

Toulmin's Warrants
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In *The Uses of Argument* (1958), Stephen Toulmin proposed a new, dialectically grounded structure for the layout of arguments, replacing the old terminology of “premiss” and “conclusion” with a new set of terms: claim, data (later “grounds”), warrant, modal qualifier, rebuttal, backing. Toulmin's scheme has been widely adopted in the discipline of speech communication, especially in the United States. In this paper I focus on one component of the scheme, the concept of a warrant. I argue that those who have adopted Toulmin's scheme have often distorted the concept of warrant in a way which destroys what is distinctive and worthwhile about it. And I respond to criticisms of the concept by van Eemeren, Grootendorst & Kruiger (1984), Johnson (1996) and Freeman (1991). Their criticisms show the need for some revision of Toulmin's position, but his basic concept of warrant, I shall argue, should be retained as a central concept for the evaluation of arguments.

1. *Toulmin's conception*

Despite the pluralism implicit in his title, Toulmin articulated his proposal for the layout of arguments in the context of a single use of argument, that of justifying one's assertion in response to a challenge (Toulmin, 1958, 12). The proposed layout emerges from consideration of the questions that could arise in such a challenge. Prior to the challenge, there must be an assertion, in which there is involved a *claim*, by which Toulmin appears to mean the proposition asserted. A challenger's first question in response to such an assertion is something like, “What do you have to go on?”, to which the answer will be *data* (Toulmin, 1958, 97) or *grounds* (Toulmin, Rieke & Janik, 1984, 38). But a challenger who accepts as correct the information given in answer to such a question can still ask a further question: “How do you get there?”, to which the answer will be the *warrant* (Toulmin, 1958, 98; Toulmin, Rieke & Janik, 1984, 46). Whereas the data or grounds are the basis of the person's claim, the warrant is the person's justification for inferring the claim from those grounds. Justifying a step from grounds to claim, according to Toulmin, requires appeal to general considerations: “What are needed are *general*, hypothetical statements, which can act as bridges, and authorise the *sort* of step to which our argument commits us.” (Toulmin, 1958, 98; italics added) Warrants may be qualified by such *modal qualifiers* as “probably” or “generally” or “necessarily” or “presumably”, a fact generally reflected by qualifying the claim; if the warrant is defeasible, then conditions of exception or *rebuttal* may be mentioned. Finally, a challenger may ask for justification of the warrant, to which the answer will be a proposed *backing* for the warrant.

To repeat Toulmin's hackneyed and familiar example, suppose someone asserts, “Harry is a British subject.” A challenger requests justification of this claim, to which the reply is, “Harry was born in Bermuda.” The challenger further asks how this ground supports the claim, to which the reply is, “A man born in Bermuda is generally a British subject.” As a defeasible warrant, this assertion has conditions of rebuttal, which could be made explicit: “unless neither of his parents is of British nationality or he has changed his nationality”. Asked to justify the warrant, the author of the claim will cite the British Nationality Acts, where these rules for determining nationality are set out. (Toulmin, 1958, 99-102)

Toulmin equivocates on whether a warrant is a statement or a rule, often within the space of one or two pages.¹ The equivocation is harmless, since a warrant-statement is the verbal expression of a warrant-rule. But a rule is more basic than its verbal expression as a statement. A warrant, then, is a general rule which licenses or permits a step from grounds of a certain sort to a corresponding claim. It is implicit in the arguments people put forward to justify their claims (Toulmin, 1958, 100), or at least not always explicit (Toulmin, Rieke & Janik, 1984, 56). Although the same universal sentence may be used in one context to state one's grounds for a claim and in another one's warrant for inferring a claim from grounds, the two statements will differ in their logical function. For example, the sentence "All the children in this class have been vaccinated" when used to support a claim provides supposedly established information, but when used to justify an inference licenses a transition from grounds to a claim which is being established; the difference in function could be "hinted at", Toulmin coyly claims, by expanding the sentence to read in the first case "Whoever is a child in this class has been found to have been vaccinated" and in the second case "Whoever is found to be a child in this class you may take to have been vaccinated". (Toulmin, Rieke & Janik, 1984, 47-48; Toulmin, 1958, 99)

Toulmin's concept of warrant has parallels in theoretical discussions of reasoning. It corresponds to what Charles Sanders Peirce calls a "leading principle" of a class of inferences, which he defines as a proposition related to a habit of inference which states that every proposition *c* which is related in a given general way to any true proposition *p* is true (Peirce, 1955, 131). Similarly, it corresponds to what John Pollock calls a "reasoning scheme" or "reason-schema" (Pollock, 2000, 243). The concept of an argumentation scheme derived from the work of Perelman and Olbrechts-Tyteca (1958) is similar. Toulmin's warrants, Peirce's leading principles, Pollock's reason-schemas and Perelman's argumentation schemes are all general principles in accordance with which we reason or argue. They are not grounds from which we argue. The distinctive contribution of all four theorists is their claim that the rules by which we draw conclusions from reasons, or support claims with reasons, are in general not purely formal but substantive.

Neither Peirce nor Pollock justifies their assertion that our reasoning proceeds in accordance with such implicit principles; they seem to take this as a fact evident to all those who reflect on their own reasoning. Perelman and Olbrechts-Tyteca cite numerous examples from the western rhetorical and literary tradition to support their taxonomy of argumentation schemes. Toulmin's only justification for distinguishing warrants from the other components of arguments is that they are responses to a different question from a challenger. He provides no justification for his claim that an adequate response to the question, "How do you get from your grounds to your claim?" must be a general hypothetical statement rather than a particular one confined to the specific case. If one were to construct such a justification from the hints he gives, it might be that one needs to be able to justify the warrant independently of the particular case to which it is applied, and that such an independent justification can only come if it makes no reference to the particular case, i.e. is general.

¹"Propositions of this kind I shall call *warrants* (W) ... our warrant will now be some such statement as ... the relevant laws give us a warrant to draw this conclusion." (Toulmin, 1958, 98-100) "Such a general, step-authorizing statement is called a warrant... the difference between grounds and warrants (facts and rules) is a *functional* difference." (Toulmin, Rieke & Janik, 1984, 46-47; italics in original)

2. *Misconceptions*

2.1. *A warrant is not a kind of premiss*

In some of the textbook literature, warrants and grounds are presented as two different types of premisses. This attempt to fit Toulmin's scheme into traditional terminology is radically misconceived. Toulmin himself explicitly presents his distinction between grounds and warrant as a replacement for the traditional distinction between minor premiss and major premiss: "Is there even enough similarity between major and minor premisses for them usefully to be yoked together by the name of 'premiss'?" (Toulmin, 1958, 96) His negative answer to this question emerges in his subsequent distinction of warrants from grounds, with no proposal of a common genus, and is reflected in the complete absence of the word "premiss" from both editions of his textbook.

In order to decide whether a warrant is a premiss, we would have to clarify what we mean by the word "premiss". The word, and its Latin and Greek ancestors, have a long history in the western logical tradition, going back to Aristotle's word *protasis* (*Topics* 101b15-16). In this tradition, a premiss is that *from which* an argument starts, i.e. that *from which* the conclusion is presented as following. If we ask which component or components in Toulmin's scheme fit the traditional meaning of the word "premiss", the answer is quite clear: Toulmin's grounds are premisses in the traditional sense, propositions from which the claim is presented as following, but no other component of Toulmin's scheme is a premiss. In particular, a warrant is not a premiss. The claim is not presented as following from the warrant; rather it is presented as following from the grounds *in accordance with* the warrant. A warrant is an inference-licensing rule, not a premiss.

2.2. *A warrant is not an implicit premiss*

It follows immediately that the warrant is not an implicit premiss. It is true that warrants are implicit, at least in Toulmin's initial formulation: "data are appealed to explicitly, warrants implicitly." (Toulmin, 1958, 100) But, as already argued, they are not premisses. And in fact they may be explicit, according to Toulmin's later position in his textbook (Toulmin, Rieke & Janik, 1984, 46, 56). It is not their implicitness which distinguishes warrants from grounds, but their functional role.

Toulmin's scheme is completely antithetical to the traditional approach of attributing implicit premisses to arguments. The supposed implicit premiss is on Toulmin's approach not a premiss at all, but a warrant.

It strikes many commentators as a mere verbal difference to call an implicit component of an argument a "warrant" rather than a "premiss". But the distinction is more than verbal. The implicit-premiss approach assumes that a good argument must be either a formally valid argument, or a modally qualified formally valid argument, or a formally inductively strong argument, or an argument possessing some other sort of formal connection adequacy. But arguments which intuitively strike us as quite respectable are not formally correct, in any of these senses. To reconcile their intuitive respectability with the assumption that a good argument has a formally adequate connection between premisses and conclusion, the fiction of an implicit premiss (variously called "hidden", "missing", "tacit", "unexpressed", etc.) is invented. And the

problem becomes one of discovering something that is not there. In particular, if one seeks an implicit premiss whose explicitation will produce a formally valid argument, then it can be proved that any such implicit premiss will be at least as strong as the proposition that it is not the case that the premisses are true and the conclusion false.² But this proposition, though a logical minimum, is less strong than the implicit assumption which sophisticated argument analysts attribute to arguments. So one resorts to ad hoc devices to explain and predict this stronger assumption, e.g. the notion of a “pragmatic optimum” (van Eemeren & Grootendorst, 1992, 64-68).

Toulmin’s concept of a warrant explains immediately why the implicit assumption is stronger than the logical minimum required to produce some sort of formal connection adequacy. The implicit assumption is not an implicit premiss, but the statement of a rule used to infer the conclusion from the premisses (or, in Toulmin’s terminology, to license the step from the grounds to the claim). As a rule, it is general. It applies not only to the argument at hand, but also to all arguments similar in the relevant respects. The warrant entitles us to infer (presumptively) not only the British nationality of Harry, but also the British nationality of a host of others born in Bermuda: Jane, Sarah, George, Sam, and so on.

There is another substantive difference between regarding the implicit assumption as an implicit premiss and regarding it as a warrant. When one searches for an implicit premiss, one is looking for something which the argument needs in order to be a good argument or for something which the arguer actually used to generate the conclusion from the premiss(es).³ In either case, one assumes that there is a unique answer to one’s question. The warrant approach, however, needs no assumption of a unique answer to the search for what is implicit in an argument’s inference of a conclusion from its explicit grounds. If it is not possible to ask the author of an argument, “How do you get from your grounds to your claim?”, the question is better construed as the question, “How might you get there?” And to this question there will in general be a variety of possible answers, varying according to how wide a scope of generalization one assumes and which parts of the content of the argument one abstracts from. As to scope, the warrant Toulmin constructs for his imaginary argument about Harry is limited in scope to human beings; it does not license inferences from the birth in Bermuda of snakes, chickens, cows and other non-human animals to their being British subjects. A broader warrant would equally well license the inference about Harry, but it lacks the required backing. As to the parts of the content from which one abstracts, consider a common argument that marijuana should be legalized because it is no more dangerous than alcohol, which is legal. Among the general rules which would license the step in this argument from the grounds to the claim are the

²Proof: Suppose not. Then the implicit premiss is compatible with the opposite, i.e. with the proposition that the premisses are true and the conclusion false. Hence the expanded argument with this implicit premiss made explicit will not be formally valid. QED

I formulate the logical minimum in terms of the negation of a conjunction (construing both negation and conjunction truth-functionally, in the classical sense) rather than in terms of a conditional, because the semantics of the indicative conditional are a matter of dispute. The logical minimum is equivalent to a truth-functionally defined Philonian or “material” conditional.

³For the distinction between needed “gap-filling” assumptions and used “gap-filling” assumptions, see (Ennis, 1982).

following: given that something is no more dangerous than alcohol and that alcohol is legal, then you may take it that that thing should be legalized; given that something is no more dangerous than something else that is legal, then you may take it that the first thing should be legalized; given that marijuana is no more dangerous than something that is legal, then you may take it that marijuana should be legalized; given that one thing is no more dangerous than another which has a certain social status, then the first thing should be given the same social status; and so forth. These possible warrants differ from one another with respect to which parts of the argument's content one abstracts from—"marijuana", "alcohol", "legal" or some combination of these content expressions. The question, then, is not which of these possible warrants the argument actually assumes, for this question has the false presupposition that just one of them is so assumed. The question is rather whether any of these possible warrants is an established warrant, i.e. whether the step from grounds to claim is in fact justified. It is a question of argument evaluation, not a question of argument reconstruction.

2.3. A warrant is not an ungeneralized indicative conditional

Freeman (1991, 53) says that for Toulmin warrants are expressible in the form, "If D, then C", where D are the data and C the claim. Taken at face value, this reading misses the generality of warrants, which is one of their key features. For Toulmin, a warrant never has the form, "From these data, you may take it that this claim is true." It always has the form, "From data of this kind, you may take it that a corresponding claim of this sort is true." He may be mistaken in believing that inference-licenses are always general, but this belief is a key part of his conception of a warrant, and it must be respected in presenting his position.

Toulmin does in fact write that warrants are expressible in the form, "If D, then C" (1958, 98), but he expressly describes warrants as general, hypothetical statements, as quoted above. And every example of a warrant given in his textbook and accompanying manual is a general statement which covers more than the particular argument of which it is a warrant. To make Toulmin's position consistent, we must construe him as meaning "If D, then C" to express a generalized conditional, generalized over some component content(s) of D and C.⁴

3. Objections

3.1 Difficulty of practical application

Van Eemeren, Grootendorst & Kruiger assert that "it is often difficult in practice to establish ... exactly which statements are the data and which statement is the warrant." (van Eemeren, Grootendorst & Kruiger, 1984, 205) They note that the main distinction is supposed to be the difference in function, between providing the basis of the claim and justifying the step from this basis to the claim. Other criteria can be used in combination with the functional one: particularity of the data vs. generality of the warrants, explicitness of the data vs. implicitness of

⁴Verheij (forthcoming) describes Toulmin as inconsistent in occasionally seeming to refer to an instance of a conditional statement (i.e. an ungeneralized particular conditional) as a warrant. Verheij notes that elsewhere Toulmin unambiguously emphasizes the generality of warrants.

the warrants. In practice, they allege, data and warrants “are totally indistinguishable” (van Eemeren, Grootendorst & Kruiger, 1984, 205).

Van Eemeren, Grootendorst & Kruiger do not justify their claim of frequent difficulty in practice of making the distinction. They illustrate it with an invented and rather unrealistic example; the example raises a specific problem which will be the next objection discussed. The way to test a claim that it is difficult in practice to apply a certain theoretical distinction is to take some examples and apply it. I did this for a sample of 50 arguments extracted by random sampling methods from several hundred thousand English-language monographs in the library of a research-intensive university (Hitchcock, forthcoming). For 49 of the arguments, I had no difficulty in singling out an applicable “inference-licensing covering generalization”, as I called it, and distinguishing it from the grounds adduced in explicit support of the claim. The generalization so distinguished was sometimes convoluted and difficult to state in comprehensible English, but that difficulty does not tell against the legitimacy of Toulmin’s distinction between data or grounds on the one hand and warrant on the other. On the basis of this sampling, I conclude that the claim of van Eemeren, Grootendorst and Kruiger is false: it is seldom difficult in practice to distinguish the grounds of an argument from its warrant.

3.2. Occurrence of general statements as grounds and of particular statements as warrants

As their illustration of the supposed difficulty of establishing which statements are the data and which statement is the warrant, van Eemeren, Grootendorst & Kruiger (1984, 205) invent a scenario in which the warrant in Toulmin’s hackneyed example functions as the datum and the datum functions as the warrant. Someone says, “Harry is a British subject.” Asked “What have you got to go on?”, she replies, “A man born in Bermuda is a British subject.” Asked “How do you get there?”, she replies, “Harry was born in Bermuda.” If we follow Toulmin in taking the functional distinction as basic, then the datum is a general statement, not a particular one, and the warrant is a particular statement, not a general one.

This example raises a problem for Toulmin’s claim that warrants are general and data or grounds particular. Since Toulmin does allow that a universal statement can function as a datum, he should say that data or grounds are usually particular statements. As to the warrant in the hypothetical example, it is in form a particular statement but in function a general inference-licensing rule. If one takes the step from the datum that a man born in Bermuda is a British subject to the claim that Harry is a British subject, one is using something like the following warrant: Given that a man born in Bermuda has some property P , you may take it that Harry has property P . (Alternatives are possible: one could limit the scope of the warrant to citizenship status, for example.) This statement has exactly the form of a general inference-licensing rule which Toulmin takes to be most distinctive of a warrant. But it is logically equivalent to the particular statement that Harry was born in Bermuda, as can be proved by deducing each statement from the other.⁵ Hence, although the datum in this hypothetical example looks like a

⁵From left to right: Suppose that, given that a man born in Bermuda has some property P , you may take it that Harry has property P . Then in particular, given that a man born in Bermuda was born in Bermuda, you may take it that Harry was born in Bermuda. But obviously a man born in Bermuda was born in Bermuda. Therefore Harry was born in Bermuda.

From right to left: Suppose that Harry was born in Bermuda. Suppose that, for some

particular statement, in its function it is a general rule. The point is quite general: every particular statement is logically equivalent to a general statement. For example, a particular statement in a first-order language of the form “*a* has property *P*” is logically equivalent to the corresponding second-order universal generalization, “For any property *Q*, if everything with property *P* has property *Q*, then *a* has property *Q*.” Thus any particular statement can function as a general rule.

Although the hypothetical example of van Eemeren, Grootendorst and Kruijer is unrealistic, examples do occur in which a particular claim is defended by a universal statement. One did, in the sample of 50 arguments mentioned above; it was the one argument of the 50 for which it was difficult to supply a warrant. It occurs in an early 18th century dialogue between two fictional characters who have opposite attitudes to such practices as making the sign of the cross with holy water and wearing surplices, Philatheus opposing them as “Popery” and Timotheus defending them. In the immediate context of the argument extracted by random sampling techniques, Timotheus has characterized the refusal of dissenters like Philatheus to make the sign of the cross with holy water and wear surplices as superstition, on the basis of a mutually agreed definition of superstition as undertaking to make laws of prescribing and refraining in the name of God where God has left us at liberty; Timotheus points out that God has made no laws prohibiting making the sign of the cross with holy water or wearing surplices. Philatheus then says, “I perceive, *Tim<otheus>*, thou resolv’st never to be long in the right: for observe, superstition is to be charg’d upon those, who say these things are injoin’d by God, and necessary to religion, when in Truth they are not so.” (Oldisworth, 1709, 141) Here Philatheus claims that Timotheus is in the wrong. He supports his claim with an atemporal universal generalization, in fact an immediate consequence of the agreed definition of superstition. The difficulty presented by this example is that there is no content common to the claim and the supporting ground on which one could generalize to formulate a warrant; that is, there is nothing like the phrase “is a British subject” in the hypothetical example just discussed. The ground can be made relevant to the claim, however, by supposing that the error alleged in the claim is the error of superstition. In that case, the warrant would be: Thou, Timotheus, say’st these things are injoin’d by God, and necessary to religion, when in Truth they are not so. Though a particular statement, this warrant can function as a general rule, since it is logically equivalent to the following second-order generalization: Whatever is true of anyone who says things are enjoined by God and necessary to religion when they are not, is true of Timotheus.

The fact that a first-order particular statement is logically equivalent to a second-order universal generalization, and thus can function as a general rule of inference, enables us to solve a problem for Toulmin’s conception of a warrant raised by a number of critics, including Clark (1956), Cowan (1964) and Freeman (1991, 51). We sometimes encounter arguments such as, “John will not come to the party, because John won’t come if Mary is coming.” Here, it is alleged, the explicit premiss has the conditional form characteristic of a warrant, whereas the assumption which licenses the inference—that Mary is coming to the party—is a particular fact of the sort typical of a datum. Freeman takes such examples as showing that it is impossible to determine in the case of some arguments *as products* which statements are data or grounds and which statement is the warrant. (He concedes that in an actual conversation, in which there is a

arbitrary property *P*, a man born in Bermuda has some property *P*. Then Harry has property *P*. By conditionalization, for an arbitrary property *P*, if a man born in Bermuda has some property *P*, then Harry has property *P*. Hence, since *P* was an arbitrary property, if a man born in Bermuda has some property *P*, then Harry has property *P*. QED

process of arguing, one can determine which is which by asking the arguer the questions Toulmin takes to elicit the two types of responses: What do you have to go on? How do you get there?) But in the example it is quite clear what the datum is. The arguer has put forward as support the conditional proposition that John won't come to the party if Mary does. This is probably a particular indicative conditional rather than a general one, but even if it were general ("John never goes to parties to which Mary goes"), it would still be functioning as the datum or ground of the argument. How do we know? Because it is the only proposition cited in support of the claim. The warrant is an implicit covering generalization, which may be expressed in Toulmin's quasi-canonical warrant form as follows: If some proposition p is true if Mary is coming, then you may take it that p is true. And this rule is logically equivalent to the proposition that Mary is coming.⁶ To identify this proposition as the warrant is quite consistent with Toulmin's characterization of a warrant as a general inference-licensing rule.

3.3. *Misconstrual of the function of generalized conditionals in premissory position*

Freeman (1991, 53-72) argues at length against what he takes to be Toulmin's claim, that explicit conditional statements which occur in premissory position are to be construed as warrants, not in the traditional fashion as premisses. Consider the argument: "Peter is a Swede; Scarcely any Swedes are Roman Catholics; so, almost certainly, Peterson is not a Roman Catholic."⁷ Freeman construes Toulmin as asserting that general categoricals like the second statement in this argument are either summaries of data, in which case they can serve as backing, or permissive warrants which can go beyond the observed data; similarly for generalized conditionals. Toulmin needs to show, Freeman asserts, that open-ended generalizations like "hydrogen atoms have one proton in their nucleus" always function in arguments as warrants when they are in premissory position. Freeman finds Toulmin's arguments for this position inadequate: they either beg the question or rest on false assumptions about the use of words like "every" and "any". Likewise, Ryle fails in an earlier attempt (Ryle, 1950) to establish that all hypothetical statements express inference rules (Freeman, 1991, 61-68). Freeman notes that Mill anticipated Toulmin's analysis of some universal affirmative categorical propositions as warrants, referring to them as "a memorandum for our guidance" (Mill, 1973, 180). But Mill

⁶Proof: Left to right: Suppose that, if some proposition p is true if Mary is coming, then

you may take it that p is true. Then, in particular, if it is true that Mary is coming if Mary is coming, then you may take it that Mary is coming. But obviously, if Mary is coming, then it is true that Mary is coming. Hence Mary is coming.

Right to left: Suppose that Mary is coming. Now suppose that an arbitrary proposition p is true if Mary is coming. Then p is true. Hence, by conditionalization, if an arbitrary proposition p is true if Mary is coming, then p is true. Hence, in general, if some proposition p is true if Mary is coming, then p is true. QED

⁷This is Toulmin's example. Freeman actually proposes the example: "If Mary is coming to the party, John won't. Mary is coming to the party. So John won't." But the conditional statement in this argument is not a candidate for a warrant, because it is not general. If someone actually propounded this argument, its warrant on Toulmin's analysis would be purely formal: A true conditional with a true antecedent has a true consequent. This is just *modus ponendo ponens*.

also allowed, as does Nagel in his critique of instrumentalism in the philosophy of science (Nagel, 1961), that such propositions can be regarded as part of our knowledge of nature, functioning sometimes as premisses. To construe them in such contexts as inference rules is to misconstrue the structure of the argument.

The first thing to note about Freeman's objection is that Toulmin's distinction between data (or grounds) and warrant does not stand or fall with his alleged insistence that all explicit conditionals or universal categorical statements in premissory position are to be construed as warrants rather than premisses. One can allow that explicit conditionals sometimes function as premisses, i.e. in Toulmin's terminology as "data" or "grounds". Here is a realistic example, adapted from a published advertisement about safe driving. Suppose that a driving instructor is explaining to a class what to do if your car starts to skid on an icy road: take your foot off the gas and turn the steering wheel in the direction of the skid. That will straighten the car out, the instructor might explain, and you can then regain control of the car. "Don't step on the brakes. If you step on the brakes, your wheels will lock. And if your wheels lock, your car won't turn." The claim in the quoted argument is, "Don't step on the brakes." The grounds are quite clearly the two conditionals, which as stated have a general applicability to all students being addressed and to all situations in which the car they are driving starts to skid on an icy road. The warrant is something like: "If your car starts to skid on an icy road, don't do anything that prevents the car from turning."⁸ Since the only propositions which play a role in supporting the claim are the three generalized conditionals, at least one of them must function as a ground. And none of these three conditionals is a mere summary of observed data; all have the open-endedness which is characteristic of a warrant. Faced with examples like this, Toulmin must admit that not all open-ended conditionals which are explicit in arguments but are not the claim are warrants; some are grounds.

Such an admission does not undermine the distinction between data or grounds and warrant. It simply shows that explicit generalized conditionals in premissory position are sometimes grounds. This fact of course reopens the first objection above: how are we to tell in a given case whether an explicit open-ended conditional in premissory position is a ground or a warrant? The default position seems to be that anything explicitly adduced in support of a claim is a ground. It takes some specific indication in the text that an explicit generalized conditional or universal categorical proposition is functioning as a warrant to rebut the presumption that it is a ground. One such specific indication, extremely common in mathematical proofs, is the insertion in the argument of a prepositional phrase containing a name of the proposition, as in the sentence: "A certain neighborhood of this invariant set [represented by a closed curve whose equation has just been given—DH] is compact, and therefore, on the basis of Theorem 6, it will follow from the asymptotic stability that this set will be uniformly asymptotically stable and uniformly attracting; ..." (Zubov 1964, 164)⁹ Propositions so cited are conclusions of an earlier proof, as in the present case, where Theorem 6 reads: "An asymptotically stable closed invariant

⁸In what Toulmin calls a "more candid" form: For any propositions p and q, given that your car is starting to skid on an icy road, and your car won't turn if p, and p if you do q, you may take it that you are not to do q. This is logically equivalent to the injunction not to do anything that will prevent your wheels from turning if your car starts to skid on an icy road.

⁹The example comes from the sample of 50 arguments previously mentioned, i.e. from (Hitchcock, forthcoming b).

set M of a dynamical system $f(p, t)$, having a sufficiently small compact neighborhood, is uniformly asymptotically stable and uniformly attracting.” (Zubov 1964, 29) The fact that theorem 6 is cited with the prepositional phrase “on the basis of” (and in other more typical cases by the preposition “by”) rather than being stated in full before the conclusion indicator “therefore” shows that it is not functioning as a premiss but as an inference-license, i.e. in Toulmin’s terms as a warrant. Another indication is that the generalized conditional occurs after the conclusion has been drawn from a premiss (i.e. datum or ground in Toulmin’s terminology) which immediately precedes it, as in the following invented but realistic expression of spousal concern: “You look very tired, so I think you should put off the house-cleaning you were going to do tonight. You shouldn’t exert yourself when you are tired.” Here the ground is that the addressee looks very tired. The conditional which follows the claim seems to come after the argument has already been stated. It does not sound like an additional piece of information offered in support of a claim, but rather like a justification of the step from the ground to the claim, i.e. like a warrant. Although warrants are usually implicit, this example is typical of those are cases where they are explicit.

3.4. Absence of warrants from arguments as products and from our conscious reasoning

Freeman (1991, 81-84) argues that the category of warrant should be jettisoned in analysing arguments as products, on the ground that they are not parts of arguments as products and so not something to be included in argument diagrams. They are not parts of arguments as products, he holds, because they are only implicit in such products and phenomenologically we are not aware of the rules according to which we draw conclusions in our reasoning. This is a strong argument. In laying out the structure and content of an argument, we do well to be faithful to the text we are analysing and to be cautious about adding to, or subtracting from, what is actually said or written (or thought, if we are analysing our own private reasoning). Otherwise, we run a serious risk of distorting the text under examination by understanding it in the light of our own prejudices, a distortion which is to be particularly avoided if we are dealing with a serious argument.

In general, then, the warrant is not part of the analysis of an argument, not something to be included in its diagramming. Identification of the warrant is part of the evaluation of the argument. The evaluative question is: Is there a justified rule of inference in accordance with which the claim/conclusion follows from the data/grounds/premisses/reasons? There may be more than one possible warrant, depending on which repeated content expressions are generalized over and to what extent. Without the opportunity to ask the arguer, “How do you get there?”, we must ask, “How could you get there?” and consider whether any of the possible rules of inference which would license the step from premisses to conclusion is in fact justified.

3.5. Difficulty of assigning some warrants to fields

Johnson (1996, 129-130) objects that the examples Toulmin gives of warrants are sometimes difficult to assign to a specific field. This is a fair objection to Toulmin’s claim that all warrants are field-dependent. Toulmin sometimes writes as if the body of human knowledge is parcelled out into fields, each of which comes with its established warrants, which an arguer uses to select

grounds relevant to his or her claim. This model fits some arguments well. Construction of a case in law, for example, often proceeds by listing the conditions which jurisprudence in the legal system has determined are individually necessary and jointly sufficient to prove the desired conclusion. Each condition in turn may have established criteria for determining whether it is met. Constructing one's arguments with reference to a hierarchy of such conditions is the well known stasis theory of the rhetorical tradition. But not all arguments can be constructed with reference to the established warrants of a field. Much everyday reasoning, for example, takes place in terms of common-sense knowledge. Suppose that a jealous husband claims that his wife is having an affair, on the ground that he saw her walking to the bus stop with a man from her office (Toulmin, 1984, 48). His warrant is that a married woman seen walking to the bus stop with a man from her office is having an affair with that man. Besides being of dubious validity, this warrant does not belong to a field with established warrants, analogous to law or science or medicine. It is a generalization (a false one) about human behaviour, but hardly the subject-matter of an organized body of knowledge.

In response to Johnson's objection, we would do well to give up Toulmin's strong field-dependency thesis. Some warrants belong to specialized fields, but some are just generalizations, more or less rough-and-ready, based on common experience. Sometimes we construct arguments by selecting data which established warrants indicate are relevant to our claim. Sometimes, however, as in medical diagnosis, we draw a conclusion from the data we observe, and can only with difficulty articulate our warrants, or even our data, afterwards; expert diagnosis is often intuitive and not readily expressible in words.

Qualification of Toulmin's field-dependency thesis, however, does not refute his claim that an argument's grounds are distinct from its warrant.

4. Summary

An argument whose function is to justify a claim does so by providing grounds in support of this claim; we may also call these grounds reasons or data, and we may if we wish retain the traditional labels "conclusion" and "premisses" for the two components. Implicit in any such argument is the claim that the claim follows from the grounds. It does so if and only if there is some justified covering generalization of the argument, possibly qualified as holding "generally" or "presumably". Any such justified covering generalization is what Toulmin means by a "warrant". Warrants are not premisses, and in particular they are not implicit premisses. And they are not merely the particular assumption that the claim is true if the grounds are; they are general.

Objections against the practical applicability of the distinction between warrants and grounds often rely on invented, decontextualized, unrealistic examples of "arguments", which are irrelevant to the question of applicability to real arguments. The distinction was quite easy to draw for a sample of 50 arguments selected by random sampling methods from English-language monographs in a research-intensive university. Examples where the stated grounds are generalizations and the implicit assumption a particular statement are quite consistent with Toulmin's claim that warrants, which are usually implicit, are general, for every particular statement is logically equivalent to a universal generalization of the next order. Explicit conditionals in premissory position, even open-ended ones, must be presumed to be grounds, perhaps contrary to Toulmin's own position; the existence of realistic arguments in which all

supporting statements are open-ended generalized conditionals proves that such conditionals are sometimes grounds. The presumption that explicit conditionals in premissory position are grounds can be defeated by textual indications that they function as warrants. The implicitness and frequent indeterminacy of the warrants for arguments as products show that warrants are generally not components of arguments, to be included in their reconstruction or in a diagram of their structure. Questions about an argument's warrant arise when one comes to evaluate it, and in particular to evaluate whether its conclusion follows from its stated premiss(es). The question is not "How do you get there?" but "How might you get there?" And then: "Is one of the ways you might get there a reliable route?" Less metaphorically, is there a justified covering generalization? If so, then the inference is warranted; if not, it is not.

Toulmin's field-dependency thesis needs qualification. Many warrants belong to definite fields, in which there is an organized body of knowledge. But many do not. Some are common-sense generalizations. Others are purely formal.

References

- Aristotle (1984/c. 350 BCE). *Topica et sophisticis elenchi*, ed W. D. Ross. Oxford: Oxford University Press. First published c. 350 BCE.
- Clark, R. (1956). Natural inference. *Mind*, 65, 455-472.
- Cowan, J. L. (1964). The uses of argument—an apology for logic. *Mind*, 73, 27-45.
- Eemeren, F. H. van, & Grootendorst, R. 1992. *Argumentation, Communication and Fallacies: A Pragma-Dialectical Perspective*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Eemeren F. H. van, Grootendorst, R., & Kruijer, T. (1984). *The study of argumentation*. New York: Irvington.
- Ennis, R. H. (1982). Identifying implicit assumptions. *Synthese*, 51, 61-86.
- Freeman, J. B. *Dialectics and the macrostructure of arguments: A theory of argument structure*. Berlin: Foris.
- Hitchcock, D. (forthcoming a). Sampling scholarly arguments: a test of a theory of good inference. In H. V. Hansen & C. W. Tindale (Eds.), *Argumentation and its applications*. Windsor: Ontario Society for the Study of Argumentation.
- Hitchcock, D. (forthcoming b). A sample of arguments. In H. V. Hansen & C. W. Tindale (Eds.), *Argumentation and its applications*. Windsor: Ontario Society for the Study of Argumentation. Appendix to (Hitchcock, forthcoming a).
- Johnson, R. H. (1996/1981). Toulmin's bold experiment. In R. H. Johnson, *The rise of informal logic* (pp. 116-152). Newport News, VA: Vale Press. First published in *Informal Logic Newsletter*, 3/3, 13-19.
- Mill, J. S. (1973/1843). *A system of logic, ratiocinative and inductive: being a connected view of the principles of evidence and the methods of scientific investigation*. Toronto: University of Toronto Press. First edition published in 1843.
- Nagel, E. (1961). *The structure of science: problems in the logic of scientific explanation*. New York: Harcourt, Brace and World.
- Oldisworth, W. (1709). *A dialogue between Timothy and Philatheus, in which the principles and projects of a late whimsical book: Intituled, the rights of the Christian church &c. are fairly stated and answer'd in their kind: And some attempts made towards the discovery of a new way of reasoning, intirely unknown both to the Ancients and Moderns. Written by a layman*

(Vol. 1, 2nd ed.). London: For Bernard Lintott.

Peirce, C. S. (1955/1867-1902). What is a leading principle? In J. Buchler (Ed.), *Philosophical Writings of Peirce* (pp. 129-134). New York: Dover. Compiled from portions of articles first published in 1867, 1880 and 1902.

Perelman, C., & Olbrechts-Tyteca, L. (1958). *La nouvelle rhétorique: Traité de l'argumentation*. Paris: Presses Universitaires de France.

Pollock, J. L. (2001). Defeasible reasoning with variable degrees of justification. *Artificial intelligence*, 133, 233-282.

Ryle, G. (1950) 'If', 'so' and 'because'. In M. Black (Ed.), *Philosophical analysis: A collection of essays* (pp. 323-340). Ithaca, NY: Cornell University Press.

Toulmin, S. E. (1958). *The uses of argument*. Cambridge: Cambridge University Press.

Toulmin, S. E., Rieke, R. & Janik, A. (1984). *An introduction to reasoning*, second edition. New York: Macmillan.

Verheij, Bart (forthcoming). Evaluating arguments based on Toulmin's scheme. In H. V. Hansen & C. W. Tindale (Eds.), *Argumentation and its applications*. Windsor: Ontario Society for the Study of Argumentation.

Zubov, V. I. (1964). *Methods of A. M. Lyapunov and their application*, L. F. Boron (Ed.). Groningen: P Noordhoff.