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Systematizing Toulmin’s Warrants: An Epistemic Approach

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ABSTRACT: Relevance of premises to conclusion can be explicated through Toulmin’s notion of warrant, understood as an inference rule, albeit not necessarily formal. Premises are relevant to a conclusion just in case a reliable warrant licenses the step from these premises to the conclusion, or there is a series of steps from premises to conclusion where each is licensed by a reliable warrant. But when is a warrant reliable? We distinguish four types of warrant based on the mode of intuition involved in coming to recognize that the set of premises constitutes a reason for the conclusion: \textit{a priori}, empirical, institutional, and valuational. Within empirical intuition, we distinguish physical and personal intuition. A warrant is reliable just in case either the mode of intuition which grasps the connection it expresses is reliable in this employment or the warrant is justified by its backing. The argument for whether a mode of intuition is reliable or whether we may presume it reliable in a given employment is different for each mode of intuition, as are the arguments to back a warrant. Making these distinctions allows us to present such arguments and thus to indicate when warrants are reliable or at least presumptively reliable.

KEY WORDS: warrant, backing, relevance, intuition, reliability, presumptive reliability

For an argument to be cogent, its premises must be relevant to its conclusion. This is commonplace. Toulmin’s model suggests an explication of relevance. To ask the warrant generating question—How do you get there?—of information put forward as data to support a claim is to ask why those data or premises are relevant to the claim or conclusion. An apropos answer Toulmin calls a warrant.

1. WARRANTS, PREMISE RELEVANCE, AND PROBLEMS

Toulmin’s notion of warrant, however, is problematic. Warrants are ‘rules, principles, inference-licences, ...general, hypothetical statements, which can act as bridges’ (1958, p. 98). But rules and inference licences are not statements (although corresponding to an inference rule is a generalized hypothetical statement). Let us make it clear that in this paper, a warrant is an inference rule, albeit not necessarily a formal, demonstrative inference rule. This accords with Toulmin’s indication that to state a warrant more explicitly than just ‘If D, then C’, one may cast it in the form: Given data such as D, one may take it that claims such as C (1958, p. 98). This is clearly an inference rule. Implicit in this formulation is another important feature of warrants which Hitchcock (2003) has emphasized. Speaking of ‘data such as D’, ‘claims such as C’ indicates that warrants are general. Whatever D and C might be, in presenting the warrant we are generalizing ‘over some component content(s) of D and C’ (2003, p. 487). We should expect the statement of a warrant, then, to contain at least one variable of some sort:

Given that \( x \) is a human being
One may take it that \( x \) is mortal
Formal sentential inference rules are no exception. In *modus ponens*, for example, we are implicitly generalizing over statements.

Given this understanding of warrant, we can proceed to explicate the notion of premise relevance. As a first approximation, we may say that a premise or set of premises is relevant to a conclusion just in case there is a warrant which licenses the move from the premises to the conclusion. This will not do. For given any set of premises \( \Gamma \) and conclusion \( C \), what is to prevent one from simply formulating the inference rule,

\[
\text{Given that premises such as } \Gamma, \\
\text{One may take it that a conclusion such as } C.
\]

On this explication, any set of premises will be relevant to any conclusion—just formulate the inference licence associated with the argument.

Considerations such as these led us to argue in (1992) that we should regard relevance as a ternary relation between a premise or set of premises, a conclusion, and a set of inference rules. We found it necessary to identify two ternary senses of relevance. Given a set of inference rules \( I \), it may not be possible to get from a set of premises \( \Gamma \) to a conclusion \( C \) in one step. No licence in \( I \) permits that move. But some \( I^1 \in I \) may license a move from \( \Gamma \) to an intermediate conclusion \( C' \) and some \( I^2 \in I \) may license a move from \( C' \) (taken conjointly perhaps with some further premises) to \( C'' \), the series continuing for some finite number of steps until we eventually are licensed to infer \( C \). If \( I \) contains a rule allowing us to get from \( \Gamma \) to \( C \) in one step, we say that \( \Gamma \) is immediately relevant to \( C \) with respect to \( I \). Should several steps be necessary, given the contents of \( I \), \( \Gamma \) is mediately relevant to \( C \) with respect to \( I \).

In (1992), we regarded both senses of relevance as descriptive. Saying in either sense that \( \Gamma \) is relevant to \( C \) with respect to \( I \) makes no comment on whether the inference rules in \( I \) are valid or reliable. Not all of them need be. A set of inferences rules may contain the fallacy of affirming the consequent. For \( \Gamma \) to be ‘really’ relevant to \( C \), the inference rule or rules to which one appeals to license the move must all be reliable in one sense demanding explication. Toulmin recognizes this in presenting his model. Although one may see why the proffered warrant explains relevance, one may question whether in general from data such as \( D \), one make take it that \( C \). One may then ask for backing for the warrants, ‘other assurances, without which the warrants themselves would possess neither authority nor currency’ (1958, p. 103).

The first point that Toulmin makes after presenting this characterization of backing in (1958) is that backing is field dependent. In different fields, warrants will be backed in different ways.

“A whale will be (i.e. is classifiable as) a mammal’, ‘A Bermudan will be (in the eyes of the law) a Briton’, ‘A Saudi Arabian will be (found to be) a Muslim’—the words in parentheses indicate what these differences are. One warrant is defended by relating it to a system of taxonomical classification, another by appealing to the statutes governing the nationality of people born in the British colonies, the third by referring to the statistics which record how religious beliefs are distributed among people of different nationalities. (1958, p. 104, italics in original)

This is an explication of what it is for a set of premises to be relevant to a conclusion, rather than each member of the set individually. Given a two premise inference rule, such as *modus ponens* or Barbara, one may say that the premises together are relevant to the conclusion, although neither one by itself is.
The issue of field dependence is a problematic feature of Toulmin’s model for several reasons. First, identifying to what field a warrant (and so its backing) belongs may be problematic, as Johnson complains.

Given that \( x \) is a society that conducts its public affairs in the style of a surrealistic painting

One may take it that \( x \) can be regarded as worse than totalitarian.
(Compare Johnson 1996, p. 131.) What is worse, Johnson urges, is that the whole notion of a field is vague.

Law and science qualify, of course. Does astrology? Does common sense? Does philosophy? And what happens when, as is often enough the case, an arguer provides grounds from different fields? Obviously no one warrant will suffice to link the grounds with the claim, unless the already nebulous concept of a field is to be extended to allow for super-fields! (1996, p. 134)

Part of the problem may involve the connotations of ‘field’. Is a field what in (2005) we called an authority-conferring field, a formal or informal body of received knowledge and technique, (Compare Coady 1992, pp. 278-79), open to revision, capable of being transmitted to others who could then be certified as achieving a level of competence in that field? Branches of science and skilled trades would count as fields in this sense. But what about morals or more generally issues of evaluation, which may not be generally recognized as an authority-conferring field? In (1958), Toulmin speaks of ‘the fields of morals, mathematics, and psychology’ (p. 104). So Toulmin’s notion of field has a wider connotation than just authority-conferring area.

Beyond these problems with the notion of field is Toulmin’s emphasis that we need to look to the field to legitimize warrants used in arguments within that field. The standards for argument evaluation are field dependent. We may expect that warrants in different fields are backed in different ways. How then do we assess whether a warrant is properly backed? Are there canons for this? Are those canons themselves field-dependent or field-transcendent?

Toulmin indicates another feature of warrants and backing which may render both problematic to some. Just as the warrant is implicit in a move from data to claim, but may be made explicit, so the backing for a warrant made explicit may be left implicit. Indeed, Toulmin claims that such backing must be left implicit in some cases, on pain of infinite regress. If one were to demand backing for every warrant, then should Jones present an argument employing warrant \( W_1 \), that warrant would be challenged. In a supplementary argument for \( W_1 \), Jones employs a warrant \( W_2 \). That in turn is challenged.... ‘Some warrants must be accepted provisionally without further challenge, if argument is to be open to us in the field in question’ (1958, p. 106). So it appears that for Toulmin we enter argumentation in a field with a stock of provisionally accepted warrants. This seems a far cry from seeing logic as involving canons for argument appraisal recognized as correctly certifying arguments as deductively valid or inductively strong antecedently to evaluating arguments within a given field. What is perhaps even more disconcerting is Toulmin’s observation that we must accept certain warrants provisionally, taking for granted that the most reliable warrants can be shown acceptable. This raises some significant epistemological questions. May one be justified in accepting a warrant, even if one were not prepared to produce a justification for it? Do we simply provisionally accept certain warrants or are some warrants acceptable even without explicit justification? If the acceptable warrants are those which are most reliable, how do we recognize the warrants which are
Parallel to the question of premise acceptability arises the question of warrant acceptability. At some point, barring circular reasoning, one will come to basic premises. When are those premises acceptable? The mere fact that they may be accepted does not show them normatively acceptable. We also have basic warrants. When are they acceptable?

Since the notion of backing has involved the problematic notion of field dependency, let us approach the question of when a warrant is reliable by asking how one comes to acquire warrants. That is, how does one come to hold that one can take the step from premises to conclusion? (Note that we are here discussing how we may come to make inferences according to a certain pattern, not necessarily to recognize that the pattern is reliable.) This may happen in three ways. First, one might receive the warrant on the word of someone else, as one might receive personal testimony. Such a mode of acquiring warrants may seem less than satisfactory. Ordinarily, when we take a step from premises to conclusion, we ‘see’ how the premises are connected to the conclusion. If we were to simply accept an inference pattern on someone’s word, however, we need have no such insight. If we do, however, such insight may be a matter of immediate intuitive recognition, as when one recognizes the legitimacy of an elementary deductive inference rule. Immediate acceptance upon intuitive apprehension of an inferential connection is the second way one may acquire a warrant. In contrast, upon the suggestion of a connection, either through intuitive apprehension or through the claim of some proponent, one may defer acceptance until the warrant is somehow properly defended. But what does it mean to defend a warrant, since warrants are inference rules, not propositions or statements in themselves, and so cannot be argued for except in an extended sense? We reply that it is not hard to see what that sense might be. Corresponding to a given inference licence is a generalized conditional, which expresses a statement or proposition and thus can be argued for. To defend the associated conditional is to defend the warrant. Accepting the warrant upon defense is the third way of acquiring warrants.

How does the mechanism by which one acquires a warrant bear on its reliability? Taking one’s word, under certain circumstances, is a reliable belief-generating mechanism. If the proponent sincerely vouches for his belief and the person who receives his word recognizes this, and also recognizes that there is a presumption that the proponent has reliably formed this belief, and understands what the proponent has said, and on this basis comes to share this belief, then the recipient has reliably formed this belief, and the belief should be acceptable for her.

The situation is parallel, should the proponent vouch for a warrant, rather than for a statement or proposition. If the proponent has reliably come to hold the warrant, and if the recipient has reliably received his vouching for the warrant, there is a presumption for its reliability from her perspective. But for the proponent to come to hold the warrant reliably, he must have either reliably intuited the inferential connection which the warrant expresses, seen that the warrant is properly defended, or reliably received the warrant from someone else. Obviously, the transmission chain is finite. So at some point, we shall reach a proponent who has either accepted the warrant immediately or on the basis of an argument. Under what circumstances would the proponent have reliably acquired the warrant? Obviously, we have two cases to consider. The case of immediate intuitive grasping is primary, however. An argument for a warrant may proceed according to warrants, whose

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2 Ralph H. Johnson specifically argues this point. See (1996), Chapter 9, section 5. See also our (2005), pp. 12-14.
3 We have discussed these issues in much greater detail in Chapter 10 of (2005), especially sections 10.1-10.3.
corresponding generalized conditionals are argued for in supplementary arguments. But these arguments in turn will employ further warrants. As Toulmin has quite rightly pointed out, at some point within the course of a given discourse we shall reach basic warrants. The primary question concerns the reliability of such warrants. Under what circumstances are such warrants acceptable without argumentation in their favor? Can we present a normative account of when such warrants *should* be accepted? We have suggested that such warrants are intuited. We need to be more explicit about this claim.

2. WARRANTS AND INTUITION

Since intuition may be regarded as an obscure and indeed even obscurantist notion by some, we need first to clarify what we understand by intuition. L.J. Cohen points out that one may have ‘intuitions...about what counts as a reason for what’ (1986, p. 73). Cohen continues, ‘An intuition that \( p \) is now just an immediate, unreflective, and untutored inclination, without argument or inference, to judge that \( p \) (and that anyone who faces the same issue ought also to judge that \( p \))’ (1986, p. 75). Finally, an intuition ‘is an inclination of mind that is taken to originate from the existence of a system of tacitly acknowledged rules for making judgements about relevant topics. That is how intuition can come to suggest what is a reason for what’ (1986, p. 76). Given that warrants license inferences from premises of a certain sort to a conclusion of some sort, they constitute those premises as a reason for the conclusion. Intuition then grasps what warrants express or indicate. Further, being immediate and unreflective, intuition (like perception) is a basic belief-generating mechanism. Finally, if the notion of assimilating a system of rules about what is relevant to what and being tacitly aware of such rules is not mysterious, we need not accuse intuition of being mysterious either.

I believe we may distinguish types of intuition, allowing us to indicate under what circumstances these types of intuition are presumptively reliable and the conditions which in a given case could defeat the presumption of reliability. That is, we can indicate whether a given type of intuition is a presumptively reliable mechanism for coming to make inferences according to a particular warrant, thus creating a presumption for the warrant’s reliability. We present an account of the types of intuition in the next section.

3. TYPES OF INTUITION

I believe we may distinguish types of intuition according to the types of warrant they grasp. I furthermore believe we may distinguish four types of warrants: necessary, empirical, institutional, and evaluative. This typology is derived from the typology of statements we presented in (2005). There we distinguished alethically necessary statements from descriptions, interpretations, and evaluations, all three types contingent. Descriptions are purely extensional statements. Interpretations are intensional, properly explicated through subjunctive conditionals. When one asserts that from \( \Gamma \), one may take it that \( C \), the asserted connection is stronger than merely extensional. Hence the generalized conditionals associated with warrants will be either necessary statements or interpretations or evaluations. As we indicate below, we may distinguish empirical from institutional interpretations. Consider the syllogistic form Barbara cast explicitly as a warrant:
From premises of the form $\forall \psi \chi$,
\begin{align*}
\text{One may take it that } & \forall \varphi \psi \\
\text{This is obviously a necessary formal warrant. By contrast, }
\end{align*}
Given that $x$ is a beam of electrons moving perpendicularly to a magnetic field,
\begin{align*}
\text{One may take it that } & x \text{ is deflected} \\
\text{(compare Burks, 1951, p. 367) is an empirical warrant reflecting an empirically discerned causal connection. We may classify these as personal warrants as opposed to physical warrants. Whereas both sorts of empirical warrants rest on discovering connections in the external world, an institutional warrant, such as }
\end{align*}
Given that $x$ has been bequeathed a sum of $y$ dollars in $z$’s will,
\begin{align*}
\text{One might discern by observation, but upon one’s understanding a connection brought about through statute law. Finally, }
\end{align*}
Given that $x$ has promised to do $Y$
\begin{align*}
\text{we have an evaluative warrant based on a connection of supervenience.}
\end{align*}

We hold that corresponding to each of these types of warrants is a type of intuition. Thus we distinguish *a priori*, empirical, institutional, and evaluative intuition of which moral intuition is a paradigm example. We hold that for each of these types of intuition, we may identify conditions under which it grasps warrants in a presumptively reliable way. Thus such warrants are certified as presumptively reliable. Warrants grasped through these employments of intuition are properly basic on analogy with properly basic beliefs such as those of sense perception. We also hold that in certain cases, although intuition may grasp a suggested connection, one may also recognize that this intuitive grasping is not in itself sufficient to presume the reliability of the warrant and thus defense or argumentation for the warrant is required. But in each of these cases, the type of warrant involved determines the type of argument appropriate and the conditions necessary to establish a presumption for the reliability of the warrant. Limitations of space prohibit our discussing each mode of intuition. However, in the next section, we shall contrast one employment of empirical physical intuition with institutional intuition.

4. CASE STUDIES-PHYSICAL VERSUS INSTITUTIONAL INTUITION

I believe we may analyze the operation of physical intuition as the imposition of an interpretive category on a recognized connection of covariation. Experience presents us both with instances of one property, condition, state of affairs uniformly, standardly, or at least frequently being associated with another property, condition, or state of affairs, and with a number of properties or conditions clustering together. A match’s being struck is standardly accompanied by its lighting. Being an apple involves having a skin of a certain texture, flesh of a certain type, seeds of a certain appearance, a typical shape, and size within certain parameters. This is covariation. Upon such covariation, physical intuition may impose one of several interpretive categories. The paradigm example is efficient causation, intuiting a causal hypothesis. Another interpretive category is natural kind. One
may recognize natural kinds in the physical world and may project or make inferences accordingly, for example

Given that $x$ is an instance of natural kind $K$, e.g. water
One may take it that $x$ is $P$, e.g. odorless

In (2005), we have presented Kornblith’s argument in (1995) for the reliability of certain of these inferences. Presenting Kornblith’s argument is beyond our scope in this paper. But we do need to comment on how apprehending certain features of a natural kind as essential to the kind leads to making inferences based on those features. Kornblith quotes the psychologists Medin and Ortony, who claim that ‘people act as if their [natural kind] concepts contain essence placeholders that are filled with ‘theories’ about what the corresponding entities are’ (Medin and Ortony, 1989, p. 186; quoted in Kornblith. 1993, p. 106.). In filling in what is essential to the kind, these theories at least in some instances identify determinable features which are universal to the kind, for example mode of nutrition (as opposed to color) for a species of living thing. One identifies the actual mode of nutrition associated with a given species by empirical observation of a few members of that species. Once ascertained, that determinate is projected, i.e. we make inferences according to the warrant that from something’s being an instance of that natural kind we may take it that it has this particular determinate mode of nutrition.

One can view the input perceptual reports as backing for the warrant corresponding to inferences from the kind to the determinate. But it is backing leading to the discovery of a warrant as opposed to justificatory backing. The warrant is basic, not argued for from the backing as premises. In seeing that something is an instance of a natural kind, one is seeing a pattern in what one views, a pattern involving an essence which identifies the observed determinate as belonging to the essence of the kind. Our apprehension that this determinate is projectible seems a basic, intuitive apprehension.

Although our grasping the warrant is basic, are warrants thus grasped presumptively reliable? The reliability of the warrant is a function, at least in part, of the accuracy or verisimilitude of the theories filling the essence placeholder. (Compare Kornblith, 1993, p. 106.) A more reliable theoretical understanding of the natural kind will result in more reliable warrants. But may we presume the reliability of the theories filling the essence placeholder? In many cases, I believe we can, for in many cases these theories will reflect current common understandings deriving from some combination of common knowledge and scientific opinion, for which in many cases there is a presumption. So we may maintain that in many cases warrants grasped intuitively through the imposition of a natural kind concept are presumptively reliable.

Institutional warrants, by contrast, are backed by systems of constitutive rules. What is it to score a goal in soccer, to be a British subject, to be classifiable as a mammal within a certain system of taxonomy? These are constituted by the rules of soccer, the statutes defining British nationality, the specifications of the system of taxonomy itself. Searle calls such systems of constitutive rules institutions (1969, p. 51). As with empirical warrants, rules back warrants by allowing us to draw an inferential moral. Only here, intuition operates not by imposing some interpretive category on observed covariation, but by understanding the rule.

To defend the view that a form of intuition operates to grasp at least some institutional warrants immediately and in a way which is presumptively reliable, we need to ask how we learn

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4 See Chapter 8.6, ‘Physical Subjunctives and Physical Intuition’. 
such rules. This happens in two primary ways. We may assimilate such rules informally by
tentatively engaging in the practice they constitute, having our understanding refined through the
reinforcement or correction of others—we learn the rules of soccer by actually playing soccer. By
contrast, we may consult some authoritative formulation of the rule—we learn who is a British
subject by consulting the British Nationality Acts.

The proper test for having informally learned the constitutive rules of a practice successfully
is being able to engage in that practice correctly or recognize that others are correctly engaging in
that practice. One need not be able to state the rules explicitly. This indicates a far more intimate
connection between backing and warrant than in the case of empirical intuition where, upon
awareness of certain backing, intuition draws a moral as to what may be inferred from what. Here to
informally learn the rule, i.e. the backing, is to acquire the warrant. Surely, from having learned the
rule constituting scoring a goal in soccer, one would project from Jones’ having kicked the ball into
the net from the field that Jones had scored a goal. His learning the rule and acquiring the warrant
would be one and the same. Surely the informal learning of such rules is immediate or intuitive. If
one has presumptively learned the rules correctly, one’s warrant is presumptively reliable.

Again, it would seem that our learning some constitutive rule through our encountering some
authoritative formulation of the rule would in many cases be immediate, as long as our understanding
of the rule was immediate and straightforward. Consider the classic warrant

Given that \( x \) was born in Bermuda

One may take it that \( x \) is a British subject.

To back this, as Toulmin points out, one may consult the relevant sections of the British Nationality
Acts. Should those statutes include that those born in British crown colonies are British subjects,
which seems quite unambiguous, given adult language comprehension, we understand the relevant
clauses when we read them and grasp the corresponding warrant immediately, i.e. intuitively.

May we presume an intuition reliable in this institutional employment? According to Searle’s
speech act theory, the written formulation of the rule that one consults is an assertive. It asserts that
certain constitutive rules have been agreed to or that certain provisions have been legally enacted.
The assertive thus reports that another speech act has taken place, a declaration. According to Searle,
a declaration ‘brings about the correspondence between the propositional content and reality,
successful performance guarantees that the propositional content corresponds to the world’ (1979,
pp. 16-17).

Suppose one is confronted with an assertive to the effect that a constitutive rule has been
declared and on this basis grasps the warrant associated with the rule. Under what circumstances can
one presume one’s intuition reliable in grasping this rule? Is the warrant thus grasped presumptively
reliable? Two conditions are necessary. One must understand the assertion that a successful
declarative has been made and that assertion must be true. One may presume the assertion true if one
may presume that the source making the assertion is trustworthy. Understanding an assertive that a
successful declarative has been made is a matter of understanding the sentence expressing the
assertive. But for sentences in general, according to Searle, to understand a sentence is to know its
meaning and ‘the meaning of a sentence is determined by rules, and those rules specify both
conditions of utterance of the sentence and also what the utterance counts as’ (1969, p. 48). But these
rules are constitutive rules of a language and its semantics, many of which we learn simply by
picking them up, as we learn the constitutive rules of other practices.
Notice that our understanding of a declarative is ordinarily immediate. We do not on the basis of some utterances make inferences about their meaning to the conclusion that it has been declared that \( p \). Rather, ordinarily we understand the declaration including its implications for making projections according to its associated warrant. That warrant will be reliable to the extent that we have understood the declarative. We may presume that warrant is reliable to the extent that we may presume we understand the declarative. But if we are able to communicate successfully using the language in which the declarative is expressed, there is a presumption that we have mastered these rules to an adequate degree. Our grasping the warrant is not only basic but properly basic.

5. AN EPISTEMIC CLASSIFICATION OF WARRANTS

We have identified four modes of intuition—\textit{a priori}, empirical, institutional, and valuational. (We may further identify two subdivisions of empirical intuition—physical and personal. Elaborating this distinction is beyond the scope of this paper.) Our case studies of physical and institutional intuition illustrate first that at least these two modes of intuition are distinct. Although each is a type of intuition, allowing one to grasp warrants immediately and in a basic way, the backing is radically different in each case. Physical intuition involves imposing some interpretive concept on observed covariation, which thus stands as backing for the warrant. Institutional intuition apprehends connections through assimilation of systems of constitutive rules, including and especially the semantic constitutive rules of one’s language, which thus constitute the backing. In some cases, in these various modes of its employment, intuition is presumptively reliable. The backing presented may serve to indicate or suggest the warrant, but no further justification is required. In other cases, justificatory argument is necessary, but depending on the mode of intuition involved, such arguments will appeal to distinctive premises and inferential procedures. Our discussion then shows there to be at least four different classes of warrants, distinguishable on epistemic grounds.

This classification preserves Toulmin’s insight on the field dependency of warrants but without the problematic notion of field. That we may distinguish these various types of intuition, that their epistemic modes of operation are distinct, seems straightforward, at least in our two case studies. That we can recognize a warrant being apprehendable through a given type of intuition, and thus use this classification of modes of intuition to classify warrants, again seems straightforward. That the considerations showing that one may presume a warrant reliable are different for each class of warrants (as we have illustrated with our two case studies) shows that we have identified a significant ground for distinguishing warrants.

We close by returning to the considerations on warrants and relevance with which we began. We want to say that a set of premises \( P_1, ..., P_n \) is relevant to a conclusion \( C \) just in case a reliable warrant in the sense of an inference rule—although by no means a formal inference rule—licenses the step from the premises to conclusion (or we may present a series of steps from subsets of the premises, together perhaps with derived intermediate conclusions) to \( C \), each of which is licensed by a reliable warrant). But when is a warrant reliable, or at least presumptively reliable? Our epistemic classification of warrants enables us to answer that question. The argument justifying the reliability of the warrant will be distinctive to the epistemic type of warrant being considered. But if our considerations are correct, our classification scheme for warrants should accommodate any found in the various fields over which Toulmin sees warrants distributed. Hence we submit that we have
answered the question of when warrants are reliable or at least may be presumed reliable, and thus our use of the notion of warrant in the explication of premise relevance is legitimate.

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