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Reflections on Reflective Practice (6b/7)

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Note: This is the second of three parts reviewing the implications of the work of Habermas for reflective professional practice. The first part appeared in the *Bimonthly* of September-October 2009; the third and concluding part is planned for a later *Bimonthly.*

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*Editorial note:
Tables and endnotes are numbered consecutively through the three parts of this essay on Habermas' contribution to practical philosophy.

Part 6b: Argumentation theory and practical discourse – Habermas 2

We are still engaged in an effort to review the practical philosophies of Aristotle, Kant, and Habermas, to see what we can learn from them for the purpose of grounding reflective practice philosophically. The discussions of Aristotle and Kant were detailed but still found place within a single essay each. The current discussion of Habermas, however, takes more space and I have therefore decided to split it into three parts (see the right-hand note). Before we continue with the second part, it may help returning readers if I briefly sum up where we stand; should you be new to the *Bimonthly,* I recommend you read the previous Part 6a/7 to facilitate your reading of the present Part 6b/7 (click on the "Previous" button at the top right of this page).

We have found an essential aim of the practical philosophy of Jurgen Habermas in his concern for *strengthening noninstrumental patterns of reasoning and social rationalization.* The central notion is "communicative rationality," the idea that people can peacefully coordinate their interests and actions through communication aimed at mutual understanding and (where necessary) backed by argumentative rather than non-argumentative means of conflict resolution. Further, inasmuch as argumentation is employed, communicative rationality implies that it goes along with a cooperative attitude rather than with a non-cooperative stance of merely "strategic rationality." We have considered in some detail the language-analytical and speech-act-theoretical foundation that Habermas proposes for comunicative rationality, and have then moved to the second of the three levels of analysis we distinguished in Table 1*, the level of "discourse." The core issue at this second level is the question of what constitutes a good argument; that is, we are entering the field of *argumentation theory.*

We have seen that Habermas analyzes the "general pragmatic presuppositions" of argumentation from three complementary perspectives,

the perspectives of process, procedure, and product. Argument as *process,* we said, is about the effectiveness of communication in achieving the telos of mutual understanding; as *procedure,* about provisions for securing rationally defendable agreement; and as *product,* about the assessment of the strength of validity claims. The first part of this introduction to the practical philosophy of Habermas ended with a discussion of his reconstruction of the "process" perspective in terms of the requirements of "rational motivation" – the idea that a cooperative attitude should orient the argumentative process – and of the "procedure" perspective in terms of the general symmetry conditions of an anticipated "ideal speech situation" – the idea that discourses should be open to everyone concerned and should allow a free and equal exchange of arguments. Although these conditions are never fully given, or at least we should not assume they are, they are nevertheless operative as soon as we enter into a discourse; for we cannot reasonably argue without assuming it is indeed possible to improve mutual understanding communicatively.

So much for a short glance back at where we stand. If we now are to move beyond these general presupposition, let us try and see how exactly argumentation, assuming such conditions, can play the role of a "court of appeal" (Habermas, 1984, p. 17) that helps us settle differences peacefully, "with reason" rather than "with force." To answer this question, we now need to turn to the "product" perspective, which deals with the difficult issue of what constitutes (in traditional rhethoric terms) a "convincing" or (in pragmatic terms) a "cogent" argument. That is, we have to clarify the *argumentative logic of discourse* – the key issue of argumentation theory. Since it is a key issue, and since it is at the same time a difficult issue that has remained largely unresolved in the history of logic and argumentation theory, I will dedicate a large portion of this essay to it, before then turning to a much shorter discussion of the fourth and final requirement of discourse, the need for always being able and allowed to raise argumentation to a higher level of self-reflection. This will lead us in the end to a summary account of the central concept of "practical discourse" – the employment of discourse for settling questions of what we "ought" to do – and to a brief appreciation of the main lessons that we might want to learn from this discussion with a view to the project of promoting reflective practice.

3. 'Cogent argumentation': the step from a deductive logic
of inference to a pragmatic logic of argumentation

If we want to settle our differences discursively rather than strategically, the crucial questions becomes: How do we *assess* the validity (conclusiveness) of arguments? This is a crucial issue – perhaps *the* most crucial issue in any conception of communicative rationality – and I will therefore discuss it in some detail, drawing not only on Habermas but on a brief review of the development that leads from Aristotle via modern logic and argumentation theory to Habermas. Unless we clarify this issue, we cannot translate the procedural notion of rationality that we have associated with the ideal speech situation thus far into clear rules and criteria of what it means to rely on the force of the "better argument." If arguments are to be the only force that should decide for or against disputed validity claims, we need to be clear about the argumentative logic required – the logic of "good" (i.e. conclusive) argumentation.

Aristotelian logic The traditional approach to this question, of how we can assess the conclusiveness of arguments, goes back to Aristotle's logical writings, the *Organon,* and particularly to his work on the syllogism in *Prior Analytics,* an early theory of the logic of inference (Aristotle, 1984a). Logic (or analytics, as he called it) was for him quite simply the science of valid inference. The central concept is that of a *deduction,* or in Greek: *sullogismos* (a term that has a somewhat broader meaning to Aristotle than the term "syllogism" has today in formal logic). In Aristotle's words:

> A deduction is a discourse in which, certain things being stated, something other than what is stated follows *of necessity* from their being so. I mean by the last phrase that it follows *because of* them, and by this, that no further term is required from without in order to make the consequence necessary. I call *perfect* a deduction which needs nothing other than what has been stated to make the necessity evident. (1984a, I.1, 24b18-24, italics added)

That which is stated at the outset is the *premises,* and that which follows is a *conclusion.* The deductive argument that leads us "of necessity" from the premises to the conclusion is what Aristotle calls a *sullogismos;* and when the deduction is perfect, that is, requires no other backing than what has been stated in the premises, he calls it a *demonstration.* Note that Aristotle's definition allows for logical (analytical) as well as causal (scientific) and principled (rule-based) reasoning, which is to say, it relies on an

understanding of the "because of" behind "necessity" which includes both analytic and substantial reasons.

Perfect vs. imperfect deduction Aristotle's particular interest in the *Prior Analytics* is in the question of "what sort of deduction is perfect and what imperfect" (1984a, I.1, 24a13). The distinction allows him to analyze the special case of merely analytic reasoning without losing sight of the general case of conclusive reasoning that he associates with deductive argumentation. Analytic reasoning is "perfect" in the sense that it is self-contained, that is, it does not depend on any evidence beyond what is stated in the argument. All other forms of deductive reasoning are "imperfect" in that they may turn out to be not so self-contained, although they still represent forms of conclusive reasoning. As an example of a perfect deduction (or demonstration) we may think of a mathematical equation. If we resolve it properly, that is, according to the rules of mathematics, it yields a result that is correct of necessity (i.e., by definition) and thus requires no further backing of an empirical or other kind. By contrast, we may think of an astronomer's prediction of the next eclipse of the moon as an example of an imperfect deduction.

The next eclipse of the moon: an example of 'imperfect' deduction Aristotle himself refers to this example in the *Posterior Analytics* (1994b, I.8, 75b33). He does not detail it in any way though, so let me do it for him. Like any forecast, predicting a lunar eclipse depends on empirical premises in the form of a record of past observations of the phenomenon in question (in this case, the moon's moving through the shade of the earth) and moreover, some insight into the statistical and/or causal patterns that describe or explain this observational record. On this basis, astronomers can calculate the exact time and location of the next lunar eclipse (the conclusion) with a reliability that is virtually beyond doubt. Most scientists will accordingly tend to see the argumentative step from the premises to the conclusion as embodying a rigorously deductive kind of reasoning, quite along the lines of Aristotle's basic concept of deduction. It is quite clear to them, however, as it was to Aristotle, that the deduction is not "perfect" in the same way as the mathematician's, in that it is never a contradiction in itself to assume that such a prediction may turn out to be wrong. However rigorous the argument is, we may not possess sufficient knowledge of all the empirical conditions

on which it depends.

Induction, or 'after analytics' In the case of astronomical forecasts, the success of past forecasts gives us good grounds for assuming that the astronomers got their records and calculations right. In fact we have so much faith in their calculations that we tend to forget that the validity basis of such astronomical forecasts, just like that of any other forecasts, includes some *inductive reasoning* – a well-grounded conclusion from particular observations of the past to general propositions that will hold in the future. This logical step is what we call "induction." It is different from deduction in that the conclusion is not merely tautological but adds new information to the premises (past observations). This may be more obviously problematic with other forecasts, say meteorologcial or economic forecasts; but the crucial difficulty remains the same. It consists in the unavoidable assumption that our premises capture all the relevant phenomena, as well as the causal or statistical relations between them, in a way that describes the future as well as the past. On this assumption rests the (imperfectly) "deductive" character of the conclusion as Aristotle understands it. But of course, since the premises and the way we use them contain statements of an experiential (observational and theoretical) nature, we may some day find them to describe "some" rather than "all" of the relevant phenomena, namely, if some previously unknown exceptions or other restrictions emerge. Imperfect deductions may therefore always be challenged on rational grounds, and may then require some additional evidence as to why in the specific case the step from the premises to the conclusion is warranted or else, on what additional conditions not previously stated it depends – the "further terms from without" to which Aristotle refers in his above-quoted definition of a deduction.[6)]

This is different from perfect deductions or "demonstrations," which rely on premises that either are logically necessary (namely, by definition, within an axiomatic system such as logic or mathematics) or else have been established beyond any reasonable doubt to represent truly universal propositions (say, laws of nature) or principles (say, basic human rights). While it may be the *aim* of science to "demonstrate" the nature of things as an expression of the universal laws of nature (1984b, I.2, 71b17–32); and of ethics, to "demonstrate" principles of the virtuous life that hold good usually (though

not necessarily universally, 1985, I.3, 1094a22), Aristotle reminds us that the normal methods of science and ethics nevertheless argue *towards,* not *from,* universal propositions or first principles. That is, inasmuch as they involve more than inductive reasoning, they embody forms of imperfectly deductive reasoning, in which the premises include some inductive elements. Demonstrations thus remain a special, ideal case of deductive argumentation, and deductive argumentation a special case of logical reasoning. Already for the founder of formal logic it was thus clear that a satisfactory logic of argumentation could not be reduced to a logic of analytic (or "perfect") reasoning, which is what is now generally understood by deductive logic. A broader notion of argumentative conclusiveness is called for. *Imperfect rather than perfect deduction – substantial rather than analytical inference – is the daily bread of argumentative practice,* in the fields of science and ethics no less than in everyday life.

The need for warranting principles Aristotle's distinction between perfectly and imperfectly deductive argumentation it itself imperfect, in that we cannot maintain it in argumentative practice. Imperfect deduction always raises the issue of how we are to establish universal propositions that can serve as basic *warrants* (or in Aristotle's terms, "principles") for conclusive argumentation. It thus depends on a complementary logic of induction. This is the topic of Aristotle's (1994b) *Posterior Analytics.* Its core difficulty is that universal propositions or "appropriate principles" (1984b, I.2, 72a6) cannot be deductively *demonstrated,* for perfect deductions depend on such principles in the first place: "one cannot demonstrate anything except from its own principles." (1984b, I.9, 75b37, cf. 76a13-17 and II.19, 99b20f) Hence, some alternative, non-deductive (or more exactly: non-demonstrative) forms of argumentation are required, which Aristotle describes in terms of *episteme* (theory of science) and *nous* (theory of first principles) and later, in his practical philosophy, also in terms of *phronesis,* the art of deliberation about the "right way" to orient our practice towards *eudaimonia* (my definition in Ulrich, 2009a, p. 14). These alternative modes of argumentation are all part of Aristotle's concept of reason *(logos),* the rational faculty or activity of the soul that makes humans aware of the good and the true. In more contemporary terms: although they are fallible rather than "perfect," we can still assess their conclusiveness rationally.

In sum, Aristotle's notion of conclusive argumentation was not merely deductive, and his understanding of deductive argumentation or *sullogismos* was not purely analytic. Instead, he allowed for the possibility that a deductive conclusion might add *new information* to what was stated in the premises; and he gave a complementary role to deductive and inductive reasoning in that each entailed elements of the other. For the founder of deductive logic, the *Prior* and the *Posterior Analytics* formed a whole just like theoretical and practical philosophy, too, formed a whole.

Symbolic logic After Aristotle, argumentation theory did not develop much for a long time, and when it did start to develop again, things went somehow downhill. Aristotle's comprehensive conception of logic was increasingly narrowed down; the discipline of logic was transformed from a theory of argumentation as he had envisioned it – a logic of deductive and inductive inference that could be used as a tool of argumentation in all fields of knowledge and practice – to a theory of analytic reasoning *only*. Since the 17th century, through the work of logicians and mathematicians such as W. Leibniz, G. Boole, A. de Morgan, J. Venn, C.S. Peirce, G. Frege, G. Peano, A.N. Whitehead, B. Russell, and many others (for an introduction, see, e.g., Smith, 2009), the study of logic has developed into the highly formalized system of contemporary mathematical or symbolic logic, which may be thought of as a kind of "algebra of logic." Its main branch, *propositional calculus* (also called propositional logic), tells us how by means of logical operators such as "and," "or," "not," "if," "only if," and "if … then," we can combine and transform basic sentences or propositions (understood as strings of symbols that are associated with some defined meaning) into more complex propositions without changing their so-called truth value, a proposition's relation to truth (i.e., its being true, false, probable, or conditional). As Aristotle might have commented, had he experienced this development: "perfection" won out over meaningfulness at the expense of relevance.[7]

Toulmin's new beginning When Stephen E. Toulmin's (2003) book *The Uses of Argument* first appeared in 1958, it offered an entirely new approach to the theory of argumentation. The book does not deal extensively with Aristotle; but by returning to Aristotle's almost forgotten quest for a logic of

argumentation that would help us establish conclusions in different fields of science and practice, it managed to challenge the established discipline of formal deductive logic more seriously than any other work did since Aristotle's day. By trying to be relevant rather than "perfect," it made it painfully apparent to logicians how far their field had moved away from any argumentative practice. It was accordingly unpopular with them, they called it "Toulmin's *anti-logic* book"! Despite such unfriendly early reception, the book has long since become a standard text for anyone studying the theory and practice of argumentation, or what soon became known as "the Toulmin model of argumentation." Meanwhile, due to the efforts of Jurgen Habermas to integrate Toulmin's work with the speech act theory of Austin and Searle and with his own formal pragmatics, it has found even wider recognition as a pioneering outline of a non-analytic – more accurately*:* not *merely* analytic – logic of argumentation. Accordingly, it is now often referred to as the *Toulmin-Habermas model of argumentation.*

The semantic and pragmatic turn of argumentation theory In the light of our previous discussions of speech-act theory and of deductive logic, the aim of an "imperfect" but relevant logic of argumentation is clear**:** rather than operating at a purely syntactic level of securing well-formed propositions or chains of propositions (WWFs, well-formed formulae), it needs to offer us a way of grasping the semantic meaning and pragmatic relevance of arguments in specific and changing contexts of argumentation. It must, in other words, not be blind to issues of *hermeneutics* (How may we understand the situation?) and *practical philosophy* (What would in a thus-understood situation constitute rational action?). This becomes obvious as soon as one thinks of the expressive (e.g., emotional) and normative (e.g., moral) content of speech acts**:** the form and "truth value" (cf. note 6) of utterances and even their propositional content may remain the same, yet the semantic and pragmatic implications we associate with them may change. Hence, to secure argumentative conclusiveness in a sense that considers the relevant *contexts of meaning and action* at play, we need a richer concept of conclusiveness, one that replaces deductive *necessity* by pragmatic *cogency* as the central notion (a term yet to be defined). In addition, a practically useful model of rational argumentation might also need to consider that the nature of the argumentative *process* is not irrelevant for assessing the rationality of the

outcome; that is, we may need to adopt a partly *procedural* notion of validity; for the argumentative practices by which a conclusion is reached matter as much as its form and content. In the terms that today's logicians use, such an account of argumentation would represent a piece of *"informal" logic* rather than formal logic; in our own terms of reflective practice and critical pragmatism, it would allow us to measure the strength of arguments against varying contexts and procedures of argumentation rather than just requirements of well-formedness.

Toulmin's jurisprudential analogy   As a basic alternative model for informal logic, Toulmin (2003, pp. 7f, 10, 39, 235) boldly proposed a *jurisprudential analogy*, for two main reasons as I understand him. First, in legal proceedings it is more clear than in formal logic that valid conclusions are always the result of credible *argumentative practice.* And second, legal practice renders it more obvious than the study of formal logic that the origin and target of argumentation is always a disputed *validity claim,* the meaning and validity of which depends on the specific circumstances. By contrast, the development of formal logic since Aristotle has led away from such practical and empirical issues; it has therefore also failed to study the differences and similarities of conclusive argumentation in applied fields of argumentation such as science, law, or medicine. Toulmin does not claim that judicial practice provides a perfect model for all the other fields; but at least, he argues, it leads us beyond the narrow perspective of modern logic towards a broader, practically oriented framework**:**

> The claim implicit in an assertion is like a claim to a right or to a title. As with a claim to a right, though it may in the event be conceded without argument, its merits depend on the merits of the arguments which could be produced in its support. Whatever the merits of the particular assertion may be – whether it is a meteorologist predicting rain for tomorrow, an injured workman alleging negligence on the part of his employer, a historian defending the character of the Emperor Tiberius, a doctor diagnosing measles, a businessman questioning the honesty of a client, or an art critic commending the paintings of Piero della Francesca – in each case we can challenge the assertion, and demand to have our attention drawn to the grounds (backing, data, facts, evidence, considerations, features) on which the merits of the assertion are to depend. We can, that is, demand an argument; and a claim need be conceded only if the argument that can be produced in its support proves to be up to standard. (Toulmin, 2003, p. 11f)

And hence:

> Arguments can be compared with law-suits, and the claims we make and argue for in extra-legal contexts with claims made in the courts, while the cases we present in making good each kind of claim can be compared with each other. A main task of jurisprudence is to characterize the essentials of the legal process**:** the procedures by which claims-at-law are put forward, disputed and

> determined, and the categories in terms of which this is done. Our own inquiry
> is a parallel one**:** we shall aim, in a similar way, to characterize what may be
> called "the rational process," the procedures and categories by using which
> claims-in-general can be argued for and settled. Indeed … law-suits are just a
> special kind of rational dispute, for which the procedures and rules of argument
> have hardened into institutions." (Toulmin, 2003, p. 7)

My personal experience with judicial practice may not exactly suggest as
close a "parallel between procedures of rational assessment and legal
procedures" as Toulmin (2003, p. 39) proposes; mechanisms of power and
institutional selectivity play an all too pronounced role for that. But then, is
judicial practice so different from other fields in this respect? As a matter of
principle (and indirectly also, as a critique of judicial practice), it is indeed
difficult to see why a *sound* argument in support of a disputed legal right or
title (say, to a property or a professional qualification) should be
fundamentally different in nature (or better, logic) from a sound argument in
support of any other disputed assertion or claim, including scientific, moral,
and philosophical claims. Toulmin's judicial metaphor is thus not as odd or
arbitrary as it may look at first. As the reader may remember from an earlier
essay of this series in which we discussed Kant's concept of practical reason
and the role of the principle of universalization in it, it was in fact Kant
(1787, Axif, Bxiii, and B779) who first used the judicial metaphor to
describe the aim of his critical philosophy**:** the three *Critiques* were to
subject reason in all its employments to the "court of pure reason" or to
"reason's self-tribunal" (see Ulrich, 2009b, pp. 2 and 14; cf. 1983, pp. 199
and 2003). Toulmin does not mention Kant,[8] but his intent is similar**:**

> There is one special virtue in the parallel between logic and jurisprudence**:** it
> helps to keep in the center of the picture the *critical* function of the reason.… A
> sound argument, a well-grounded or firmly backed claim, is one which will
> stand up to criticism, one for which a case can be presented coming up to the
> standard required if it is to deserve a favorable verdict. How many legal terms
> find a natural extension here! One may even be tempted to say that our
> extra-legal claims have to be justified, not before Her Majesty's Judges, but
> before the Court of Reason." (Toulmin, 2003, p. 7f)

Constant and changing elements of argumentative logic Toulmin's "court
of reason" differs from Kant's in that it is constituted by practitioners of
different fields of professional practice such as law, medicine, science,
business, ethics, philosophy, mathematics, cultural criticism, and so on,
rather than by "pure reason." Consequently, since argumentative practice
takes place in such different *fields of argument* (2003, p. 14f), we have to
expect that it will be couched in different conventions or "canons" (2003,

pp. 15f and 34) and thus will employ changing, *field-dependent* criteria or standards of assessment (2003, pp. 15, 28, and 33-35). That does not imply, however, that the basic procedure by which argumentation reaches well-grounded conclusions needs to be different in each field; Toulmin treats this issue as an open empirical question. We may well be able to uncover some general, basically *field-invariant* (2003, pp. 15 and 33-37) features, which we may then understand and teach as a skeleton or basic *layout of arguments* that applies to all fields or uses of argument (2003, pp. 40 and 87-134).

If I understand Toulmin correctly, his core idea, then, is something like this**:** taking into account the *field-specific* characteristics of an argument will free us to focus on the *field-invariant* logical patterns at play. By paying attention to what changes, we can learn about what remains the same, namely, the ways we combine field-invariant with field-specific features to formulate strong arguments. Although Toulmin does not explicitly say so, it seems to me he applies this core idea to the philosophical task of constructing a general logic of argumentation as well to the practical job we all do every day of assessing specific arguments in real-world situations of problem solving and decision making. With his notion of a "field of arguments," Toulmin makes sure the general framework allows for the changing semantic and pragmatic contexts of argumentation that we have found missing in the deductive-logical model of rational argumentation. That is, *we need not escape into abstract, formal logic to ensure general applicability and validity!* Taken together, then, Toulmin's message is**:** an argument can be made to the effect that we all may, in our argumentative practice, consider particular argumentative contexts of meaning and relevance and yet apply forms and procedures of argumentation that are universally valid and rigorous. Whether the argumentative contexts are adequately specified in the disciplinary or institutional terms of different fields of professional practice such as those we have mentioned is another matter that need not concern us at this point; I rather doubt it.[9]

A comparative empirical approach The task that Toulmin mapped out for argumentation theory is then clear. The main difficulty in developing a generic model of argumentation consists in the great variety of argumentative circumstances and purposes in different fields. In response to

this difficulty, Toulmin sees logic as a philosophical discipline that includes comparative empirical analysis of the actual *working logic* – the argumentative patterns – used in different fields of argumentation, as distinguished from the idealized logic of logical theorists (2003, pp. 9 and 135-194).

As an example of such empirically generalizing analysis, Toulmin (2003, pp. 17-40) analyzed the use of modal terms such as "possibly," "might," "presumably," "chances are," "certainly," or "necessarily" in different fields of argumentation. How do people use such terms to qualify claims or to criticize and defend arguments? He found that although the *criteria* (standards, grounds, reasons) for asserting or questioning such qualifications vary with the field, the qualifications (or logical modalities) themselves have the same argumentative *force* (i.e., implications of use, p. 28) in all fields. For instance, taking the example of qualifying a suggestion as "possible," Toulmin reports**:**

> In order for a suggestion to be a "possibility" in any context, ... it must "have what it takes" in order to be entitled to genuine consideration *in that context.* To say, in any field, "Such-and-such is a possible answer to our question," is to say that, bearing in mind the nature of the problem concerned, such-and-such answer deserves to be considered. This much of the meaning of the term "possible" is field-invariant. The criteria of possibility, on the other hand, are field-dependent, like the criteria of impossibility and goodness. The things we must point to in showing that something is possible will depend entirely on whether we are concerned with a problem in pure mathematics, a problem of team-selection, a problem of aesthetics, or what; and features which make something a possibility from one standpoint will be totally irrelevant from another.… "Can" and "possible" are, accordingly, like "cannot" and "impossible" in having a field-invariant force and field-dependent standards. This result can be generalized**:** all the *canons* for the criticism and assessment of arguments, I conclude, are in practice field-dependent, while all our terms of assessment are field-invariant in their *force.* (Toulmin, 2003, p. 34f)

The unchanging layout of argumentation Based on this kind of comparative empirical analysis, Toulmin proposes a field-invariant "layout" of argumentative procedure and logic that any sound arguments tends to follow in practice. We can summarize it in a basic and an expanded scheme. Figure 1 shows the basic scheme, Figure 2 the enlarged scheme.
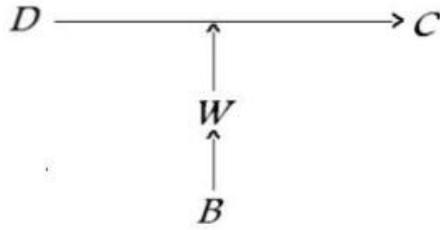
Fig. 1: The layout of arguments (basic scheme)
Source: adopted from Toulmin, 2003, pp. 92 and 97

The basic scheme works with four components**:**

> **C = Claim:** a conclusion to be justified. Example of Toulmin (2003, pp. 92-99, slightly adapted here): "Harry is a British citizen."

> **D = Data:** an empirical observation or a statement of "fact" that is offered as evidence for C. Also called **G = Ground** (esp. in Toulmin et al, 1984). Example: "Harry was born in Bermuda, a British overseas territory."

> **W = Warrant:** a rule or principle that justifies the step (transition) from D to C. Example: "A person born in a British overseas territory will generally be a British citizen."

> **B = Backing:** some evidence or a general reason in support of W, to be supplied if citing W is not sufficiently convincing to all those addressed. There are two logically different kinds of B**:** If B implies C, the argument is merely analytic, as in syllogistic logic. If however C is not implied in B (the more important case for argumentative practice), then the argument is substantial, that is, it adds information and is not covered by syllogistic logic. Example (of the substantial kind): "This is so on account of the following statutes and legal provisions: … (e.g., the *British Nationality Act 1981* and the *British Overseas Territories Act 2002*)."

Of these four components, the first three are required and are therefore usually explicit in any sound argument, whereas the fourth is required only if someone challenges the warrant W, and will thus remain implicit in many arguments. But since a challenge is always possible, any argument consisting of the first three components (D, W, so C) implies the availability of the fourth (i.e., some B) and may, if doubted, need to make it explicit (D, W, B, so C). But what happens if B is challenged in turn? Then the proponent of C may either offer an alternative, hopefully more convincing backing (B'), or else may argue why the original backing (B) is valid. In the latter case, the "T" layout applies once again, so that B then results as the conclusion of a

preliminary argument (D', W', so B), or in a short notation that Toulmin does not use)**:**

$$\top\!\!\!\top$$

Similarly, a preliminary argument is possible if D is challenged (D', W', so D)**:**

$$\top\top$$

The "T" layout is in this sense *recursive,* that is, it may be applied to its own components – an important characteristic that renders its use very flexible and allows to build entire chains of arguments. Some recursive loops – recurring "rounds" of argumentation about an argument's components – may indeed be very useful at the outset to prepare the ground, as it were, and must obviously remain possible at all times as the argument unfolds. In a sense, then, such recursiveness constitutes the methodological core of what Habermas terms the *step from communicative action to discourse,* as well as of the argumentative principle in general. Although neither Habermas nor Toulmin say it in these terms, the recursiveness of the "T" layout seems crucial if discourse (the argumentative process) is indeed to "bracket" (suspend) all issues except that of a disputed claim's validity; for only thus can the assumptions and implications of arguments be freely unfolded. On the other hand, if the participants take this recursive business too seriously and keep challenging each other's Bs and Ds from the outset, then the argument about the original claim (C) never really starts. The good news is that the danger of an infinite regress is only a theoretical risk; practically speaking, if discourse is to play a role, the participants need to share *some* basic assumptions, otherwise they have no basis for reaching an understanding at all.

There are two more components, which the proponent of an argument may, but need not, employ from the start. They are useful whenever participants question the force of basic arguments (i.e., arguments following the basic scheme of Fig. 1), in that they may help to avoid endless recursive loops or else, a breakdown of the argumentative process altogether**:**
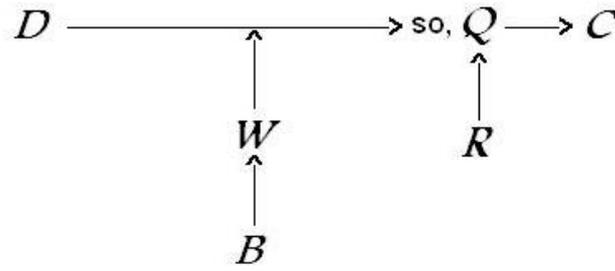
Fig. 2: The layout of arguments (expanded scheme)
Source: adapted from Toulmin, 1984, p. 98, and 2003, p. 97

The two additional components are:

> **Q = Qualifier:** a modality expressing the force (strength or certainty) with which C is asserted, typically formulated with a term such as "presumably," "surely," "probably," "necessarily," "in general," "chances are," or "as far as the evidence goes." Qualifiers expressing incomplete strength recognize the conditional character of an argument, allowing for the possibility of rebuttals. Example: "*Chances are* Harry is a British citizen, unless he has become a naturalized American or neither of his parents was a British citizen."

> **R = Rebuttal:** a statement of some exceptional circumstances that may limit or undermine the force of an argument (specifically of Q, W and B) and thus the validity of C, typically beginning with "unless," "except that" or "if and only if." Example: "Someone born in a British overseas territory may generally be assumed to be a British citizen, *except* that in this case, neither of Harry's parents was a British citizen, so the *British Overseas Territories Act 2002* does not apply."

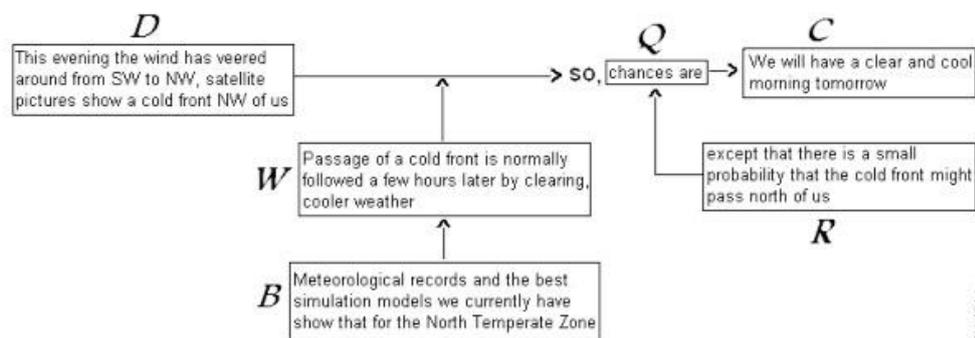Fig. 3 shows an example taken from meteorological practice.

Fig. 3: The layout of arguments: example "weather forecast"
Source: adapted from Toulmin, 1984, p. 124

The generic nature of Toulmin's scheme Note that Toulmin's layout of arguments is truly general, in that it allows for a plurality of different types of validity claims. It recognizes that not only assertions of fact and of logical, mathematical, or statistical conclusiveness admit of argumentative challenge and substantiation, but also all other kinds of claims, including those concerning questions of morality, legality, political legitimacy, aesthetics, and so on. Toulmin's empirical analysis confirms to Habermas what he has been suggesting all along**:** there is no reason to assume, as conventional wisdom does, that only scientific questions (i.e., claims to truth) can be decided rationally. We can just as rationally criticize and vindicate practical questions, including claims to rightness, to adequate value judgments, to the sincerity of one's motives, and so on. As Toulmin concludes from his empirical work**:**

> Philosophers have often held that arguments in some fields of inquiry are intrinsically more open to rational assessment than those in others**:** questions of mathematics and questions about everyday matters of fact, for instance, have been considered by many to have a certain priority in logic over (say) matters of law, morals or aesthetics. The court of reason, it has been suggested, has only a limited jurisdiction, and is not competent to adjudicate on questions of all kinds. In our inquiry, no contrast of this sort has so far turned up**:** there is, for all that we have seen, a complete parallelism between arguments in all these fields, and no grounds are yet evident for according priority to mathematical and similar matters. (Toulmin, 2003, p. 37)

Such a finding is of obvious interest to Habermas' search for ways to strengthen noninstrumental patterns of reasoning and societal rationalization. Although Toulmin does not formulate his conclusion in the terms of practical philosophy, it touches upon the very core issue of the Kantian question of "how reason can be practical"; or, in terms closer to Habermas' undertaking, it does indeed address the question of whether and how we can effectively extend the scope of rational argumentation from questions of theoretical-instrumental rationality to questions of practical-normative rationality. Yes we can, and the basic pattern of argumentation remains the same! Toulmin's finding certainly suggests that the limitation of rational criticism to the tools of science and deductive logic, as it has been advocated notably in K.R. Popper's (1959, 1962, 1972) "critical rationalism" – a source of orientation for many practicing scientists and professionals – cannot be upheld except on dogmatic grounds (for a detailed critique, cf. Ulrich, 1983, ch. 2; 2006c; 2008).

The reader may think**:** I hear the good news, but why should I assume that practical matters can indeed be settled "rationally" according to Toumin's model? Isn't the example in Fig. 3 just dealing with a question of theoretical rather than practical reason? To respond to such doubts, I would like to delve a little deeper into Toulmin's analysis and its far-reaching implications for epistemology, practical philosophy, and our conception of rationality in general. To begin with, it may be useful simply to add an example that deals with a practical-normative rather than a scientific question and which moreover is taken from everyday argumentative practice as we have all experienced it**:** When is a promise binding and when not? In practice, this is not always as clear as one might assume (e.g, when the promise was given jokingly rather than seriously). Fig. 4 illustrates a possible layout of arguments.
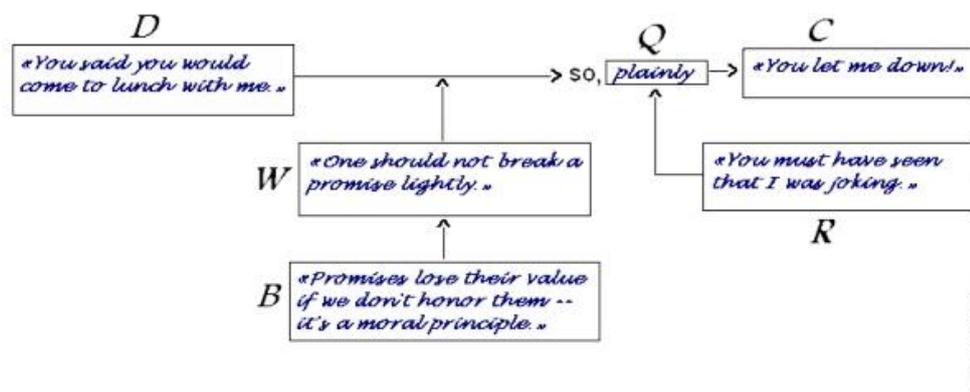

Fig. 4: The layout of arguments: example "promise"
Source: adapted from Toulmin, 1984, p. 118

Recovering argumentative logic It seems to me Toulmin indeed offers us a generic model of argumentation. It is generic in at least two senses**:** first, it is applicable to practical questions (Fig. 4) as well as to theoretical questions (Fig. 3); and second, it encompasses "logical" issues not only of analytic but also of substantial reasoning. It may thus help us to recover the broader notion of logic as *argumentative logic* with which Aristotle started out two millennia ago, prior to its subsequent reduction to formal deductive logic. This historical curtailment of argumentative logic (and ultimately, the logic of systematic thinking) still hinders and impoverishes our contemporary notions of what *rational* conclusions – rational argument and criticism – are all about. To mention just two major examples, it is still prevalent in the

"exact" sciences in the form of the so-called *Hempel-Oppenheim model* of explanation,[10] and even in the "inexact" sciences it has remained prominent in the form of Popper's earlier-discussed deductive concept of "rational criticism." The unspoken ideal of such a deductive notion of "rational" conclusion is to eliminate from systematic thinking all elements that cannot be entrusted to a machine or to a "propositional calculus." To be sure, the advantage of analytic reasoning is that it can do without considering the empirical, normative, and expressive content of conclusions; but the price we pay for measuring the rationality (or conclusiveness) of all thought and argumentation against such an ideal is definitely too high – it begs the issue. For as we have learned from both Aristotle and Kant, but also from many other outstanding thinkers about the nature of thinking (e.g., Dewey, 1910, and Bateson, 1972, 1979), the task of rational thinking and argumentation consists precisely in establishing the *connections between things* that experience alone cannot give us; *the pattern which connects* or "metapattern," to use Gregory Bateson's (1979, Ch. 1) famous phrase. Only reason can inform us about the basic *principles* that connect things, both in experience (theoretical reason) and in action (practical reason). Allow me to summon John Dewey as an independent witness who is widely respected for his account of *How We Think:*

> There is thus a double movement in all reflection: a movement from the given partial and confused data to a suggested comprehensive (or inclusive) entire situation; and back from this suggested whole ... to the particular facts, so as to connect these with one another and with additional facts to which this suggestion has directed attention.… *To think means,* in any case, *to bridge a gap in experience, to bind together facts or deeds otherwise isolated.* (Dewey, 1910, p. 79f, my italics)

Toulmin's scheme teaches us how to bridge the gap rationally. It bursts through the limits of a merely analytic concept of "conclusiveness." Although it superficially resembles Hempel and Oppenheim's (1948) model, it recognizes that the job of substantial reasoning is to add new content to what is previously known or assumed (the premises), and that merely analytic schemes of conclusive argumentation cannot handle this task. We are facing an *epistemological* rather than just a deductive-logical issue. The crucial question is how we can *justify knowledge* (or in any case, the new content in question). To reduce this question to a merely analytic issue implies an error of category or in Toulmin's (2003, pp. 150, 153, 155, 212-216) term, a *type-jump* – an impossible inferential leap from analytic

conclusiveness (a tautology) to substantial conclusiveness (new content). Type-jumps are unavoidable, but they involve a non-analytic transition from one type of logic to another, and thus burst the framework of analytic conclusiveness. This does not imply, however, that they are arbitrary, or that the arguments in question cannot be conclusive; all it implies is that they are not analytic, and in this sense non-trivial.

The need for 'type-jumps' To require, as formal logicians do, that conclusions must *always* (i.e., in *any rational* argument) follow analytically from the data and backing, amounts to an inadequate handling of type-jumps. The error, to be sure, is not the attempt to jump from D and B to C, but only the attempt to treat the jump as a purely analytic issue. This attempt is bound to lead us into an *apparent* logical gulf – apparent, that is, because it is merely the consequence of a narrow understanding of what "logic" and "rationality" are all about. The gap is an analytical gap, but not necessarily an argumentative gap. Argumentative logic is about rational argumentation; but rational argumentation is not just about internal consistency, it is also and mainly about the "strength" (relevance, force, cogency) of an argument within specific contexts of meaning and action. Although internal consistency of arguments is always a *necessary* requirement for "strong" argumentation, it is not a *sufficient* criterion, except of course in purely analytic judgments – a special, particularly simple case of conclusiveness that we must not mistake for all there is to argumentative logic. If we do, and consequently try to define rational argumentation in purely analytic terms, we are bound to end up with a bottomless epistemological skepticism.

So much for Toulmin's pioneering analysis. Let us now draw some conclusions for the step from a deductive logic of inference to a pragmatic logic of argumentation (step 3 in Table 3).

Conclusion 1: Farewell to 'Hume's problem' It is difficult in this connection not to think of David Hume's (1978, Book I) long-standing critique of empiricism and inductive reasoning, which has remained an unresolved problem for epistemology ever since. *"Hume's problem"* has remained unresolved, as we now begin to understand, because he defined it in a self-defeating way. It was the inevitable consequence of his attempt to reduce the logic of inquiry (i.e., of substantial argumentation) to one of

analytic reasoning only. Thus seen, it was indeed "Hume's problem"; an artefact of his assumptions. To do justice to Hume, his attempt pursued a critical purpose; it taught us that any such attempt is futile. Because something like a language-analytical turn of argumentation theory was out of sight then, he had no option but to try and explain substantial argumentation in analytic terms – and had to fail. Understandably, neither Hempel and Oppenheim's (1948) deductive model of scientific explanation nor Popper's (1959) "falsificationist" use of deductive logic could really solve Hume's problem, although, to do justice to Popper, he probably came as close to a solution as a purely analytic framework, without access to hermeneutic and pragmatic reasoning, could get. The difference is, Hume recognized that his experiment had failed!

Popper's Hume, as well as Hempel and Oppenheim's Hume, is definitely not Kant's Hume, the Hume who managed to awake the great critical philosopher from his slumbers! Nor is he Toulmin's Hume, who makes us understand that any attempt to reduce rational argument to a deductive-logical concept of rationality commits a *petitio principii:*

> At every step he rejected anything other than analytic criteria and proofs. There is no certainty that a pinch of salt put in water will dissolve. Why? Because, however much evidence I may be able to produce of salt's dissolving in water in the past or present, I may suppose that a pinch dropped in water tomorrow will remain undissolved without contradicting any of this evidence.… Throughout the *Treatise* Hume appeals repeatedly to considerations of this kind: the understanding is to admit arguments as acceptable, or "conformable to reason," if and only if they come up to analytic standards. But, as he soon discovers, all arguments involving a transition of logical type between data and conclusion *must* fail to satisfy these tests: however grotesque the incongruity produced by conjoining the same data with the contradictory of the conclusion, the very presence of a type-jump will prevent the result from being a flat contradiction. (Toulmin, 2003, p. 152f)

Perhaps a less self-defeating approach can begin with Toulmin's (2003, p. 212) recognition that we should not "talk away" the need for type-jumps, that is, simply eliminate them from our concept of rationality. We better learn to handle them carefully! Handling type-jumps carefully is what Toulmin's layout of argumentation is all about. It teaches us how to take the step from D and B to C in a way that deals explicitly and critically with the warrant W or, in the earlier discussed terms of Aristotle, with the "principles" on which we rely in taking this non-analytic step. We can now formulate two essential guidelines to this end:

1. Toulmin's model accurately defines and locates "Hume's problem" as the type-jumps involved in all non-trivial (i.e., not just analytic) argumentation. It makes us understand that the *argumentative force* or *cogency* of an argument depends essentially on the way we bridge the analytical (but *not* argumentative) gap between B and W, and consequently, the resulting gap between D and C.

2. Toulmin's model tells us precisely how to handle the two non-analytic transitions ("type-jumps") involved, from B to W and from D to C. It calls for, and regulates, a *discursive validation of the "bridge principles"* we use, whether we are aware of them or not, for this transition.

To be sure (and here I seem to differ a bit from Habermas' understanding of Toulmin, to which I will turn in a moment), we must never forget that *"bridge" principles* are just that**:** *auxiliary* principles that help us in making those non-analytic transitions. They serve us to *understand* the type-jumps involved, but not necessarily to *justify* them in any definitive way; they are working hypotheses, as it were. The point is, in substantial reasoning we cannot avoid relying on *some* bridge principles; hence, from a critical point of view, it is imperative that we make it clear to ourselves and to everyone concerned what these principles are and how they affect the perceived strength of an argument. Although we need them for assessing arguments, they should not stop us from considering, in each case, alternative transitions.

Another basic lesson concerns our understanding of the *principle of excluded contradiction,* as the core principle of analytic reasoning. Hume, Popper, Hempel, and Oppenheim all appear to have overestimated how far it carries. Counter to them, I suggest we understand it as a criterion of *meaningfulness* rather than of *validity:* we cannot argue meaningfully if we contradict ourselves, and that is why we need it. But *validity* is a different issue. In purely analytic reasoning we may take meaningfulness and validity to be congruent (propositions that are logically true are logically meaningful and those which are logically false are by definition not meaningful), which is to say, we do not need a separate concept of validity at all. In assessing the validity of substantial arguments, however, it is never a contradiction in itself to imagine that the contrary conclusion or claim might be true; sometimes it is a critical necessity to do so! To put it differently**:** whether a claim is

logically implied or contradicted by its premises tells us nothing about what difference it makes in specific contexts of meaning and action. Insisting on analytic criteria for assessing the validity of substantial claims is therefore *beside the point* (Toulmin, 2003, pp. 156 and 216). The third basic guideline, then, is something like this:

3. The principle of excluded contradiction is not an adequate bridge principle to ensure valid transitions from B to W and from D to C. It is a necessary condition of meaningful argumentation but not a sufficient condition of cogent argumentation.

As a forth and last lesson, we may apply Toulmin's analysis to Hume's negative assessment of all inductive reasoning**:** although deductive-logically correct (by definition!), it is epistemologically *beside the point.* An analogous conclusion obviously holds for issues of practical philosophy. All Hume's rejection of inductive reasoning really tells us is that inductive logic is different from deductive logic. That is, it calls for a richer concept of conclusiveness, one that takes into account the specific and changing contexts of argumentation, as well as probably different procedures of – non-trivial – argumentation. Which is what Toulmin's work is all about. Our fourth guideline, therefore, may read:

4. It is time to bid farewell to "Hume's problem"**:** Toulmin's analysis has freed us once and for all to see that "non-analytic arguments also can be conclusive" (2003, p. 216).

Going beyond Toulmin's model, we will want to embed his layout of argumentation in a broader, hermeneutic and pragmatic framework for critical discursive practice such as it has become available through Habermas' work. Let us, then, return to Habermas "formal-pragmatic" reconstruction of argumentation theory.

Conclusion 2: The Habermas-Toulmin model of argumentation

What we call the "Toulmin-Habermas model" is simply the way Habermas adopts Toulmin's model and embeds it in his larger framework of formal pragmatics. As is to be expected, he ties it to the "general pragmatic presuppositions" of communicative rationality that we have discussed earlier. The layout of arguments remains the same, only its interpretation and use in discursive practice is partly different from Toulmin's reading. There is no

need to repeat our account of the "formal-pragmatic" lens through which Habermas (e.g., 1973c, pp. 238-252; 1984, pp. 22-27 and 31-42; 2009, pp. 243-259) reads Toulmin's layout of argumentation; it is clear that he uses it to enrich and operationalize his understanding of "rational" discourse with concepts such as the *telos* of mutual understanding and the general symmetry conditions of discourse, as well as with his analysis of the different types of validity claims involved in all communication, with the resulting notion of a universal validity basis of speech, and so on. It may be more helpful, instead, to offer a short discussion of those particular aspects of Toulmin's reading that he welcomes and those which he wishes to revise.

Beginning with the "welcoming" part of Habermas' reception, he finds it essential that Toulmin's conception of argumentative logic includes issues of argumentative practice that reach beyond formal logic. He acknowledges that by considering different uses and contexts (or "fields") of argumentation as well as the non-trivial transitions these uses of argument may involve, Toulmin opened the discipline of logic up to the wider concerns of a theory of argumentation properly speaking, a theory that can deal with the hermeneutic and pragmatic contexts of argumentation. Already his early writings on communicative competence and on the need for a consensus theory of truth made it clear that Toulmin's analysis helped him in developing an adequate understanding of argumentation theory in the first place, for example, as it relates to his concepts of "rational motivation," of "discourse," and of "rational consensus"; in particular, it made him see more clearly that "the logic of discourse is a pragmatic logic [that] examines the formal properties of contexts of argumentation." (Habermas, 1973c, p. 249). Later, in the *Theory of Communicative Action,* Habermas (1984, p. 31) explicitly designates it as an "advantage of Toulmin's approach" that "he allows for a plurality of validity claims while not denying the critical sense of a validity transcending spatio-temporal and social limitations." He is similarly explicit about the value of Toulmin's empirical finding of the field-invariance of both the layout of arguments and the force of modal qualifications.

Despite these many points of agreement, Habermas' finds it necessary to expand Toulmin's perspective. For Habermas, a proper theory of argumentation amounts to nothing less but a theory of rationality in general,

and such a theory can for him only be a *social* theory of argumentation, that is, part of a more encompassing social theory as he envisions it with his theory of communicative action. At the other end of the scale, Habermas thinks an adequate argumentation theory requires a further-reaching basis in language theory. In addition to this broader outlook, Habermas has a number of more specific methodological concerns that do not allow him to adopt an empirically generalizing approach such as Toulmin's without further ado; I restrict myself to mentioning three of them.

Bringing back in the 'process' and 'procedure' perspectives First of all, Habermas finds that Toulmin focuses one-sidedly on the logical (or "product") perspective of argumentation while rather neglecting the *rhetorical (or "process")* and the *dialectical (or "procedure") perspectives* (cf. Table 3). Especially the latter is of course essential to Habermas. In his view, therefore,

> Toulmin does not push the logic of argument far enough into the domains of dialectic and rhetoric. He doesn't draw the proper lines between accidental *institutional differentiations of argumentation* [read: fields of argument] on the one hand, and the *forms of argumentation* determined by internal structure [read: types of validity claims and processes required to substantiate them, i.e., to reach rationally motivated agreement], on the other. (Habermas, 1984, p. 35)

For example, much of the argumentation going on in the field of legal practice is oriented towards success, negotiation, and at best compromise, rather than towards reaching genuine agreement (as, say, in the fields of science and moral discourse). However, "negotiating compromises does not at all serve to redeem validity claims in a strictly discursive manner, but rather to harmonize nongeneralizable interests on the basis of balanced positions of power"; and furthermore, "arguments in a court of law … are distinguished from general practical discourses through being bound to existing law, as well as through the special restrictions of an order of legal proceedings that takes into account the need for an authorized decision and orientation to success of the contesting parties." (1984, p. 35)

Mobilizing the pragmatic presuppositions of discourse A consequent second concern relates to what Habermas sees as wanting clarification of the *pragmatic presuppositions of discourse* in Toulmin's account. We have just mentioned that there are relevant differences of purpose between argumentation in court (Toulmin's jurisprudential model) and argumentation

in rational discourse properly speaking (Habermas' discourse-theoretic model). In particular, argumentation in court is *not* relieved from external pressures such as the influence of power and the "need for an authorized decision" (Habermas, 1984, p. 35). In legal practice the participants are usually pursuing a strategic rather than communicative orientation, quite apart from arguing under heavy pressures of cost and time as well as asymmetric distribution of decision authority. Toulmin's account remains rather silent on such issues, which for Habermas call for a methodological counterconception (or standard) such as the "ideal speech situation."

Against the suppression of generalizable interests A third and last concern that I want to mention here regards the distinction of nongeneralizable vs. generalizable interests. When we agree or argue about a validity claim, we need to understand what it means for the different parties concerned; to which extent has it a bearing on everyone's interest or only on some particular interests? If it is to address such issues, an adequate theory of argumentation cannot do without giving a well-defined role to Kant's *principle of universalization* (or generalization). Toulmin's framework, due to its empirically generalizing rather than philosophically constructive approach, appears to offer no systematic place to Kant's principle, or at least remains largely silent on its role. For Habermas (1984, pp. 17 and 35), argumentation and discourse can *in the end* only lead us to valid conclusions if they address the *universal audience* of all those concerned, that is, are open to everyone who may have something to contribute or to object.[11] Convincing a universal audience, so as to gain general assent for one's claim, is for Habermas (1984, p. 26) "the fundamental intuition connected with argumentation." As he sees it, Toulmin does not distinguish clearly enough between generalizable and nongeneralizable interests; in fact, Toulmin's focus on the empirical analysis of a number of fields of argument such as law, morality, science, management, and art criticism, with their institutionally and professionally bounded audiences, rather works against a universalist perspective. Habermas sees a danger that with such an empirical and institutional orientation of our notions of sound argumentation, our argumentative practice may inadvertently rely on some preexisting notion of rationality, rather than making rationality its core subject (Habermas, 1984, pp. 33-35)

With Habermas I would argue that an adequate framework for argumentative practice should indeed give a more central place to the universalization principle than it is given in Toulmin's work. This seems particularly obvious when it comes to the normative implications that discursively reached agreements may have for third parties. Without the Kantian idea of testing and justifying our claims with a view to the generalizability of underlying norms or principles of action, we risk losing sight of the "critical difference between warranted and unwarranted consensually achieved decisions." (Burleson, 1979, p. 113, quoted in Habermas, 1984, p. 35) But similar conjectures are equally appropriate regarding the procedures used in the sciences for generalizing observational statements to hypotheses and nomological laws. It is the same essential concern which led Peirce (1878, par. 407), in the realm of theoretical discourse, to understand truth as a the ultimate agreement of an *indefinite community of competent researchers;* and Kant (1786, 1788; cf. Ulrich, 2009b), in the realm of practical discourse, to understand morality in terms of *moral universalization.*[12)]

A definition of pragmatic cogency   In consequence of these and other observations, Habermas wishes to give his theory of discourse a more clearly pragmatic and discourse-theoretic twist than he finds it in Toulmin's model of substantial argumentation. *Successful argumentation,* apart from not exhausting itself in deductive-logical inferences, amounts to what Habermas terms *cogent argumentation.* Cogent argumentation is basically similar to Toulmin's concept of conclusive argumentation in that it involves "type-jumps" and for this reason entails argumentatively non-trivial transitions from premises (D and B) to conclusions (C, via W). Beyond that shared understanding, it is essential for Habermas to insist that a discursively reached agreement should count as rational only the extent it is the result of a rationally motivated, undistorted discourse. He therefore maintains that we can adequately conceive of argumentative cogency only in terms of communicative rather than strategic reason; in addition to Toulmin's layout of cogent argumentation, such a concept of cogency entails corresponding requirements of process (communicative competence), procedure (undistorted discourse), and product (rationally motivated agreement). The argumentative process, procedure, and product must all live up to the general (or formal) *pragmatic presuppositions of argumentation;* we have

summarized these conditions, in Tables 1-3, in terms of different core issues and requirements of communicative rationality and types of validity claims concerned. Furthermore, since for Habermas a proper logic of cogent argumentation is a *pragmatic* logic, we need a clear understanding of how we define argumentative conclusiveness in pragmatic terms. As Habermas explains**:**

> In terms of discursive modalities, an argument is unfitting (or *impossible)* if W cannot be interpreted as a rule of inference that allows the transition from D to C. An argument is compelling *(necessary)* if C can be inferred from B; in this case we have an analytic rather than substantive argument, for W is not adding any information to B. We call an argument cogent if and only if it is *possible* in terms of discursive modalities. This is the case if there is no deductive relation between B and W, but B nonetheless provides sufficient *motivation* for accepting W as plausible. We call such arguments substantive, as they generate plausibility despite a logical discontinuity, that is, a type-jump *[Typensprung]* between B and W. (Habermas, 1973c, p. 243, and 2009, Vol. 2, p. 249, my transl.; *note:* in the second sentence of the German text, both in the 1973 original and in the 2009 edition, 'C' is misspelled as 'D'.)

This summary account of cogent argumentation is precise, but not easy to handle. It may be advisable for later reference, therefore, to translate it into the following definition.

Definition: Within a pragmatic logic of substantial argumentation along the lines of Toulmin and Habermas, we may define *argumentative cogency* as follows. An argument is "cogent" if and only if**:**

1. the step from D and B together to C is a *substantial* one (i.e., D and B do not entail C analytically, or in other words, C is not logically necessary);

2. it is logically and theoretically *possible* (i.e., it contradicts neither logic nor the facts); and

3. it is redeemed *discursively,* that is, it effectively meets with rationally motivated consensus (i.e., it convinces everyone concerned to agree, under conditions of basically unconstrained discourse).

In conclusion, then, we may say that in the Toulmin-Habermas model of argumentation, the layout of argument itself (as proposed by Toulmin) does not change, but its understanding and use does.

4. 'Metalevels of discourse': the step from initial to higher levels of reflection

If we now return to our starting point – the requirements of rational argumentation as summarized in Table 3 – there remains a fourth and last

step we need to take. Its necessity follows from the preceding discussion. A pragmatic concept of argumentative cogency does not alter the fact that in all non-trivial, substantial, argumentation there is an element of inductive reasoning involved. It is thus always possible and meaningful to question the cogency of the step from D (via W and B) to C, or quite simply to argue for an alternative conclusion. Habermas responds to this issue with two strategies. The first strategy builds on the idea of *bridge principles* that should render the step from D to C plausible, despite its inductive implications (i). We have already encountered two such bridge principles, Peirce's indefinite community of researchers (when C stands for theoretical claims) and Kant's concept of moral universalization (when C stands for practical claims). In addition, Habermas suggests the "principle of discourse" as a third bridge principle (we will discuss this in connection with his discourse ethics). The second strategy builds on the idea that a *radicalization of discourse* must always be an option, in the sense that discourses may become their own subject (ii). That is, whenever the plausibility of the step from D to C becomes problematic, Habermas suggests a practical need for taking the discourse to metalevels at which the presuppositions of inductive reasoning can be analyzed. Rather than relying on general bridge principles and reconstructive analysis alone, we might say, Habermas puts his faith in the discourse participants themselves, by entrusting them with the task of ensuring to their argumentative efforts a self-reflective dimension.

In the present context, I am mainly interested in the second strategy, as it completes the idea of a progression of discursive steps by which we try to understand the meaning of a "good" argument, and accordingly the rationality requirements of discourse (cf. Table 3). Habermas does not discuss the role of bridge principles together with his notion of a radicalization of discourse, yet it seems to me that the two strategies are to some extent interdependent, in that the need for radicalization arises partly from the somewhat precarious nature of the "bridge principle" strategy. In other words, I believe the bridge principle strategy cannot stand alone; only together with the "radicalization" strategy is it credible. It makes sense, therefore, to begin with a brief discussion of the first strategy.

Re: (i). *The role of bridge principles* To better understand the nature and role of bridge principles, and of methodological "reconstruction" in general,

Habermas (1973c, pp. 246-252; 1979a, pp. 14-22; 1979b; pp. 73f and 77-82; 1984, pp. 2f, 67-69, 138-140; 2009, Vol. 2, pp. 252-259) turns to Noam Chomsky's (1965) analysis of linguistic competence, according to which linguistic grammar is not conceivable without a corresponding mental grammar, and to Jean Piaget's (1932, 1970) research on the cognitive (intellectual and moral) development of children. Further important sources are George Herbert Mead's (e.g., 1913, 1925, 1934) work on "symbolic interactionism," with its central question of how we form our sense of identity as members of society, our "social self"; and Lawrence Kohlberg's (1968, 1976, 1981, and 1984) work on the stages of moral development – two sources that we have discussed earlier in this series (Ulrich, 2009b). In all these approaches, "formal explication of the conditions of rationality and empirical analysis of the embodiment and historical development of rationality structures mesh in a peculiar way." (1984, p. 2). The essential idea is that all our cognitive capabilities, and thus also the bridge principles on which we have to rely (and usually do rely intuitively) in inductive reasoning, embody linguistic and cognitive schemata that form in the course of our intellectual and moral development:

> If the basic predicates available in the languages we use for argumentation do indeed express such cognitive schemata, induction means something rather trivial: namely, the exemplary repetition of exactly that type of experience which previously formed these cognitive schemata themselves.… *Induction thus loses its mysterious character, although the limits of what it can achieve become equally apparent.* The data [read: D and B] available for inductive confirmation or rejection [of propositions] are unavoidably preselected by our linguistic and conceptual framework *[Sprachsystem],* so much so that "experience" cannot represent an independent instance of validation.… It is, then, an entire framework rather than any particular proposition which is effectively confronted with reality; and this framework is regulated by our cognitive development. (Habermas, 1973c, p. 246f; 2009, Vol. 2, p. 252f , my simplified transl. and my italics)

If this is so, Habermas appears to suggest, we can indeed have some basic faith in the adequacy of the cognitive schemata that we have learned to apply to different domains of experience and argumentation; for these object-domains shaped our cognitive schemata in the first place. They act in this sense as "guarantors" (1973c, p. 246; 2009, Vol. 2, p. 252) for the adequacy of our argumentative languages, although not of course for the validity of our claims; the latter can only be redeemed discursively, and such redemption must now include the dimension of the larger cognitive frameworks at work.

The argument looks rather similar to Kant's (1787, B193-197; cf. Ulrich,

1983, p. 208) famous "highest principle of all synthetic judgments," according to which we ultimately cannot help but presuppose that there exists a fundamental convergence between the (cognitive) conditions of possible experience and the (ontological) conditions of the objects of experience. But there is an important difference**:** we can no longer unproblematically assume today that the conditions of objective experience are at the same time sufficient conditions for truth, as Kant could still assume. "Objectivity" and "truth" have fallen apart, or as Habermas (1973b, pp. 382-293, cf. Ulrich, 1983, pp. 113-115) explained in his famous "Postscript" to *Knowledge and Human Interest,* Kant's transcendental *a priori* has dissolved into an empirical *a priori of experienc*e and a discursive *a priori of argumentation.* This is why Habermas, in addition to acknowledging the (unavoidable) assumption of a basic adequacy of our cognitive apparatus, needed to introduce all his "formal-pragmatic" provisions for argumentative cogency. Ever since the "Postscript," he has therefore focused mainly (and as I have always felt, all too one-sidedly; see the discussion in Ulrich, 1983, pp. 153-166, esp. pp. 158 and 163) on the *a priori* of argumentation. Only with *Truth and Justification*, he has recently (2004) turned back the wheel a bit.

In fact, it is because the two sets of conditions – concerning the constitution of experience and the validation of claims – are interrelated and must come together, that induction may lose some of its mysterious character, as Habermas writes in the above-quoted passage. Inasmuch as our cognitive schemata are conditioned by our social and intellectual development (both as a species and as individual), inductive reasoning is perhaps, as Habermas seems to suggest, more trivial than we tend to think, namely, in that it need not start from scratch with each argument but has a history of maturation, a past record of probation as it were. I may not be thoroughly convinced, nor do I assume the reader is; the important point for me is, rather, that *in any case* we should not take our cognitive schemata (including bridge principles) for granted. We better watch carefully how they influence both the meaning and the validity we attribute to an argument – which leads us to the second strategy.

Re: (ii). *'Radicalizing' discourses* The cognitive schemata in question express themselves and become effective through the specific *linguistic and*

conceptual frameworks that we use in argumentation. Consequently, communication and discourse take on an additional role: they are not only means to exchange information and arguments but also means to make us aware of, and "enlarge," our linguistic and conceptual frameworks. The substantial critique of validity claims unfolds into a substantial *critique of language.* That is, adequate argumentative procedures must allow for a revision of the conceptual framework of a discourse, so that facts (D), backings (B), norms or principles (W), and conclusions (C) can all be reinterpreted and questioned in a different light. In the field of theoretical questions, this may also mean that the *theoretical framework* used is questioned; in practical questions, that the assumed *ethical or political framework* is questioned. For example, in environmental discourses (say, about an environmental impact assessment), participants may want to question whether the wide-spread practice of measuring the value of natural resources, as well as people's concern for nature, in financial terms, is adequate; this may lead to a critique of the dominating framework of cost-benefit analysis (CBA) and its theoretical, ethical, and political implications as to what counts as "rational" environmental policy. A satisfactory logic of substantial argumentation depends on this possibility of a metalinguistic, metatheoretical, and metaethical or metapolitical *radicalization of discourse* (1973c, p. 253f, 2009, Vol. 2, p. 260f).

This ultimately unfolds into a *critique of knowledge,* in which the normative foundation of knowledge becomes problematic. At this highest level of reflection, the boundaries between theoretical and practical questions become blurred, in that it is no longer possible to distinguish sharply between them; we encounter, in a famous formulation of Habermas (1971b, p. 61), a "dialectic of potential and will," that is, an ultimate, unavoidable interdependence of what we *can* know and do on the one hand, and what we may *want* to do and *ought* to do on the other hand. In the example of environmental discourses, what counts as "rational" environmental action depends on a complex interplay between our conceptions of environmental expertise (how do we identify and assess risks and what do we know about the efficacy of alternative environmental protection policies) and environmental ethics (what place do we give to market values, aesthetic and spiritual values, the options of future generations, and so on). Counter to

what advocates of "green" politics sometimes appear to assume, there is no such thing as a straightforward conception of "right" environmental action and "true" environmental expertise.

The possibility of a progressive radicalization of discourse to increasingly reflected levels is therefore indispensable. Together, these levels constitute the self-reflective dimension of the Toulmin-Habermas model of argumentation (Table 4).

Table 4: The self-reflective dimension of the Toulmin-Habermas model of argumentation: levels of progressive radicalization of discourse
(adapted from Habermas, 1973c, p. 254; 2009, Vol. 2, p. 262; and Ulrich, 1983, p. 141)

Level of argumentation (self-reflection)	Theoretical discourse	Practical discourse
1. Entry into discourse (speech acts)	Claims to truth (assertions of fact, predictions, nomological propositions, etc.)	Claims to rightness (action proposals, evaluations, commands, prohibitions, etc.)
2. Substantial critique of validity claims (argumentation)	Cogency of theoretical discourse $\quad$ D———C $\quad$ W $\quad$ B	Cogency of practical discourse $\quad$ D———C $\quad$ W $\quad$ B
3. Substantial critique of language (metalinguistic discourse)	Metatheoretical revision of language	Metaethical /metapolitical revision of language
4. Critique of knowledge and will (reflection on the interdependency of theoretical and practical discourse)	Critique of knowledge (reflection on what *ought* to count as knowledge)	Critique of will (reflection on what *ought* to count as right interest or action)
	In view of the dialectic of potential and will	

This brief analysis of the *step from discourse to metadiscourse* concludes our discussion of the rational structure of discourse according to Table 3. Four crucial steps have led us from everyday practice to communicative action and on to discourse, to a pragmatic concept of argumentative cogency, and to the option of metalevel discourses. Each step embodies a self-reflective turn of the previous conception of communicative rationality. It is time to turn from the theory of communicative rationality to its practice.

Application: practical discourse, discourse ethics, deliberative democracy, and social theory So what? What is all this detailed analysis

of the formal-pragmatic conditions of competent speech, meaningful communication, and cogent argumentation good for? It is obviously not an end in itself but is to supply a theoretical and methodological foundation for Habermas' larger project. We have characterized this project at the outset as a quest for overcoming "the jagged profile of modernization" – the selective patterns of rationalization that historically have developed in the course of an increasing differentiation of competing "complexes of rationality" and which threaten to undermine the project of modernity, that is, the vision of an open and enlightened society.

Apart from this initial characterization, we have not considered the social theory of Habermas strictly speaking. I have preferred in this introductory discussion to focus on the *methodological* foundation on which Habermas aims to base his social theory as well as his political vision, that is, formal pragmatics and what I consider to be its methodological core, the Toulmin-Habermas model of argumentation. On it rest our hopes, if we are to follow Habermas, for strengthening noninstrumental patterns of reasoning and societal rationalization, as against the current prevalence of one-dimensionally instrumental patterns of rationality in many domains of society.

The importance of the Toulmin-Habermas model of argumentation derives from the fact that it extends the range of rational discourse from questions of analytical, theoretical, and instrumental reason to questions of practical (ethical, moral, and political) reason. This is so, we have understood through Habermas' analysis of the universal validity basis of speech, because not only claims to truth (assertion of facts) and to truthfulness (expression of motives) but also claims to rightness (stipulation of norms) admit of argumentative vindication and challenge. Accordingly, the basic vehicle for extending the reach of communicative rationality becomes what Habermas calls *practical discourse.*

'Practical discourse' While cogent argumentation is a generic concept that applies to theoretical discourses as well, it is in the domain of practical questions that we most urgently need new conceptions of rational practice. Science has long since found ways to implement theoretical discourses successfully and in this way to ensure (imperfectly) rational research

practices. But when it comes to applying such rationality to *applied* science and expertise, as well as to everyday problem solving and decision making, we seem to be at our wits' end. The core questions we then face have such a strongly normative side (What *should* we do?) that they do not lend themselves to the same "rational" treatment. That something has gone awry with this conception of rational practice becomes clear, however, once one considers that theoretical and practical discourse are *ideal types* that cannot be practiced in pure form, except perhaps in some limiting cases of "pure" science for which no application is on the horizon. More usually, we cannot answer questions of "fact" and "value" separately. Within a context of application, what we consider a relevant "fact" is not independent from what we think *ought to count* as relevant fact; and what we consider an adequate "value" is not independent from what we know or believe to know. There is not only a close parallel but an *inextricable interdependency* between theoretical and practical discourse (Table 5).

Table 5: Theoretical and practical discourse
(adapted from Habermas, 1973c, p. 243 and 2009, Vol. 2, 248, cf. Ulrich, 1983, p. 139)

Layout of arguments	Theoretical discourse	Practical discourse
C	Assertions (the propositional content of statements)	Recommendations /evaluations (the normative content of statements)
Controversial validity claim	Truth or instrumental efficacy	Rightness or appropriateness
Required substantiation	Explanations	Justifications
D	Recourse to "facts"**:** causes of events, motives of actions	Recourse to "norms" or "reasons"**:** principles of action, standards of evaluation
W (bridge principles)	Reference to nomological hypotheses or statistical regularities	Reference to moral principles, human rights, or other basic standards of evaluation
B	Basic observations regarding cause-effect relations	Basic observations regarding needs /values of people, and consequences /side-effects of actions

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All further seminal contributions of Habermas, in particular his *discourse ethics,* his *political philosophy* with its core ideas of the "public sphere" and of "deliberative democracy," and his *critical social theory* centered around the core concepts of "social action," "life-world" and "system," depend on this concept of practical discourse.

Outlook In continuing our review of Habermas, I will concentrate mainly on the topic of discourse ethics, along with brief considerations of this concepts of deliberative democracy and "system vs. lifeworld." This way of proceeding is analogous to the way we earlier discussed the contributions of Aristotle and Kant, namely, with a clear focus on their contribution to ethics.

Summary and appreciation To some readers who are used to associate Habermas with Marxism and "grand" social theory, it may have come as a surprise that an introduction to Habermas' practical philosophy should focus so much on his theory of argumentation. Such a focus is obviously a matter of personal judgment and to some extent arbitrary; but more importantly, it corresponds to the aim of this series of reflections on reflective practice. I believe that a theory of substantial argumentation is indeed key to a practical philosophy that is to help us promote reflective professional practice. It is equally important to Habermas theoretical aim, of developing the "communicative turn" that he has pioneered, along with a few other key contributors, in contemporary philosophy and in the humanities. [13)]

Summary Is there a way to summarize, in three or four sentences, the core ideas of the new methodological foundation that Habermas proposes for practical philosophy? I am not sure – it may mean oversimplification – but it seems to me the central concern of the "communicative turn" of practical philosophy is as simple to understand as it is powerful**:**

1. It is only as *social* beings, through communication and cooperation with others, that we can deal reasonably with the inevitable limitations of our *human condition,* and with the way these limitations shape our individual experiences and frameworks.

2. Hence, with a view to improving the human condition, the place to look for untapped rationality potentials – as well as for sources of deception to be avoided – lies in the *communicative conditions* that we create in this world of ours, our social world, rather than (as previous generations of philosophers assumed) in the ontological constitution of the natural world, including our own biological constitution (naturalism), or in the psychological constitution of the human mind (mentalism), or in a transcendental-logical conception of reason (transcendentalism).

3. Consequently, practical philosophy needs to be grounded in an effort to elucidate the communicative conditions that are conducive to

"rational" practice; basic to this task are, in particular, a grounding in *language theory* and, building on it, *argumentation theory.*

4. To live up to the task, language theory needs to be developed into a pragmatic theory of communicative competence, and argumentation theory into a pragmatic theory of argumentative cogency. *Formal pragmatics* is the framework that Habermas proposes to this end; in it he sees the methodological foundation not only for an overarching social theory but also for the practical vision of promoting discursive practices in all domains of society, and thus for the communicative rationalization of society.

Personal appreciation (1): the argumentative turn Habermas has recently celebrated his 80th birthday. Still, it is probably too early to assess what will ultimately remain of his work. I would not be surprised though, if posterity will remember him in the first place as one of the great argumentation theorists of our epoch, along with or even prior to some of his many other outstanding contributions, among which I would certainly count his contribution to the revival of ethics as a subject of academic discussion; his relentless defense of enlightenment ideas against their postmodern "destruction"; or the model he has provided through his work as to how we may overcome the gap between the "two cultures" of the empirical sciences and the humanities, just to mention a few examples.

But the implications of his work that interest me most at present concern its methodological potential for the pursuit of rational professional practice. I suspect it centers around what I am tempted to call the *argumentative turn* of our notion of "sound" professional practice, towards a more open and participatory, less elitist and expertise-driven, concept of professional competence. Our concept of what constitutes cogent argumentation, we have learned through the work of Habermas, is the crux of all matters communicative, scientific, moral, and political. To put it differently: without a clear understanding of what *mutual understanding* means and how we achieve it, we cannot hope to be competent speakers, to communicate successfully, and to discourse and act rationally. *Argumentation under fair conditions* is the concept that replaces Kant's abstract notion of the "court of reason," and which unfolds into the participatory motto: *Let arguments decide, not authority!*

Personal appreciation (2): 'enlarging' our thinking A critical appreciation of Habermas' work must wait for the end of the third and last part of this discussion. At this point, I have only one major concern that I would like to share, concerning the important but (I feel) still somewhat unclear role of "bridge principles" in the Toulmin-Habermas model of argumentation. My impression is that Habermas burdens such bridge principles – in particular, the Kantian principle of universalization – with a methodological role that is still too weighty. Whether we like it or not, universalization is an ideal; and ideals have this nasty tendency of resisting reality. The attempt to relieve the burden with the option of metalevel discourse looks rather theoretical to me, in the sense that it risks putting ordinary discourse participants in a situation of incomprehension and incompetence. After all, discourse (particularly practical discourse) is to provide an argumentative opportunity to all of us, not just to philosophers and academics. In addition, my work on critical heuristics and boundary critique suggests to me that an essential self-reflective dimension of discourse is not well captured with Habermas' major focus on "metalinguistic," along with "metatheoretical" and "metaethical," reflection. I believe there are other, equally meaningful yet much more down-to-earth ways to mobilize the idea of self-reflection. Without meaning to question the need for metalinguistic discourse as such, I think we need to *enlarge our notion of what self-reflective discursive practice is all about* ... in practice!

I suggest it is about the *self-limitation* of the validity claim of discourse itself! To explain what I mean, we can go back once again to what we have learned from Toulmin and Habermas, namely, that the *unity of argumentative logic* (the field-invariant "layout" of arguments, cf. Figures 1 and 2) goes hand in hand with *varying contexts of meaning and action* that shape the propositional, normative, and subjective contents of our arguments (cf. Table 2). What the bridge principles in question need to achieve, then, is (in Kantian terms rather than those of Habermas or Toulmin) that they should guide us in "enlarging" our thought beyond the subjective contexts of meaning and action in which we always find ourselves, even in the most rationally motivated discourse, towards perspectives that are less narrowly dependent on our current individual views and needs. Earlier in this series we have encountered Kant's beautiful formulation of much the same idea in

his *Critique of Judgment:*

> Under the *sensus communis* [i.e., well-understood common sense] we must
> include the idea of a sense *common to all,* that is, an ability of reflection that
> considers the ways all other humans may think, in an effort to compare one's
> own judgment to the collective reason of humanity, as it were, and thus to avoid
> the trap [orig.: illusion] of allowing one's private conditions of thought, which
> one might easily mistake for objective, to inform [orig.: affect in a harmful way]
> one's judgment.…
>
>   The following maxims of common human reasoning … may serve to elucidate
> the basic propositions [that I associate with well-understood common sense].
> They are: (1) to think for oneself; (2) to think [as if one found oneself] in the
> place of everyone else; and (3) to always think consistently with oneself. The
> first is the maxim of *unprejudiced* thought; the second of *enlarged* thought; the
> third of *consequent* thought. (Kant 1793, B157f, my simplified transl.; similar
> formulations can be found in Kant, 1798, § 43, and 1800, end of Sec. VII)

For Kant, then, "enlarging" our thinking properly means to unfold *common
sense* into *community sense* (cf. Kant 1793, B157f; discussed in Ulrich,
2009b, p. 10). If we apply this thought to our understanding of bridge
principles, we find that adequate bridge principles will help us to "enlarge"
the contexts that shape our notions of relevant facts and norms, so that we
may recognize their limitations and can reconsider them systematically in
exchange with others. Since in substantial argumentation we cannot avoid
relying on *some* bridge principles to take the inductive steps from D to C;
and since, at the same time, we cannot assume that such principles ever
represent indubitable guides to universalization, it seems to me we need
another, *self-limiting* kind of metadiscourse, the focus of which would lie on
the limitations of *any* principle of "enlargement" assumed in an argument,
rather than on an attempt at universalization strictly speaking.[14]

In this way, it seems to me, we might ease the burden that our bridge
principles (whatever they are) need to carry, namely, by taking what I call the
critical turn of our concept of rationality, or simply put**:** by a deliberate
self-limitation of what we expect from rational discourse, and a consequent
focus on the idea of reflective practice. Thus understood, discourse will be a
valuable means of reflective practice, rather than superseding it with yet
another version of supposedly superior rationality. We must never allow the
motto**:** *let arguments decide, not authority!* to put people once again in a
situation of incompetence. A theoretically satisfactory conception of rational
discourse is at risk of doing just that. But at the end of the day, it is still
ordinary people, rather than any reference to the methodological ideas of
philosophers, which have to carry the burden of responsibility for their

actions. Rational discourse and Socratic self-limitation must somehow go hand in hand. It is with this final reflection that I will try to continue the discussion of Habermas in a coming *Bimonthly,* then with a particular focus on the idea of discourse ethics. See you later!

Notes

6) It may help readers not familiar with Aristotle's understanding of deductive logic to briefly hint at the way it is tied to his distinction of "universal" and "particular" propositions or assertions. As we have noted, an argument for Aristotle is *deductive* if its conclusion results *of necessity* from its premises, that is, there can be no question about it inasmuch as contesting it would lead us into an immediate contradiction. This is the case whenever an argument can be shown to move from some *universal* proposition (such as "all men are mortal") to a particular one (such as "Socrates is a man, hence he is mortal"). This yields the classical syllogistic model of deductive-logical inference (X is an A; all A's are B's; so X is a B). Hence, Aristotle explains, "the propositions on which the deduction depends are universal"; for "one cannot demonstrate anything except from its own principles" (1984b, I.8, 75b21f and I.9, 75b37). By contrast, when the conclusion results not necessarily but only possibly, Aristotle speaks of a *dialectic* argument. Such an argument leads to questions and debate about the right kind of conclusion, or differently put, about the right principles to be applied. It is of an *inductive* rather than deductive kind, in that it works the other way round; it attempts to infer universal from *particular* propositions (e.g., scientific theories, or basic principles of science and ethics). This latter form of argumentation was already used by Socrates and is central to Aristotle in the *Posterior Analytics,* an early kind of "theory of science" (Aristotle, 1994b), as well as in the *Nicomachean Ethics,* his theory of the good and virtuous life (Aristotle, 1985). As we will see, it is essential for establishing the "warrants" (scientific or ethical principles) that make conclusive argumentation possible beyond the reach of merely analytic reasoning or, with Aristotle, "perfect" deduction (deductive-logical demonstration in the narrower of Aristotle's two understandings of deduction). *[BACK]*

7) To give a simple example, if the two propositions "p" (it rains) and "q" (the road is wet) are both true, then the proposition "p implies q" is equally true whereas "p rules out q" is false. Note that whether the new proposition is true or not depends solely on the truth values of the original sentences along with the logical operation applied to them; it does *not* depend on the content (meaning) of the original sentences. For example, if the meaning of "q" changes to "carbon dioxide is heavier than air" (true), "p implies q" is still true and "p rules out q" is still false (example taken from Bochenski and Menne, 1965, p. 28; I.M. Bochenski was in the late 1960s my logic teacher at the University of Fribourg). Clearly, then, syntactic well-formedness does not secure semantic meaningfulness, much less pragmatic validity, without further ado. That is, a meaningful and practically relevant logic of argumentation cannot be reduced to a logic of syllogistic inference. As I am tempted to say, using Aristotle's term: "perfection" does not supersede relevance, in logic as little as elsewhere. As trivial as it may look, this insight had been all but lost in the development of the theory of argumentation from Aristotle's original conception of logic to the modern propositional calculus – until Stephen E. Toulmin (2003, orig. 1958) published his seminal book on *The Uses of Argument.* *[BACK]*

8) Perhaps a reason why Toulmin does not mention Kant is that the judicial metaphor has long since become part of our everyday vocabulary of argumentation, no less than the propriety or building metaphor**:** when we argue, we not only "claim" to have "solid" reasons and "grounds" and then try to "support" these with firm "backings"; we also talk about the sort of "case" we "present" in defense of our claims and about the "procedures" by which we try to convince the "parties." Even so, I find it useful to associate the judicial analogy with Kant's critical philosophy. Doing so reminds us that any relevant logic of argumentation ultimately "ties up with the business of rational criticism." Toulmin (2003, p. 6) *[BACK]*

9) The issue is essential, though, when it comes to promoting reflective practice. As a preliminary reflection on this issue, my work on critical systems heuristics (CSH) and critical pragmatism (cf., e.g., Ulrich, 1983, 1987, 1996, 2000, 2002, 2006a, b) suggests to

me it is upon the discourse participants themselves, whoever they are, rather than any prior "field-dependent" (i.e., disciplinary or institutional) conventions, to reach some mutual understanding as to what in a specific situation are the relevant contexts of argumentation to be considered. This is so because, in the terms of CSH, the definition of relevant contexts is a normative-practical issue of *boundary critique* by all those affected or concerned, rather than one of theoretical-empirical justification by the "experts" (professionals) and decision-makers involved in a situation. The role of boundary critique will be in the center of the final essay of this series. *[BACK]*

10) The reader may have observed that Toulmin's basic scheme is superficially similar to Hempel and Oppenheim's (1948) scheme of syllogistic *explanation* in science, where C = explanandum (description of the empirical phenomenon to be explained), D = initial or antecedent conditions (minor premise), W = general laws or nomological hypotheses (major premise), and B = empirical basis for W or basic statements; W and D together are also called the explanans. But of course, the essential difference consists in the fact that in Toulmin's scheme, the step from B to W is no longer a merely analytic one; which is to say, from the perspective of the Hempel-Oppenheim scheme, it raises Hume's problem of induction – a problem we'll discuss in a moment. Note that if the Hempel-Oppenheim scheme is indeed to serve as a model of scientific explanation, then the problem of induction is bound to come up again; symptomatically, with its reference to "general laws," the model glosses over the fact that it does indeed presuppose the validity of some prior inductive inference from particular observations to nomological hypotheses or "laws." That is to say, the Hempel-Oppenheim model does not solve but merely avoid the problem of a logic of substantial (or "inductive"), rather than merely analytic (or "deductive"), argumentation. – Similarly, Popper's (1959) attempt to avoid the need for substantial argument by using deductive logic merely as the "organon of criticism," is bound to avoid rather than solve the problem. Popper's model is logically based on the *modus tollens* (modus tollendo tollens) of classical logic, according to which "the falsification of a conclusion entails the falsification of the system from which it is derived" (Popper, 1959, par. 18). Thus, if a statement *p* says that A ("it rains") implies B ("the street is wet") and we have ¬B [not B, the street is dry], then ¬A [not A, it doesn't rain] should hold true. If A still holds, *p* is "falsified." In Popper's famous example: A=swan and B=white. While unproblematic as a tool of analytic reasoning, Popper's attempt to use this scheme for substantial reasoning – more accurately, as the *only* rational form of critical substantial argumentation – amounts to a narrowing down of the concept of rational criticism to the uncovering of logical inconsistencies, at the price of excluding from the realm of rational criticism any considerations of substantial inadequacy, e.g., regarding a claim's semantic context of meaning and its pragmatic context of relevance. For more detailed discussions of Popper's narrow concept of criticism with a view to reflective research and professional practice, see Ulrich, 2006c and 2008). *[BACK]*

11) The concept of the "universal audience" (or "ideal audience") was coined by the Polish-Belgian philosopher of law Chaim Perelman, who in cooperation with Lucie Olbrechts-Tyteca attempted to extend classical rhetoric to an (informal) logic of value judgments. The *auditoire universel* comprises "all men who are rational and competent with respect to the issues that are being debated" (Perelman, 1968, p. 21, quoted in Alexy, 1978, p. 206). That is, it is the largest possible audience which has an interest to hear and to agree. Consequently, the value of an argument is to be measured by the audience that it convinces, or in other words, by the extent to which it convinces a particular rather than a universal audience. A convincing, as distinguished from a merely persuading, argument is "one whose premises are unversalizable, that is, acceptable in principle to all members of the universal audience" (Perelman and Olbrechts-Tyteca, 1969, p. 35). *[BACK]*

12) We may understand the fundamental importance of the universalization principle in even more basic terms, without presupposing (with Habermas) the language-pragmatic and discourse-theoretical turn in the first place; namely, by relating it to Kant's *general principle of reason* (which, as its name suggests, applies to both theoretical as well as practical reason). According to this principle, it is reason's intrinsic necessity to always look for the general, that is, for completeness on the side of the conditions on which its conclusions depend (cf. Ulrich, 1983, p. 219f; Kant, 1787, B364). In simpler, less Kantian and more pragmatic terms, a "reasonable" argument must consider all the circumstances that may have a bearing on the conclusion in question, now and in future. This explains why the Kantian principle of generalization (or universalization) is indeed fundamental to theoretical-empirical as well as practical-normative reasoning, before and beyond the language-pragmatic and discursive turn. *[BACK]*

13) Among these other key contributors I should mention his long-time colleague and friend Karl Otto Apel (e.g., 1967-70, 1972, 1981), to whose influence and importance I have not even tried to do justice in this article. I have been similarly selective with regard to some key concepts of Habermas that have played an important role in the development of his thought but are no longer so central to him today. This concerns, for example, his "consensus theory of truth," his work on "technology and science as ideology" (1971b), and his abandoned early focus on "knowledge-constitutive interests" (Habermas, 1971a). As explained, I have preferred instead to concentrate on a few ideas that I find of fundamental methodological interest not only for Habermas' work but equally for our own current undertaking. *[BACK]*

14) Although empirical and contextual considerations have recently gained more weight in Habermas' conception of discursive rationality (see particularly Habermas, 2004), as far as I can see his reading of bridge principles still tends to be more strictly universal than what I consider feasible for practical purposes. It seems to me that any conception of "enlarged" thought (whatever bridge principles it may imply) entails a quest for comprehensiveness in our knowledge of relevant circumstances and understanding of normative issues that is epistemologically as unfeasible as it is unavoidable. The philosophical dilemma we encounter here is the unresolved *problem of holism.* An alarm bell is ringing**:** we must not allow the talk of "bridge principles" to deflect our attention away from the precarious nature of any holistic claims. There is, symptomatically, no natural end to "universalization," "discourse," and so on; or in more technical terms**:** any stopping rule that might end the quest for comprehensiveness is arbitrary. In my work on critical heuristics, I have therefore found it necessary to limit the burden that *any* conceivable bridge principle can carry. I try to achieve this by employing bridge principles – or as I prefer to say, methodological guidelines or principles for "enlarged" thought, including Kant's universalization principle but also, for example, Peirce's pragmatic maxim and Singer's (1959) and Churchman's (1982) "sweep-in" principle – in systematic combination with a counterprinciple that I call the *principle of boundary critique* (for an introductory discussion, see Ulrich, 2001, pp. 11-15 and 23f). It will be in the center of my attempt, in the final essay of this series, to sketch the outlines of a "philosophy *in* practice" rather than *of* practice, that is, a practical philosophy properly speaking. *[BACK]*

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November-December, 2009

Commitment for the self-reflective dimension of discourse: Jurgen Habermas

„I believe that the concept of communicative rationality can be
adequately explicated only in terms of a theory of argumentation.''

(Habermas, 1984, p. 17f)

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