapter 1, *Science as Argumentative Practice*, Rehg seeks to establish an understanding of (natural) scientific inquiry according to which

> the daily struggle with the physical world in the laboratory of in the field is (…) *oriented towards* the development or construction of an argument

> – indeed is part and parcel of the constructive process, where 'construction' simply refers to putting together the evidence required to support a publishable result. (p. 19)

The claim is based on a rejection of the logical-empiricist 'discovery-justification distinction' and is to the effect that "the notion of argumentation I employ here takes in, as part of its substance, the discovery process itself" (p. 20). Rehg adopts a broad view of rhetoric, according which it studies "all the ways by which meaning is created symbolically among people (Wenzel 1987, 106)" (p. 21). Consequently, he can claim that "rhetoric need not be at odds with ideals of objectivity" (*ibid.*). At the same time, he is careful not to equate the terms 'rhetoric' and 'argumentation studies'. The idea is to "use the term rhetoric to designate a specific perspective on science, albeit a perspective whose interpretation, scope, and relation to other perspectives vary according to different theories of science (…)" (p. 22). And "[t]to use the term 'argumentation studies' (…) as an umbrella to cover the multidisciplinary complexity" (p. 22) which to adequately address, theorize and understand – or so Rehg may be understood– will at least be aided by his (boundary-)concept of 'cogent argument'. In first approximation, the term 'cogent' may be understood as a "broad synonym for argument strength and/or persuasiveness" (p. 7).

Building the heuristic framework for his inquiry, Rehg interprets Wenzel's (1990) distinction between a *rhetorical*, a *dialectical* and a *logical* (normative) perspective and places these terms alongside 'arguing' as social process, 'argumentation' as cooperative procedure (or method) and 'argument' as product (p. 24), such that "each row represents one dimension of, or perspective on, argument that interpenetrates the other two" (*ibid.*). Here, "[t]he term 'argument' has both a narrow and comprehensive usage (…). As one dimension, 'argument' refers to the package of reasons supporting a conclusion; as a multi-dimensional social practice, 'argument' takes in all three dimensions" (p. 25). In this "loose alignment of (…) triads" (*ibid.*), he finds a "multidimensional framework" (p. 24) or a

> perspectivism, as I shall designate it, [the value of which] lies in its hermeneutic and evaluative breadth, and thus in its serviceability as a heuristic open to a range of approaches and foci that make up argumentation stud-

> ies as a field. Although the three perspectives do not exhaust the approaches, they do seem to capture the central normative perspectives on argumentation. Perspectivism thus provides a kind of heuristic for reading developments in science studies over the last half-century (…). Moreover, as a set of normative perspectives on argument evaluation, this framework might be taken as a multidimensional account of cogency: the different ways one can understand or assess the cogency of arguments (p. 25).

Rehg then submits these well known triads to criticism (pp. 25-28), foremostly noting complications with respect to the neatness of the above distinctions. "These complications – above all the slippage between the two triads lead me to suggest that we simply break up the one-to-one alignment between product-procedure-process and logic-dialectic-rhetoric" (p. 28).

The reader is led to understand that "perspectivism as a heuristic framework does not function as an architectonic, a predefined grid into which we squeeze the various initiatives in science studies" (p. 30). Rather, by making heuristic use of old terms, and allowing in new ones, e.g., "social-institutional perspective" (p. 29), we may pose "direct specific questions to the theories, case studies, and proposals in science" (p. 30). Over and above a commitment to a (non-sceptical) critical evaluation (p. 31), the basic idea is that scientific inquiry at least *centrally involves*, perhaps *crucially depends upon* argumentative practices, while "sceptical approaches that dismiss or reduce the logical perspective to the rhetorical, or to sociological explanation, are at odds with the argumentation studies framework I propose" (*ibid.*).

As for constraints, the "theorist must take a hermeneutic approach oriented toward disclosing the norms operative within scientific inquiry" (*ibid.*), while "hegemonic claims for a particular discipline of perspective are counterproductive" (*ibid.*) Thus, one might generally say, Rehg's interdisciplinary project studies the *argumentative factor* in scientific inquiry. This meta-inquiry into standards uses argumentation theoretic categories without, from the start, claiming that argumentation studies shall serve as the master discipline (*ibid.*).

In chapter 2, *Kuhn's Gap: From Logic to Sociology*, Rehg contrasts what he identifies as the logical empiricist vs. Kuhn's (and, in extension, the sociology of scientific knowledge [SSK]) perspective on scientific argumenta-

tion. The logical empiricist perspective is presented as a normative (or: prescriptive) and primarily syntactical formal calculus of hypothesis-confirmation by evidence(-statements). This, however, cannot be directly applied to scientific discourse without considering the pragmatic choices of particular contexts. Crucially, formal rules for hypothesis (dis-)confirmation do *never fully* translate into rules for the scientist's rejection or acceptance of a theory. Nevertheless, from Hempel's and Carnap's early 20th century work on a confirmation theory (viz.: inductive logic), Rehg draws implications for the evaluation of cogent evidential argument. Here, so called "intrinsic formal merits" (p. 42) –"relevance, support, strength of support, and valid structure" (p. 41)– play the greater role, but are always *enriched* by pragmatic considerations:

> By making the acceptability of premises a pragmatic or conventional matter, Hempel, like other logical empiricists, injects a context-dependent, sociological element into his account of scientific inquiry. He thereby introduces a division between the logical and pragmatic aspects of cogency. (…) So long as the language in which the observational premises were formulated was neutral vis-á-vis competing hypotheses, and so long as the logical framework of comparison remained purely formal, then the pragmatic side of inquiry did not undermine the possibility of an impartial comparison of the relative strength of the arguments for one hypothesis over its competitors. By vividly displaying the fragility of these assumptions, Kuhn turned this division into a contentions gap in the analysis of scientific argumentation. (p. 42)

In contrast, Kuhn's perspective amounts not merely to an enrichment of formal by pragmatic evaluative criteria, but to "substituting a social-institutional perspective on the process of argumentation for the logical perspective, whether formal or informal, on its products" (p. 49). As Rehg outlines, this replacement has given rise to two research strands within SSK: "the rule sceptical approach of the Strong [Edinburgh] Program and the particularist approaches of certain ethnographers, above all ethnomethodologists" (p. 50). As for the first, "[t]he rule sceptics downplay the normative dimension in theoretical development as explanatory of theoretical development in science" (p. 52). On their perspective:

> [H]ow one ought best to extend [current] science is underdetermined by inherent theoretical content, past usage, and evidence (natural phenomena). To explain theory change, (…) one must look to sociological models of causality: interest constellations, distributions of power, social networks and the like" (p. 51).

Similarly, "[p]articularists agree with Strong Programmers that the normative standards that guide the science community cannot be fully represented by general norms of rationality (…)" (p. 52). However, rather than replace (what are identified as) the logical empiricist's epistemic norms by social ones in order to explain theory change, the ethnomethodological particularist sees "no need to go beyond the normative self-understanding of practitioners and invoke a causal explanation of the development of science" (*ibid.*). Although not rule sceptical, but aiming at descriptions of "various rationalities (…) [that are] more or less unique to each local context" (*ibid.*), or so Rehg claims, particularism's "restriction to the participant level leads to a principled 'indifference' (…) [with respect to] standards of reasonableness for science" (p. 53).

Thus, what Rehg calls "Kuhn's Gap" refers to the "unmediated opposition between two perspectives on scientific argumentation" (*ibid.*). One favours "analyses of cogent argument in terms of formal or substantive properties of the product" (*ibid.*), while the other focuses on "the social-institutional contexts and processes from which these arguments emerge" (*ibid.*). Here, each perspective names as a condition for the cogency of argument that which the other finds irrelevant or, at least, less relevant. Faced with this gap, Rehg's concept of cogency shall primarily serve to mediate, insofar as "these different accounts [logical empiricism, Kuhn's theory of science, SSK] all want to say something illuminating about the actual practice of scientific inquiry" (p. 56). Moreover, "the appeal to praxis [as opposed to calculus] allows us to regard theories of cogency as attempts to explicate the 'social practice of cogency,' so to speak – the social-practical structures that underwrite the ascription of cogency in scientific argument-making" (*ibid*). Consequently, in Rehg's terms, the challenge is to construct a broader framework to "bring these different conceptions of cogency together in fruitful cooperative exchange" (p. 56) in order to "overcome Kuhn's gap" (*ibid.*).

On Rehg's diagnosis, we currently cannot make a *smooth* transition be-

tween (not to speak of integrating) a logico-methodological and a sociological-institutional perspective on theory change, broadly construed. When trying, we always project our slipping into a gap, the depth of which is uncertain, and which is intimately associated with relativism. In Rehg's metaphor, his project is an attempt at *treating* this gap.

In chapter 3, *Closing the Gap: Three Rhetorical Perspectives on Science*, "rather than cover the rhetoric of science as a field (…), much less the rhetorical perspective in general" (p. 57), Rehg focuses "on three particular ambitious theoretical initiatives (…)" (p. 58) which seek to fill out "the microdynamics of persuasion and theory change" (*ibid.*), namely that of Marcello Pera, Lawrence Prelli, and Bruno Latour. Their contributions are read as gap-closing approaches *en route* to a *comparative* concept of cogency in scientific argument. Latour's is gap-*closing* in a special sense (see below).

Pera's primarily dialectical conception of comparative argument cogency is said to replace the logical empiricist methodological rules as the normative arbiter with the science community and the tradition it carries on, although "the community's sense of procedural and substantive demands of rational debate" (p. 63) are ultimately understood as historically contingent. According to Pera:

> [A]n argument A is more cogent than B just in case (a) the community judges A to be stronger than B after rational discourse, as defined by the accepted dialectical factors, and (b) that judgement is not reversed at a later stage of rational discourse (although A might be superseded by argument C). It follows (…) that at any stage of discussion and inquiry, successful arguments can enjoy *at most a presumption* of being more (or less) cogent than their competitor. (p. 64, *italics added*)

However, so is Rehg's main criticism, specifically social aspects (How to organize the community?) remain largely outside of Pera's analysis, resulting in an "'intersubjectified' [rather] than a 'socialized' account of scientific progress" (p. 64).

Next, Prelli's rhetorical criterion (see below) is presented as a partial, though ultimately insufficient supplement to Pera's analysis, by virtue of "elucidating the rhetorical substance of the rational discourse referred to in

Pera's dialectical model of cogency" (p. 69). Although, by "linking a normative conception of cogency with audience psychology [persuasion], Prelli's rhetoric adds a social layer not found in Pera (…), he does not [as, in Rehg's opinion, he should] link persuasion with specifically sociological aspects of science" (*ibid.*), for example: "institutional mechanisms such as peer review, funding structures, gate keeping, and so on" (*ibid.*). Prelli's "rhetorical, pragmatic criterion governing the logic of reasonable scientific discourse" (p. 67), if perhaps well applicable to scientific discourse, remains – for Rehg problematically so – confined to community-relative (or: communitarian) standards. It runs as follows:

> [T]o be judged reasonable and persuasive in any specific situation, scientific discourse must be perceived as identifying, modifying, or solving problems that bear on a specific scientific community's maintenance and expansion of their comprehension of the natural order. (p. 67, cited as Prelli 1989a: 122-13)

On Prelli's account, an argument "becomes better – actually persuades, is more cogent than competitors – only if it responds insightfully to the actual constellation of positions held by members of the audience" (p. 68). *Pace* the criticism that this account of the "microdynamics of persuasion" – the analysis part of which proceeds on a *topoi cum stasis* model around four "rhetorical exigencies" (from *evidence* over *meaning*, *significance* to *action*; p. 66) –, is mechanical rather than informative, Rehg praises it for being "more substantial and contextual than formal logic and more normative than psychology and sociology" (p. 67). Moreover, he explicitly accepts "the three main rhetorical tasks – selecting an exigence and specific issues and developing situationally reasonable lines of argument" (p. 70) as helpful in the analysis of cases.

Nevertheless, "[t]he danger lurking in such a communitarian approach is that it 'underestimates the potential ideological functions of science in contemporary culture' (Taylor 1996: 106)" (*ibid.*). With reference to Habermas and the chapters to come, this danger is characterized as a conventionalism that "eschew[s] universal norms of cogent argumentation" (p. 71). Along with Pera's and Prelli's, also Toulmin's work (as Habermas reads it), in particular his *field dependent* standards of argument validity, are said

to disqualify on account of staying "science-internal", i.e., drawing "norms of cogency from conventions specific to each disciplinary field of argument" (p. 71).

Lastly, Latour's attempt to address Kuhn's gap by an actor network theory (ANT) is presented. Rather than fill it, Latour's strategy is to level the gap. Along with rejecting "intrinsic and process-independent notions of cogency" (p. 76), Latour "rejects any prescriptive view of cogency" (p. 77), as his main methodological assumption keeps him from distinguishing knowledge and power. Consequently, on his view, "[t]he more cogent argument is simply the one that de facto succeeds in 'trials of strength'" (p. 77). Catchphrase: "The strongest reasons always yield to the reason of the strongest (Latour 1988: 186)" (*ibid.*). Taking cogency to be entirely factual, and with particular respect to the journal article as a scientific product,

> Latour thus explains the apparent cogency of arguments in terms of networks of actants (human and nonhuman) with which arguments are allied and through which they can successfully travel (…). So we might say that the cogency of an argument – the article as a product of inquiry – is constituted by its ability to enlist in its support, and travel (translate) through, heterogeneous material, social and political networks. The greater its power of travel, the more cogent the argument. (p. 77f.)

Thereby, Kuhn's distinction between "normatively sound argumentation [and] institutionally effective rhetoric" (p. 78) is said to be levelled. Therefore, in Rehg's opinion, like Pera and Prelli, also Latour fails to bridge the gap, although already in a trivial sense of failing, since Latour principally rejects the normative perspective. In contrast, Rehg reads Prelli to have tied the above distinction together, such that effectiveness becomes part of a normative criterion of cogency (*ibid.*), to yield a "normative rhetoric of science in the thick sense (…) [attending to] specific demands of rhetorical invention in relation to features of the concrete audience" (p. 79), while Pera "assimilates the logical and the social within a *dialectical perspective* on science as a conceptual process" (*ibid.*).

All the same, Rehg finds a particular merit in Latour's (politically motivated) "use of SSK methods to study 'science in the making'" (*ibid.*) for the purpose of "dismantling the Enlightenment dichotomies that legitimate

Western science" (*ibid.*), without succumbing to a principled relativism, here ascribed to Bloor (Strong SSK Program).

> [B]y giving natural phenomena [i.e., nonhuman actants] a constitutive role in persuasive argumentation, Latour acknowledges, in a backhanded sort of way, the rationalist, empirical side of Kuhn's Gap, which highlights empirical adequacy as the primary consideration in an account of argumentative cogency. His analysis thus ties the empirical adequacy of arguments with their ability to spread materially, socioinstitutionally, and technologically. However, it remains unclear how one would integrate Latour's strategic [Machiavellian] analysis with a prescriptive argumentation theory. (p. 80)

As Rehg claims, "[p]ulling these perspectives together into a coherent normative conception of argument cogency sets the task for the second and third parts of the book" (p. 80).

In the postscript to part I, *The return of the Logical: Achinstein's Realist Theory of Evidence*, Rehg discussed Peter Achinstein's (2001) objective theory of evidence, in particular "the way in which his theory links evidence with a realist (…) mind-independent notion of truth" (p. 82). Coming from "a tradition of attempts to understand inductive confirmation" (p. 81), Achinstein's theory is read to deliver cogency as an impersonal merit, based on an epistemic situation (ES) model of evidence (p. 85). Adopting large parts thereof, Rehg objects that Achinstein's theory unduly leaves the communicative aims of argumentation outside.

On Achinstein's model, the transition from evidence E to hypothesis H is taken as an *explanatory inductive* inference. The inference counts as justified *if and only if* E is evidence for H "in virtue of physical and mathematical facts, independently of whether anyone knows it or not" (p. 85) (This is the objective part). Moreover, "[t]o say that the 'E provides a good reason to believe H' means that E is a reason to believe H *rather than its negation*" (*ibid.*, *italics added*). In particular, given background assumptions, B, the model requires that, for E to be potential evidence for H (as opposed to veridical evidence for H), (i) H and B must be true, (ii) without E entailing H deductively (ii seems to be the inductive part). Furthermore, (iii) the probability that there is an explanatory connection between H and E, given the

logical conjunction of E and B, must be greater than one half (p. 86). Rehg notes: "[T]he objective character of the explanatory connection (…) ensures the impersonal character of relevance: it is not audience relative" (p. 87).

In the following, Rehg reads Achinstein's as an "objective model of cogency" (p. 88). In particular, Achinstein's idea of an epistemic situation yields 'ES-evidence' (in distinction to potential evidence) as that which is made available by and, thus, holds relative to available experimental techniques and methods. Note that, in this model, E is either true or no ES evidence for H, to begin with. Rehg understands E primarily as "experimental results" obtained under "the available methods for testing and inference" (94). Branding it as a logical empiricist insight, however, he adopts that "one can at most *take* E as true, insofar as it is justified in the light of corroborating observations and available knowledge" (*ibid.*). To account for the fallibility-objection while serving in a theory of argument cogency, Rehg submits, the truth condition on Achinstein's ES-evidence must be replaced with a justifiability condition.

> Achinstein's theory of evidence suggests the following distinction for a conception of cogency: (1) a (synthetic) definition of veridical evidence that captures the truth at which scientific inquiry aims: true hypotheses supported by true evidence-statements and assumptions; (2) a (synthetic) definition of ES-evidence that, if shorn of its truth condition (that E must be true), aligns cogency with properties of the arguments that scientist are in a position to make and assess; insofar as those arguments succeed at providing cogent justification, they fallibly indicate success at the representational aims of argument, as stated in (1). (p. 95)

So understood, cogent arguments count as providing the "sole indicators of truth" (*ibid.*). Moreover, "as a fallible means to truth, arguments as justifications make sense in view of a representational enterprise whose success is measured by the world" (*ibid.*). Thereby, "two important features of scientific practices, namely the potential for controversy and the commitment to ongoing research" (p. 93) can be explained, insofar as "ES-evidence makes the acceptance of an argument product reasonable even though there are unknown defeating conditions (…)" (p. 89).

A cogent evidential argument will (i) state an explanatory connection

between E and H, given E and B, with a probability > 0.5, while (ii) E and B are true, (iii) E does not entail H, and (iv) one is justified, given the epistemic resources are one's disposal, in believing (i-iii) (p. 96f). This captures what a "scientist ought to strive for (…)" (p. 97). On this definition, cogency is impersonal; cogent arguments will "in part be constituted by the mind independent truth of their evidence and background assumptions" (*ibid.*).

However, when assessing the cogency of a given argument, one "assess[es] impersonal merits indirectly, as merits relative to specific challenges made by a particular community" (*ibid.*). Moreover, because "arguments are generally made *to lead addressees to accept* a particular conclusion as probably true or at least reasonable" (*ibid.*), the focus on "justificatory and representational properties of the argument product" (p. 98) misses that cogency must also take account of "the satisfaction of communicative aims" (*ibid.*). That is, success in the communicative aims of argument shall count as more than a "necessary means in the construction and assessment of arguments" (*ibid.*)

A crucial question which Rehg can now state (with the declared intent of reading Habermas' argumentation theory for an answer) is: Shall the concept of cogency collapse into "identifiable merits of the product" (*ibid.*) or shall it include having "emerged from a sufficiently reasonable process of argumentation (…), such that the same argument content could become more cogent as it held up under increasingly severe argumentative criticism" (*ibid.*)? Though Achinstein's model may provide a standard for cogency (in the sense of citing a correct, but an epistemically inaccessible criterion), Rehg argues, the latter characterization is a live option: Features of the process must count as necessary conditions for cogent argument in science.

Part II of the book, *Integrating Perspectives: Habermas's Discourse Theory*, starts with *Habermas's Critical Theory and Science: Truth and Accountability* (chapter 4), mainly an exposition and critique of his Theory of Communicative Action. This centres on the notion of the mutual accountability among rational subjects for the validity of claims (expressing propositions of empirical or normative content) raised in argumentative discourse. In particular:

> Habermas understands mutual accountability as a *defeasible pragmatic presupposition* – an imputation that participants mutually undertake

> but that cannot be definitely demonstrated by empirical observation. Accountability thus has the sense of a practically effective but possibly counterfactual 'as if' – an idealization or 'idea of reason' that has consequences for social interaction. (…) When actions fail to display the marks of rational agency, others are likely to withdraw their imputation and consider the offender irrational or unreasonable. (p. 114, *italics added*)

A participant's "general ability to *orient* her action by validity claims (Habermas 2003: 95)" (*ibid.*) then includes truth claims. Provided such claims to truth, should their content be true, are understood as intersubjectively acceptable beyond the present context of discourse, "[i]n making a truth claim in a particular forum, we 'implicitly assume responsibility (…) for demonstrating its rational acceptability in other relevant forums as well' (McCarthy 1994: 75)" (p. 115). In turn, such claims are understood to incur a (pragmatically necessary) presupposition of the objectivity world:

> The objectivity of the world, in the sense of its intersubjective accessibility, is thus an unfalsifiable presupposition by virtue of which actors anticipate that, 'all other things being equal,' competent observers should be able to reach unanimity in their factual reports (Pollner 1990 143, 150-51). Without this presupposition, neither the problem of discrepancy [between subjects' reports] nor the means used to resolve it are intelligible (ibid., 142). (*ibid.*)

Put succinctly: "The idea of a common objective world depends reciprocally on the idea of truth" (*ibid.*). While past versions of Habermas's account at least *linked*, in some interpretations *equated,* truth with an ideal consensus among rational participants, Rehg denies the direct route from objectivity through acceptability to final consensus. Instead, he sees our shared access to the objective world to always depend on available epistemic resources (p. 117). As it were, we always carry along a "kind of 'knowledge index' on truth claims" (*ibid.*). Given this index, and rather than explicating what it means for a proposition *p* to be true, Rehg offers the following "pragmatic presupposition of attempting to justify truth claims" (*ibid.*), abbreviated (JTC), which "states what it means in practice for us justifiably *to take p* as true" (p. 119).

> (JTC) If we reasonably consider our arguments to justify our taking 'p' to be true, then we must presume that our justification would prove convincing in a rational discourse that was maximally inclusive and rigorous, given current methods and knowledge. (p. 117)

Thus, "the idea of truth [is analyzed] as it functions sociologically, as an accountability structure" (p. 119). Thereby, truth remains objective and realist, in the sense that the truth-maker of a proposition is the objective world. But rather than explicating this correspondence theoretically – an endeavour beset with well known problems –, Rehg sides with Habermas's 'pragmatic epistemological realism' which allows us to understand "truth in the way it functions in action and learning" (p. 120). Simply put, if you may not be able to analyze objectively conceived truth, then rest content with analyzing its socially manifested consequences, as they must be understood by a philosophy after the linguistic turn.

The cogency of arguments, then, "rests partly on an internal relation between discourse (argumentation) (...) and experience and action (...), which in the sciences include observation and laboratory inventions" (p. 121). Thus keeping truth tied to ways in which truth-claims can be problematized in the historical development of science (e.g., in the light of technological development), renders it plausible to "say that such arguments, as internally related to laboratory 'experience,' are the only means we have for determining what is probably true" (p. 122). In this sense, Habermas's approach may be said to remain oriented towards context-invariant, transcendental norms (truth and validity).

According to Rehg, for (JTC) to be applied for purposes of critical assessment of local and institutionally established practices – as Habermas proposes it should –, also requires "a particular vision of social emancipation or the 'good society' (Cooke 2004)" (p. 125). Roughly: a historically progressive deliberative democracy founded upon a universalistic conception of communicative (as opposed to strategic) reason. A relativistic contextualism, or so the reader may understand, constitutes the "theoretical threat" (p. 127) to Habermas's project. More precisely, and with a view to part III: According to Rehg, there remains in Habermas's approach a "tension between the ideal[alized justifiability of claims before the univer-

sal audience] and the real [institutional constraints on discourses of truth and justice which] creates the problem of contextualization" (p. 124).

In chapter 5, *Habermas's Theory of Argumentation as an Integrated Model of Cogency*, Rehg seeks to develop Habermas's theory as a comprehensive framework

> to see how his theory plausibly integrates, within a normative theory of cogency, (a) a logical perspective focused on argument content, (b) dialectical and rhetorical perspectives that analyze the substantive normative commitments, *ethos*, and psychology of science as a discourse community, and (c) social-institutional perspectives that acknowledge the strategic aspects of argumentation without negating the possibility of normatively good reasons. (p. 131)

Rehg argues that Habermas's rhetorical level, at which argumentation is construed "as a process of communication in which arguers seek to gain assent of an audience according to the standard of the universal audience" (p. 135), cannot properly qualify as rhetorical. According to Rehg, the presuppositions of reasonableness identified by Habermas – "exclusion of coercion or force (…), openness of the argumentative process (…), equality of participation (…), and non deceptiveness" (*ibid.*) – should rather be considered "process idealizations" (p. 136). "[L]ike the ideas of truth and universal consensus (…) [, they constitute] idealizations that are at once counterfactual and pragmatically efficacious (…)" (*ibid.*). Thus, "Habermas's ideal process standards (…) have a dialectical function, and so we might wonder if their alignment with rhetoric is apt" (*ibid.*), for "(…) his understanding of rhetoric remains very much a *logos*-centred model or, more precisely, a dialectically oriented rhetoric" (p. 137).

> Thus, the two levels that Habermas distinguishes [dialectical and rhetorical] coincide insofar as both set down rules for organizing the process of critically testing arguments. They differ mainly in the object of the rules – statements versus participants – but in fact a critical discussion requires both types of rules. (p. 138)

Collapsing Habermas's rhetoric into dialectic opens up a space which

Rehg wishes to fill with considerations based on Aristotle's analysis of *ethos* and *pathos*, to reach "a more substantive and contextualist rhetorical perspective" (*ibid.*). With respect to argumentation in science, Rehg identifies two uses of *ethos* and *pathos*. On the one hand, he mentions Aristotle's "proof from character" (p. 142), by which a speaker seeks to establish herself as a competent interlocutor (in the process of argumentation, rather than by reputation) and "gives the hearer evidence of one's capacity to judge plausibilities responsibly" (p. *ibid.*). On the other, "scientists use (the device of) *pathos* insofar as rational argumentation always involves 'hot' cognition – not simply a detached logical calculation but a human interest, say, in more elegant theories, surprising counterintuitive discoveries and the like" (p. 143). Importantly,

> (…) this model implies that an individual cannot adequately grasp the cogency of an argument without engaging in a sufficiently high-quality discourse with others, in which participants present their arguments in *rhetorically responsible* ways that enhance the judgement of plausibilities. (…) The individual scientist depends on others, not simply to assemble all the relevant considerations, but to make a responsible *judgement* of their import for argumentative cogency (p. 144, *italics added*).

In the following, Rehg's basic idea is to postulate an internal dependency relation between the logical, the dialectical and the rhetorical, to the effect that – unlike Hempel's or Achinstein's model (see chapter 1 and postscript) which build on impersonal truth – "the merits that qualify arguments as cogent ought to be defined in terms of *pragmatically manifest* features of argumentation (see Johnson 2000)" (p. 147), yielding a "multidimensional model of cogency" (p. 151). Compared to Habermas's theory, the question shifts "from a metaphysical to a pragmatic register, understanding cogency in terms of the pragmatics of assessment rather than abstract statements of impersonal truth conditions and logical connections" (p. 151).

Rehg defends this shift against an objection, according to which "the 'lone genius' can reach a *true* conclusion on the basis of arguments the community finds unconvincing" (p. 149) – a situation which Habermas's distinction between truth and justification allows (*ibid.*). Rehg argues, "the lone genius objection appeals to a scenario that depends on hindsight and thus

tacitly assumes the social conception of cogency it targets" (p. 150). For she is not a *lone* genius who managed to communicate the fruitfulness of her claim to others; nor is she considered *a genius* until "other scientist can successfully incorporate her work into their own practices of inquiry" (*ibid.*). The supposition is that "the loner's own argument makes a fruitfulness claim that can be sufficiently supported only when it actually bears up in the broader discipline: only then can her arguments count as the publicly acceptable knowledge on which the objection relies" (p. 150f.).

This brings him to the social institutional level. Unlike the dialogical (he uses the term as: 'rhetorical' plus 'dialectical'; p. 152) level, where only idealizations are found, it "calls for the empirical study of the micro- and macrosocial contexts of argumentative practices in science" (p. 153), identifying, "socioeconomic forces, disciplinary organization, institutional mechanisms (e.g., credit [see below]), personal interests and so on" (*ibid.*). Here,

> the social institutional perspective, as a critical perspective, tests the presumption of sufficient approximation [to the ideal] by scrutinizing both the design and the execution of scientific inquiry/discourse for their dialogical adequacy. (…) If the process is sufficiently dialogical, then greater consensus indicates a more cogent argument. (p. 154).

Importantly, insofar as Habermas includes observable social-institutional conditions of actual discourse about a theory, T, these conditions, *if and as long as they are not violated*, then serve as *warrants* for a presumption that one has satisfied ideal dialogical conditions which, in turn, indicates that T is probably true (see Fig. 5.1, p. 156). But neither the interlocutors nor the analyst can have direct access to cogency. "Rather, we must rely on social-institutional indicators (…) as a defeasible warrant for presuming we have such justification" (*ibid.*).

As Rehg notes, Habermas's conception does not only assign SSK the odd role of explaining bad science through the identification and evaluation of social-institutional indicators – and, therefore, is hardly able to fill Kuhn's Gap (*ibid.*) (see chapter 2). Habermas's conception is also at odds with the demand of a pragmatic manifestation of cogency. Consequently, Rehg seeks to recover the dialogical ideals in the here and now. To show this is possible, he considers credit (for an invention or a discovery), noting that its attribu-

tion "requires a certain amount of secrecy in science communication, thus (…) [temporally] undermining the openness required by the ideal of inclusiveness" (p. 158).

What looks like a trivial example "serves to specify the openness/inclusiveness *ideal* by situating its operation in a temporal framework" (p. 159, *italics added*). The deviation from the ideal of openness is explained by social mechanisms (self interest, need for recognition) which, in the long run, sustain social order in science. Thereby, Rehg brings cogency "down to institutional earth" (*ibid.*). To be more fully developed in part III of his book, and *vis á vis* Habermas's negative criteria for cogent arguments, the reader has been allowed to glimpse at a *positive* form of context-sensitive reason.

In chapter 6, *Argumentation at Fermilab: Putting the Habermasian model to work*, in order to clarify and test Habermas's model (p. 164), Rehg draws on a 1993-1994 research and publication process in high energy physics at Fermilab, as described by Staley (2004). The case study centres on different methods for detecting the *top quark* in high energy collisions between subatomic particles. These methods are statistical; results are based on an interpretation of instrument readings (rather than, e.g., cloud-chamber images); the instruments register (extremely rare) events believed to indicate the presence of the sought-for particle, along with background noise. Rehg details the research group's methods, the process of writing (via an internal critical peer review process) what is referred to as the 'Evidence paper'. He then analyzes the group internal debate and subsequent compromise/consensus on whether the data warrant "a discovery claim, a weaker evidence claim, or no interesting claim at all" (p. 170).

> To the extend that this rather upbeat interpretation of the writing process is accurate, the Evidence paper has an irreducibly social character in the sense that (a) each author freely shares in the collective acceptance of the paper's argument in its entirety [read: consensus], but in such a way that (b) no single author has complete command over the various considerations and evaluations that entered into the construction of the argument. (…) Such an argument genuinely expresses an 'intellectual solidarity' – an enterprise to which individuals organically contribute somewhat different, but complementary, skills and perspectives in producing a result in which all share freely (p. 183f.)

Rehg can attest an irreducibly social character to the Evidence paper insofar as its claim was oriented towards a consensus among group members and was raised after excluding from the group an outside researcher – along with his position, allegedly reached by jumping to the conclusion – "partly because of concerns over merit, and partly in view of the outsider's alleged lack of judgement" (p. 177) or *ethos*.

The meat of the case lies in the significance of the 'no peeking (predesignation) rule', a dialectical rule which – for reasons of bias towards obtaining a *desired* result – obliges the researcher not to look at data before "the selection of cuts" (p. 175), i.e., scale points beyond which an instrument's reading is regarded to indicate data *rather than* background noise (see p. 173). From the logical perspective, Rehg reconstructs the group's argument concerning "the adequacy of the testing methods" (*ibid.*) as a "relatively straightforward statistical argument (…): one must falsify the null hypothesis [H_0]" (p. 168). H_0 says: "'[A] particular data sample has been drawn from a population of proton-antiproton collision events that is free of top-quark production' (Staley 2002, 285)" (*ibid.*).

Should falsification of H_0 be achieved, then this occurs relative to a cut-value of, say, x (see p. 175 for details), such that – given a (mathematical) null probability distribution – "the probability of observing seven or more candidate events [as in fact happened] *in a sample free of top quark production* is 0.041" (p. 175, *italics added*), i.e., very low, given that, in the same sample, only "3.1 +/- 0.3 candidate events" (*ibid.*) are expectable. On a naïve view, this "result" will be interpreted as confirming the negation of H_0. Now, "[t]he central objection grew from the suspicion of bias in the [group's] choice of cuts – that they had 'tuned on the signal'" (p. 173), as the (same) group had considered a value of $2x$ one year ago (*ibid.*). Thus, generally, "the statistical significance of the data cannot be assessed as they stand. Conversely, assessing such statistical arguments *inherently* depends on knowledge of the procedures used to produce it" (p. 176). Rehg holds, this reservation is distinct from considerations concerning the *reliability* of instruments.

> The no peeking rule directly governs the experimenter's *psychological* states – what one is allowed to know and when. This makes sense inasmuch as the rule aims to exclude an objection that targets the

> experimenter's psychology, namely the charge of unconscious bias. From the perspective of Habermas's process ideals, bias represents a form of internal coercion. Thus the predesignation rule links the process ideal of uncoerced discourse directly with the content of evidential argument. One would expect such a link in the human and social sciences [!]. The (…) debate shows how important it can be in the natural sciences as well, *indeed to the point of making the logical cogency of a mathematical (statistical) argument inherently depend on procedural fidelity.* (p. 176, *italics added*)

The group's Evidence paper stuck to the lower cut-value (x), presented the data, but *avoided* the claim that evidence supports a falsification of the H_0 hypothesis (p. 179) (Following a second test run, the discovery claim was subsequently raised in another paper). With a view to Habermas's theory and its strong sense of consensus, Rehg observes, "the group did not converge on its consensus position on the basis of the same reasons, as Habermas's model requires" (p. 180), although "scientists oriented themselves toward the central dialectical standard: that cogent arguments should stand up to critical challenges in open debate" (p. 182).

Importantly, a report on this group-internal disagreement is *absent* from the Evidence paper. Therefore, despite any perceived dialectical adequacy of the process *for the insider* – constituting a warranted presumption of dialogical adequacy (see table 6.1, p. 188) –, hiding the disagreement makes it impossible for an outsider, e.g., the public, to evaluate (without additional information) "whether the level of consensus *tracks* the merits of the argument" (p. 187, *italics added*). After all, the consensus might be based on political pressure or be motivated by the sake of communicating a clear conclusion. A question, "modestly addressed to the paper authors" (p. 188) arises: "[I]n signing on to the [Evidence] paper without notice of the unresolved disagreements, have you misrepresented the merits of your argument?" (p. ibid.). At the same time, Rehg is careful to note the risk of open disagreement: "[S]pecial interests can find it politically useful to overemphasize disagreement in the science community for purposes of blocking policies and laws unfavourable to their agenda" (p. 189). Nevertheless, he claims that Habermas's model especially implicates (abrupt behaviour change in) science journalism which, to date, is not known for "digging into

the depth and dialogical quality of the positions reported in popular science venues" (*ibid.*).

Unlike the case of credit (see chapter 5) which was analysed as a *long-run* fruitful, therefore an epistemically justified temporary suspension of openness for the sake of sustaining social order, "the conflict between compromise and noncoersion is less easily reconciled with Habermas's model, particularly so in *short-run* contexts in which non-scientists [e.g., policy makers, the public] must rely on expert opinion for making practical decisions" (p. 191). Thus – here SSK methods, along with, e.g., considerations of collective judgement aggregation (*ibid.*) come in –, it is an *empirical* question if "untainted consensus actually exists" (p. 192), and another "to what extent (…) coercive social procedures drive the compromise" (*ibid.*). According to Rehg, giving an answer requires evaluating the potential of interdisciplinary cooperation between a Habermasian and SSK theorists, particularly those committed to relativism (to form *Critical Science Studies*, see below). In the limit of such cooperation: Although

> [o]ne might go considerable distance with SSK in this critical project (…) [in a way which] opens *all* consensus positions to sociological investigation. In the end, however, critics must still distinguish arguments on the basis of merits partly defined by counterfactual idealizations. (…) [W]e must still ask whether actual processes of inquiry and discourse warrant the presumption that compromises and social pressures, though present, have not seriously undermined the dialogical merits of a given outcome (…) (p. 192, *italics added*).

In the postscript to the second part, *Who's Afraid of SSK. The Problem and Possibilities of Interdisciplinary Cooperation*, SSK theorists "like Barnes and Bloor [are said to] insist on a kind of scepticism towards rational justification, or what I call 'justificational atheism'. This view puts the Strong Program [in SSK] directly at odds with Habermas" (p. 196) whose theory is said to

> commit us to the regulative idea of an intrinsically reasonable dialogue: a hypothetically reasonable dialogue untainted by any motive or influence that would detract from the reasonable construction and evaluation of arguments on their merits (relative to the available epistemic resources). (p. 197f)

It is this "rationalist commitment" (p. 198), Rehg explains, which grounds the distinction between collective outcomes (openly or insider non-)perceivable as dialogically adequate which (do not) track the merits of the arguments, in turn yielding one (or no) position as decisively superior (see. p. 188). Though allowing for ties, this commitment is said to "recall" the internal/external, epistemic/social asymmetry which SSK theorists denies when rejecting "that [over and above a merely *perceived* version, operative in science,] arguments could ever *have* an intrinsic force of their own, a force that could be distinguished from social context" (*ibid.*, *italics added*). On behalf of atheism, and by extension perhaps on behalf of compromises more generally, Rehg notes:

> [I]n saying that social conditions are 'ultimately decisive', atheists need not claim these are the sole determinant of outcomes or that science is unconstrained by nature. Rather, the phrase gains its sense from a context of explanation in which one wants to understand how, given the underdetermination of theories by evidence, scientist reach their conclusions. (p. 199)

Faced with *prima facie* incompatible conditions for cooperation, Rehg calls for "a lateral move, adopting the epistemological equivalent of John Rawls method of avoidance (Rawls 1996)" (*ibid.*). Practically speaking: Recognize differences, study cases (see p. 208). And do it such "that an SSK study of a given case can proceed without invoking a sweeping atheism and (…) that critical appraisal can appeal to less ambitious standards than the idealizations articulated by Habermas and others" (p. 200).

The terms on which critical science studies (CSS) may operate leaves the designation 'scientific vs. unscientific' "to the participants themselves" (p. 203), likewise for categories such as '(ir)relevant motive' or 'unchallenged presumption' (p. 201). Rather than define (un)scientificity in an *a priori* manner (p. 203), "we must state these factors [which a critical analysis identified] as explicit reasons for the consensus and then ask ourselves if our confidence in the consensus is thereby undermined" (p. 202), given the understanding of the aims of scientific inquiry – which is also left to the participants (*ibid.*). E.g., empirical success must not be the primary aim of

science. As it were, consensus situations that do not, upon reflection, *undermine* their own collective results deserve the presumption to approximate the ideal process – only such talk is avoided now.

Denying any claim to exhaustiveness, Rehg identifies three forms of critique which CSS may deliver when studying scientific discourse: criticism of background assumptions as empirically false (contrasting one science with another), exposing ideological commitments (as steering a research program), acknowledgement of the social and political agendas that shape science and its social implementation (p. 208). All are forms of "making presuppositions and influencing conditions explicit for purposes of critically assessing particular scientific arguments that have gained some level of acceptance among a group of scientists" (p. 203). If "the analysis is successful – (…) participants accept its results as conclusive or plausible enough to stimulate critical reflection on the science at issue" (p. 207).

A case in point is provided by a scenario involving two mutually incompatible models (or theories) both plausibly, but inconclusively supported by argument, and – as reasons for a consensus with respect to either model – also related to the social consequence of the respective model (p. 204). Imagine such a consequence pertains to what in Rehg's example is the "sociopolitical interest in the maintenance of traditional gender roles" (*ibid.*). Model 1, say, supports these interests, while model 2 rather supports emancipatory interests. Now, whoever construes her consensus position with respect to any of these model as a claim to "theoretical superiority" (p. 205) – i.e., a claim of being "worthier than [the other model] of our pursuit and provisional acceptance as theoretically more fruitful, that is, as the more accurate representation of nature" (p. 205) –, would be open to a dialectical critique. On this critique, which "targets a background assumption or social factor as unscientific" (*ibid.*), the second of the above factors (emancipatory interest) "is irrelevant as an explicit supporting reason and should undermine our confidence in the consensus" (*ibid.*). Note that the critique can be simply avoided by construing: 'Compared to the other model, ours is worthier etc. as socio-politically more fruitful (and as possibly the more accurate representation)' (*ibid.*).

This, Rehg submits, may make sense only as long as both sides share a conception of evidence and subscribe to a theory's principled underdeter-

mination by evidence. Here, evolutionary biologist and creationist/intelligent design theorist serve as examples of groups that "diverge too sharply for them to consider the other side's position as reasonable" (p. 206).

> SSK analyses, as I have presented them here, depend crucially on showing that the evidence for some scientific conclusion is not conclusive. Precisely this inconclusiveness opens the door to sociological factors. If this opening move is itself disputable in a given case, then a plausible argument can be made that the evidence for a consensus in science is indeed conclusive. Thus, the attempt to apply the dialectical critique to itself will in many cases boil down to a dispute over the status of the evidence for the primary scientific conclusion at issue – the kind of deep controversy exemplified in the creationist debate. (p. 207)

In preparation for part III, Rehg closed by noting the metaphysical status of Habermas's idealizations. To him, it appears as an unnecessary limitation in interdisciplinary potential, and is ascribed to the Habermasian *manner* of integrating the logical, the dialectical and the rhetorical perspectives" in a *philosophical* theory of cogency (p. 208).

> [T]he critical theorist must relax the general philosophical claims about the ideal grounds of cogency and rely instead on participant's *judgements* – what scientist perceive as cogent in the specific contest at issue. In this move one can see the first hints of a critical contextualism that radically repositions the framework of critical assessment. (p. 209, *italics added*)

Part III, *Toward a Critical Contextualist Framework for Interdiscipinary Assessment*, starts with chapter 7, *Adjusting the Pragmatic Turn: Lessons from Ethnomethodology*, which advertises no less than "a revised understanding of truth, objectivity, and dialogical idealizations" (p. 224). This shall result from "incorporating the radical challenge [posed by ethnomethodological accounts of scientific work by treating] "ideas of reasons [e.g., truth, objectivity] (…) [by their] function as modes of mutual accountability" (*ibid.*) and "dialogical ideals [e.g., inclusiveness] as rhetorical potentials" (p. 227).

The radical challenge to the "grand theory" (p. 223), i.e., Habermas's

formal pragmatics, stems from the deflationary research policy observed in ethnomethodology. According to it, "one's own ideas of rationality are set aside in order to attend more closely to the situated 'methods' or 'procedures' that members themselves used to produce social order" (p. 222). One is asked to "resists 'all efforts to build general models and to develop normative standards that hold across situations' (Lynch 1993, 306)" (p. 223) and to subscribe to the irremediable "indexicality of language" (p. 219), according to which "all language – and all meaningful behaviour – acquires a definite sense only in the concrete situation" (*ibid*).

> Applying this point to argumentation, we should say that its rationality lies in the practical, local achievement of cogent arguments. Formulated rules of argument and idealizations such as Habermas's pragmatic presuppositions are glosses, shorthands that acquire their intelligibility and relevance only in relation to the situated rationalities, the practical know-how of local practices. Competent arguers must *discover* each time the concrete methods, the situated rhetorics, by which they can argue reasonably. Consequently, one cannot simply invoke formal structures or idealizations to account for the rationality of argumentation. (p. 223, *italics added*)

The "dilemma" (*ibid.*) created by not allowing simple invocation consists in the *prima facie* necessity of these formal structures for an *external* mode of criticism in Habermas's "project of emancipatory critique" (*ibid.*). However, treating process idealizations (e.g., objectivity or inclusiveness) indexically (or: locally) yields the verdict that "as abstract ideals, they do not enjoy presumptive applicability to practice; rather their proponents must meet domain- and locale specific burdens of proof" (p. 230). As an alternative to the principled indifference which an ethnomethodologist might advertise at this point (p. 230), Rehg recommends that critical science studies adopt "the engaged attitude of the participants" (*ibid.*) and in "formulating indexically sensitive idealizations that participants find relevant in their situated accounting procedures (…) avoid a disconnected top down-approach" (p. 231) in favor of an *indirect* mode of engagement.

> Like ethnomethodologists, critical (argumentation) theorist strive to notice such situated details; like scientists, however, they take the stand-

> point of participants who are interested in the correct assessment of potentially controversial scientific arguments. This does not mean that critical theorists must (…) engage directly in this or that controversy. (…) [T]here is also an *indirect* or "vicarious" mode of engagement (…)[,]evident in those controversies in which participants [scientists] explicitly invoke argumentative ideals as part of their advocacy (…), particularly in interdisciplinary controversies (…). Argumentation theorists are *indirectly* involved in these debates insofar as directly engaged participants draw upon formulated ideals of argumentation. (p. 230f., *italics added*)

Thus, rather than first requiring expert status in a particular field, critical theorists can connect to context-transcendent ideals invoked by participants (most notably: 'truth', p. 227) which, in various ways – "through contact with philosophy of science, from science textbooks, works by public intellectuals" (p. 231) – , have disseminated from the critical theorists' field to that of the directly engaged scientist. On such an understanding, "a scientific truth claim assumes, not so much the counterfactual assent of an ideal audience, but rather the potential relevance and contextualizability of that claim in an *indefinite* range of scientific and extrascientific contexts" (p. 227, *italics added*), especially those pertaining to the "science-society interface" (p. 236) which "link technical choices with nonepistemic social values" (p. 235). However, " theorists meet the more radical contextualist challenge only when they recognize formulations as *no more* than potential accounting procedures (…)" (p. 231, *italics added*). Insofar as these formulations refer to process idealizations, e.g., "inclusiveness, equality, non coercion" (p. 229), Rehg claims, these terms are not applicable "to some ideal universal audience, but always to specific features of an institutional arrangement in some particular domain or locale" (*ibid.*).

> To render process idealizations more context sensitive, then, I suggest we view them as enduring sites of contest and reflection in social life – potential questions or rhetorical *topoi* that in principle remain open to context and thus can never be regarded by practitioners as finally settled. (…) Thus, to refer to process idealizations as rhetorical *topoi* does not so much deny their status as pragmatic presuppositions as specify it. (p. 229f.)

According to Rehg, the following four modes of criticism become possible: (i) a mode of either external or immanent criticism "drawing on sociological analysis to make explicit the political values that drive competing research agenda" (p. 232), e.g., a feminist critique of masculine bias in science; (ii) an immanent mode which "attempts dialectically to undermine or refute simplistic ideals of scientific method" (*ibid.*) targeting, e.g., "the positivist ideals of method" (p. 233), (iii) an ironic variant of the second mode aiming "to elicit justification [from participants] that elaborates the situated rationalities and local discretionary judgements that the [participant's] justification did not at first attend to" (p. 233), and, lastly, (iv) an external mode of criticism which remains compatible with the ethnomethodologist's indifference "[b]y choosing to study a group whose practices are assigned a marginal status by the dominant culture" (*ibid.*) and recognizing "possible alternative rationalities" (*ibid.*).

Furthermore, Rehg claims that his "critical contextualism supports a deliberative democratic model of science-intensive policy formation, for deliberative democratic procedures are designed for just such cross-contextual argumentation and dialogue" (p. 236). While "standards of cogency differ across different disciplines and social contexts" (p. 237) – and this claim *embraces* the relativism Habermas's criticized, e.g., in Toulmin's conventionalist notion of field dependent standards of validity –, a principled incommensurability does not appear to follow necessarily: "[W]hether two given contexts operate with commensurable or incommensurable standards is a matter that must itself be judged from a third context (Kusch 2002, 245-246, 277-279)" (*ibid.*). In adjusting the pragmatic turn *away from* a metaphysically absolutist notion of truth, and with reference to Hales's (1997) modal logic of relativism, a "consistent relativism" (p. 237) is advertised, according to which

> the thesis that everything true (or untrue) is true (or untrue) relative to some context or perspective is not self-contradictory – unlike the simplistic relativist thesis that 'everything is relative'. (…) But it [the relativism] remains compatible with a different sort of absolutism, namely the idea that at least some, and possible all, true statements are true in every perspective or context. This formal analysis thus allows the kind of cross-contextual moves and ideas of truth for which I have argued. (*ibid.*)

In chapter 8, *Three Dimensions of Argument Cogency – A Contextualist Case Study*, Rehg draws on a detailed case study, located at the boundary of science and society, on "a series of expert panels appointed by the National Academy of Sciences (NAS) in 1980, 1982 and 1985 to study the possible links between diet and health" (p. 242). Conducted by Hilgartner (2000) who draws on Goffman's (1959) dramaturgical sociology, the case study uses concepts such as "front and back regions [of a metaphorical stage], impression management, and information control" (p. 234). Here, "[t]he key to understanding the different fates of these [three] studies lies in the panel's success at impression management, which in turn depended partly on the institutional networks of expertise they could enlist in their support" (p. 244).

To reach his three dimensions of argument cogency with a model claimed to be similar to that of Wenzel and Habermas (p. 266), Rehg draws on the distinction between micro and macro process (p. 245), such that argumentation theory studies conversational transactions at the micro (or turn-taking) level, often with a particular audience in mind, while "public sphere theorist have studied argumentation as a broadly dispersed public process (…) often focussing on institutional structures that affect the quality of public debate" (p. 246).

> These observations suggest we divide the dimension of process according to its local and public contexts. We can then distinguish three interrelated dimensions of argumentation: the *argument* itself (the product), the local *transactions* in which arguers produce and engage arguments, and the *public* networks and arenas through which arguments spread and reach a large number of people. (p. 246)

Rehg can support this distinction by pointing out that, in the 1982 NAS study, both an "empiricist rhetoric" and an "expert-judgement" rhetoric are at work. The earlier "focus[es] the reader's attention entirely on the *content of the argument product*" while the latter "tacitly relies on claims about the quality of the *transactional process* through which the [NAS] committee produced its arguments" (p. 248). Unlike the 1982 version, however, in light of shortcomings with respect to transactional quality, the 1980 and the 1985 documents "failed as attempts at *public* argument" (*ibid.*), i.e., failed as argumentation that may be considered *cogent in the public context*.

> [P]articipants can evaluate the strength or cogency of an expert argument according to (a) the argument's content, (b) the quality of the transaction that produced the argument, and (c) the ability of the argument to appeal to a wider reasonable public that finds it relevant, thought provoking, or convincing [the latter being glossed as the argument's ability to "travel"]. (p. 250)

Crucially, while the NAS expert panel may be described as local, the issue discussed (the connection between diet and health) is of public interest. Coining a new term, "[a]rguments that win broad acceptance *across* a well-structured social space of multiple local (and reasonable) transactions enjoy (…) 'public merits'" (p. 251, *italics added*). Such enjoyment presupposes that "people in different transactional locales and domains can engage the argument and accept it" (*ibid.*). Importantly, should the social space be well structured to begin with, then "the ascription of public merits is (a) independent of the merits we can identify in the argument itself on the basis of logical and topical standards and (b) differs from the transactional merits we can attribute to the argument as persuasive in this or that particular locale (…) " (p. 252).

Content merits, transactional merits and public merits, then, are construed as differentially important according to "the locally situated occasion of the argument" (p. 253). The NAS study provides evidence for these claims, amongst others insofar as, *locally*, exclusionary tendencies among the NAS panel may be said to have sustained social order, while, *publically*, the very same tendencies have provided reasons to doubt the interactional quality of the NAS arguments and thus its recommendations.

Generally, which of the three merits is most important, is a matter of context; "[n]or does the model require every argument to have all three sorts of merit – that too is a context-sensitive matter" (p. 266). "I also leave open the possibility that for some evaluative purposes it may suffice to examine only one type of merit, even if we could in principle assess the argument more comprehensively" (*ibid.*). Rehg hesitates to attempt an integration of the three dimensions, seeing neither a need nor a possibility, but treats them as a heuristic (p. 267).

> Rather than start with an integrated prescriptive definition of cogency,

> the critic must *delve* into the particular case and first become familiar with the normative concerns of the participants themselves and how they attempt to integrate those concerns. (…) In making such critical assessments, argumentation theorists enter the fray at the same level as critical participants: the contextualist framework does not bestow privileged status on those who adopt it. (p. 267f.)

Thus, the critic, as Rehg writes, "must find a basis for taking a justified stand on a particular interpretation of merits, or on the cross-contextual relevance or certain transactional standards, and so on" (p. 268). In the full sense, then, the critic has become part of the action. She can no longer invoke ideals and be done justifying them. "But neither does she have to accept whatever it is that the participants happen to believe about cogency" (*ibid.*). Rather, her critique must prove its reasonability in the concrete case. Though some normative demands might be "'absolutes' in the sense of holding in every context, or at least every context at issue" (*ibid*), it remains true that "the real challenge for critique arises when standards are contested, either in their relevance or in proper interpretation (…)" (*ibid.*). Lacking a basis from which to take a justified stance for one's critique, the question of the good society arises, specifically: "a vision of science in society" (*ibid.*).

The final chapter 9, *Critical Science Studies and the Good Society*, starts with a recapitulation of Rehg's approach in the face of "challenges connected with post-Kuhnian science studies" (p. 269) and a description of his approach to "scientific inquiry as a socially embodied constellation of *argumentative* practices" (*ibid.*). The challenge and motivation for his book are stated to consist in finding "a comprehensive concept of cogency that can integrate the prescriptive perspectives favored by philosophers and the descriptive perspectives of the social sciences" (p. 270), to yield a "framework for fruitful interdisciplinary exchange" (*ibid.*), to which Rehg holds critical science studies (CSS) "deeply committed" (p. 275).

> The key move involves a shift from the traditional evaluative perspectives (logical, dialectical, rhetorical) to a context-oriented framework [content, transactional, and public merits]. Rather than start with the ideal that a cogent argument must satisfy a specific set of logical, dialectical, and rhetorical standards, I subordinate the traditional perspectives to

> the different levels of context that condition the meaning and relevance of the standards those perspectives highlight. (…) One thus understands ideals substantively, in the rhetorical, context-specific sense, from case to case. Similarly, the idea of a single objective world, along with the specific pragmatic commitments entailed by making truth claims about that world, also acquires an indexical component (…). (p. 271)

Free of certain ideals, critical contextualism starts and ends in contexts. Of these, the most important with respect to grounding critique seems to remain that of discussing "the direction science and technology ought to take in today's society" (p. 276). In fact, the relation between science and society appears as the ultimate evaluative context. Though rather unwilling – "[i]f one must put the critical contextualist approach into single integrated statement" (p. 277) –, Rehg offers the following "procedural statement" as a methodological recipe:

> *Cog (A): To assess the cogency of argument A*,
> (1) *start with the context of origin* C_O: assess the content, transactional, and public merits of *A* as it is interpreted in C_O, according to (a) the logical, dialectical and rhetorical standards relevant in C_O, and (b) the goals of scientific argument in C_O;
>
> (2) *evaluate the broader public merits of A*: ask whether there are further relevant contexts C_R for assessing the cogency of *A* (e.g., related scientific disciplines, technological and medical contexts, interested lay publics); if there are, then assess *A* according to the standards and goals relevant in C_R;
>
> (3) *situate the critique, and settle conflicts between (1) and (2)*: ask whether the relation between science and society, or the goals and problems currently relevant for science in society, call for an assessment of *A* from the standpoint of further evaluative context C_E. If the answer is yes, then assess *A* in relation to standards relevant in C_E.

This recipe is obviously oriented not so much to "interdisciplinary controversies within the sciences in which all parties are geared towards empirical truth" (p. 287), but rather to "policy-relevant scientific arguments [which] move across fundamentally distinct cognitive domains" (*ibid.*) As

Rehg stresses, it is not at all clear that "contextualist democratic inclusion" (*ibid.*) of the public can or should settle the matter. If there is a "final arbiter" (p. 289), then it comes about by "inclusion of all the relevant contexts, scientific and lay" (*ibid.*). This is the maximum of prescription Rehg seems willing to admit. Also therefore, we would do well "to expect (…) case-specific complexities" (*ibid.*).

On the final pages, complexities are addressed in terms of the relevance of arguments for contexts (rather than the other way around) and the transformation of arguments in "travelling" from one context to another. While these, as well as the larger controversies over standards, such as that between evolutionary biology and creationism, seem to pose challenges for contextualism, Rehg is "not sure that the metacritical framework settles these deeper questions" (p. 290). And yet, as the last paragraph states:

> If that analysis is on target, critical assessment finds its grounds in a vision of the good society and its relation to scientific knowledge. As a meta-critical framework, contextualist CSS does not fully specify a single vision of the good society. Pushed to this deeper level, reasonable critique must argue for one vision over its competitors. The analysis of such argumentation takes us beyond the present work (but see Cooke 2006), though I suspect that effective arguments depend on innovative transformations of practices and social institutional experimentation in which members acquire direct experience of alternative visions. In any case, a vision of the good society constitutes the final, encompassing context of evaluation in which all other contexts presumably emerge and find their place.

3. Evaluation

Rehg's book is a substantive achievement, drawing on a very wide range of relevant literature from various disciplines (The reference list is 22 pages long; at entry # 102, we reach the letter F). Most importantly, Rehg manages to establish critical contextualism as a live option for future interdisciplinary research *vis-à-vis* current approaches, notably (relativistic) sociology of scientific knowledge and Habermas's discourse theory. In my opinion, he rightfully accuses both for incurring one or the other dogma which

hinders interdisciplinary cooperation. In contrast, critical contextualism appears able to fruitfully address and inform fields dealing with questions traditionally located in philosophy of science and political science.

The strength of his book lies in Rehg's mastery of the subject and the clear presentation of argumentative merit (content, transactional, and public) by means of rich examples. Rehg shows us that rather insurmountable difficulties arise in applying the current state of the art. If there is a single message in the book, then it might be put as follows: 'The devil is the details and which detail matters is primarily a question of context. So, stop waving your hands above participants' heads and, instead, engage with the material.'

A second strength lies in what the author manages to avoid, both substantially and exposition wise. A topic such as his is prone to drown in technical detail, rhetorical over-effort or meaningless philosophical dispute. Rehg stays clear of these traps, instead providing a comprehensive overview of the contexts and contributions constituting his issue. Substantially, on the other hand, his contextualism is conceived strong enough to render a critical analysis of socially relevant scientific argumentation possible, yet weak enough to not preclude its result in favour of a material standpoint. Thus, his critical contextualism successfully avoids constituting a moral theory in disguise.

It may be debated, if Rehg manages to *integrate* (in the literal sense of the word) the rhetorical, the dialectical and the logical perspective. In fact, I am neither sure that he fully intended to do so, nor that he did not. Perhaps, not so much hinges on integration, but one may suspect the issue will be taken up by critics. What we likely will not see, are complaints regarding the self-applicability of Rehg's ideas – the critic's favourite move. With a single exception (see the longer quote from the second postscript, p. 207), considerations of self-applicability do *not* play an explicit methodological role in Rehg's work. Given what he *does*, however, one may assume that securing self-applicability is important to Rehg and that he has successfully minded this constraint.

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