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-

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,

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[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

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[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,

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[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-

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[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-

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[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-

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[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

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[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

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[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.

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[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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