



An Unconscious Universal in the Mind is Like an Immaterial Dinner in the Stomach. A Debate on Logical Generalism (1914–1919)

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Abstract

The debate on the a fortiori and the universal that took place between April 1914 and April 1919 in the journal *Mind* has a double interest for argumentation theorists. First, the discussion is an example of a philosophical polylogue that exhibits the characteristics of a quasi-engaged dialogue (Blair Blair, J. A. (2012 [1998]). “The Limits of the Dialogue Model of Argument”. *Argumentation* 12, pp. 325–339. Reprinted in J.A. Blair, *Groundwork in the Theory of Argumentation*, pp. 231–244. Dordrecht: Springer, 2012.), confirming Blair’s hypothesis that journal papers and scholarly monographs can be analyzed as turns in non-engaged or quasi-engaged dialogues. It could be said that philosophical argumentation is dialectical but not dialogical. Second, the debate is a discussion in argumentation theory. Generalism in the theory of argument claims that the very possibility of arguing depends on a suitable supply of general rules that specify what kinds of conclusions can be drawn from what kinds of data, while particularism denies this. Although the terminology may be alien, I will also show that the debate on the a fortiori and the universal was a debate on generalism and particularism.

Keywords *A fortiori* · Atomism · Generalism · Holism · Particularism · Quasi-engaged dialogue

Mr. Shelton now says that we have the universal unconsciously in our minds (*Mind*, 96, p. 527). This is delicious. An unconscious universal in the mind may take rank with an immaterial dinner in the stomach, an unresisting support beneath the feet, or an impalpable weight in the hand. It is one of the garments that make up the Emperor’s clothes.

C.A. Mercier, (1916), p.87.

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1 A philosophical Polylogue

I will analyze a debate on the *a fortiori* and the universal, consisting of twenty notes (to which we could add, by thematic continuity, Shelton's 1919 paper), that took place between April 1914 and April 1919, in the discussion section of the journal *Mind*. Seven authors of different affiliation and recognition took part in the discussion: the psychiatrist C.A. Mercier, who had written a *New Logic* two years earlier, the philosophers H.S. Shelton, F.C.S. Schiller, A. Sidgwick,¹ and J.E. Turner, the classicist W.A. Pickard-Cambridge, and the psychologist and sociologist G.E. Mayo. The discussion was not always conducted in a strictly academic tone, with accusations of plagiarism and witty disqualifications, as the epigraph to this paper attests. The discussion is a polylogue, i.e., a multi-participant argumentative interaction where each party upholds a given position (Kerbrat-Orecchioni 2004, Lewinski & Aakhus 2014).

As it happens with many scholarly discussions, the debate on the universal and the *a fortiori* has a double articulation. On the one hand, it is composed of notes, published in successive issues of *Mind*, in which one or more previous notes are addressed. On the other hand, each note is composed of several contributions in which different questions are addressed. To account for this double articulation, we can distinguish turns and moves (Kerbrat-Orecchioni 2004, pp.7–8). A turn is marked by a change of speaker, while a move corresponds to any contribution that a participant intends to accomplish in her turn. Thus 'The A Fortiori Argument' (1915) can be seen as a turn in which Pickard-Cambridge performs the following moves:

- reiterating Shelton's argument about the need for a universal implicit premise to discriminate between formally similar valid and invalid arguments;
- rejecting Mercier's charge that Shelton's argument is flawed because the universal premise is not derived from the postulate, claiming that the major premise of a syllogism is not usually warranted by the minor premise;
- criticizing Mercier's explanation of how in an *a fortiori* argument the conclusion is reached directly from particular premises because it assumes that the difference between formally similar valid and invalid arguments depends on the purpose of the argument.
- arguing by *reductio ad absurdum* that the key to valid argument is not its purpose, but a nexus of relations which is universal; and
- vindicating the syllogistic form as a means of showing the role of the universal in arguments.

In the discussion on the universal and the *a fortiori* we find the typical complexity of the polylogues: fluctuation in address, with main and secondary addressees, variability in alternation patterns, general lack of balance in floor-holding, violations

¹ Alfred Sidgwick is considered a forerunner of informal logic (Walton 2000).

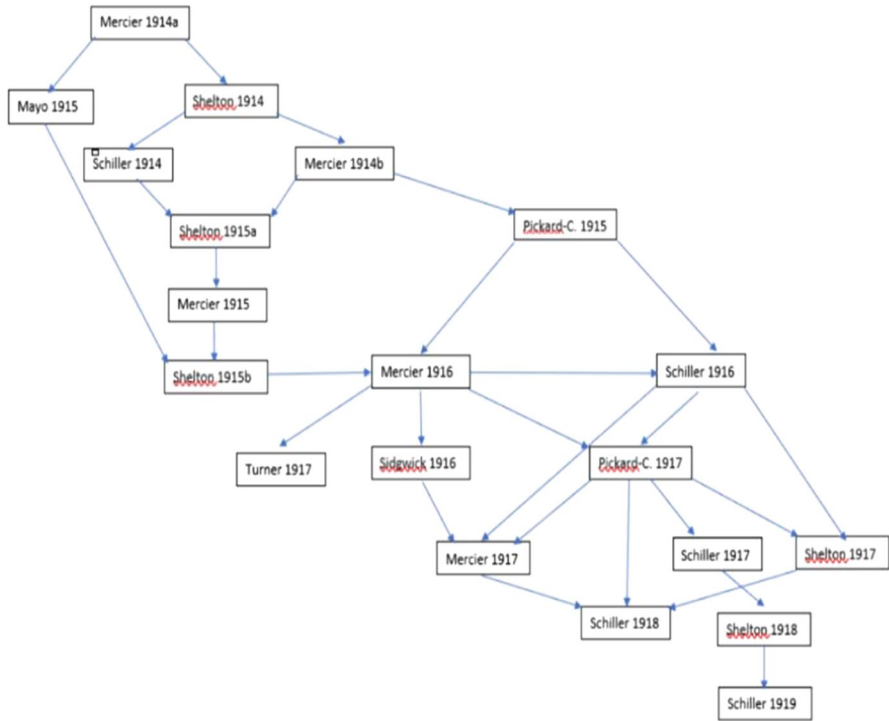


Fig. 1 Chart of the discussion on the a fortiori and the universal

of speaker-selection rules, and simultaneous talk (Kerbrat-Orecchioni 2004, pp. 4–6). The following chart of the discussion gives an idea of this complexity ($X \rightarrow Y$ means that Y is a response to note X) (Fig. 1).

2 A Quasi-engaged Dialogue

J. Anthony Blair distinguishes four main types of dialogues and twelve subtypes, depending on the complexity of the argumentation developed in each turn (2012 [1998]). Blair’s classification shows, through a succession of increasingly complex dialogues, how we move from questions to arguments and from arguments to counterarguments.

Group A dialogues are question and answer dialogues. At each turn, each party must respond to the immediately preceding turn in the exchange. The questioner presents the ingredients of the argument (premises, steps of reasoning and conclusions) separately in successive turns, and the answerer concedes that the questioner’s premises and reasoning establish the assertion in question. Dialogues of Groups A and B have in common that what is supplied by each participant at each turn is a direct response to what was stated or asked in the previous turn. But in Group B

dialogues one side is permitted to produce a simple argument at each turn in answer to the questions of the other side.

In Group C dialogues it is permitted to present in the same turn a line of argument —i.e., a combination of several arguments, in which some of them support any of the premises or the reasoning step of another one. Finally, in Group D dialogues, in addition to the moves allowed in Group C dialogues, it is permitted to argue in the same turn against alternatives to the main proposition, and to present arguments to refute the main proposition. Thus, counter-argumentation appears, and hence the possibility of presenting a complete case for a position in a single turn.

Blair distinguishes between engaged dialogues (A and B dialogues) and quasi- and non-engaged dialogues (C and D dialogues), maintaining that only the former are genuine dialogues. In an engaged dialogue, arguments respond to a request from the other party. When a party in a dialogue is permitted to offer, and in turn support, several lines of argumentation for a standpoint, it is no longer responding to a single question or challenge from the other party (op.cit., p.236). That opens the possibility of quasi-engaged or non-engaged dialogues. In a quasi-engaged dialogue there is no communication between the participants about their respective counterarguments to the other's case, and in a non-engaged dialogue, the participants do 'dialogue' in the sense that they defend opposing positions on the same issue, but, except incidentally, they do not argue for or against, or question, each other's arguments. Thus, arguments in quasi- and non-engaged dialogues are solo performances, solo arguments (Blair 2012 [1998], pp.238–239).

Blair's example of a quasi-engaged dialogue is a philosophical discussion about moral relativism and moral objectivity (Harman & Thomson 1996). In the first five chapters of the book Gilbert Harman argues for a form of moral relativism and in the next three Judith Jarvis Thomson does the same for a form of moral objectivism. Although their conclusions are incompatible, in their argumentations they rarely refer to each other's argumentation, and so the eight chapters compose a non-engaged dialogue. In chapter 9 Harman responds critically to the argumentation developed by Thomson in the preceding chapters and in chapter 10 Thomson does the same with Harman's argumentation of the first chapters. The last two chapters form a quasi-engaged dialogue, because although each of them takes into consideration the argumentation of the other, "there is no communication between the co-authors about their respective refutations of the other's case." (op.cit., p.238).

Blair claims that journal papers and scholarly monographs can be conceived as turns in dialogues, and that if so conceived, they result in non-engaged or quasi-engaged dialogues, like the Harman–Thomson exchange. The debate on the *a fortiori* and the universal confirms Blair's conjecture, as we shall see.

The complexity of the argumentation developed in each turn is relevant for classifying dialogues to the extent that it reflects the level of interaction between the participants. To counter-argue is to argue against another argument and is therefore different from arguing against a proposition. A counterargument offers a reason to reject another argument. I distinguish four types of counterarguments: dismissal, objection, rebuttal, and refutation. The conclusion of a dismissal is that an argument as a whole is not cogent, without further specification; the conclusion of an objection is that some premise of an argument cannot be asserted; the conclusion of

a rebuttal is that the premises of an argument do not provide a reason for the conclusion, and the conclusion of a refutation, that nonetheless the conclusion cannot be asserted (Leal & Marraud 2022, Ch.11).

Refuting an argument should not be confused with refuting a proposition. When it is argued that the conclusion cannot be asserted despite the reason offered, it is accepted that the reason adduced is relevant, but it is claimed that it is outweighed by a contrary reason. Consequently, the refutation of an argument involves a weighing of reasons that is absent when a reason is simply given to deny that a proposition can be asserted.

When one party attempts to counter an argument of the other party — whether by dismissal, objection, challenge, or rebuttal — she is responding to the other party and is therefore engaged in a dialogue. But when one party merely attempts to refute the claim of the other party, without taking into consideration her arguments, she engages in a solo argument. I shall show that this is precisely what happens more often in the debate on the *a fortiori* and the universal.

3 Generalism and Particularism

To classify argument models, I have adapted to the theory of argument two distinctions from the theory of reasons: generalism vs. particularism and atomism vs. holism (Marraud 2021a, 2021b). Generalism in the theory of argument claims that the very possibility of arguing depends on a suitable supply of general rules that specify what kinds of conclusions can be drawn from what kinds of data, while particularism denies this. The paradigm of such general principles are Toulmin's war-rants: "general, hypothetical statements, which can act as bridges, and authorize the sort of step to which our particular argument commits us" (Toulmin 2003 [1958], p.91). Toulmin, in fact, quite explicitly declares himself to be a generalist:

unless, in any particular field of argument, we are prepared to work with war-rants of some kind, it will become impossible in that field to subject arguments to rational assessment (op.cit., p.93).

Particularism leads, naturally but not necessarily, to holism. Applied to arguments, holism holds that the logical properties of an argument are context-dependent on assumptions that are not parts of the argument, while atomism maintains that they are wholly determined by the properties and the arrangement of its parts.

General rules can play two different roles. On the one hand, general rules can be standards of evaluation that explain why certain arguments are cogent. On the other hand, rules can be guidelines that participants in an argumentative practice should follow when they give and examine reasons. In principle one might be a particularist or a generalist about general rules understood in any of these ways. Whether being a particularist or generalist in one sense drives one to be a particularist or a generalist in the other sense is a matter of debate.

Although the terminology may be new, the discussion of the relative merits of generalism and particularism is latent in much of the history of logic and argumentation. I will show that, even though several different issues are mingled in the

discussion, and despite Schiller's attempt to turn it into a discussion of the concept of formal validity, the discussion on the *a fortiori* and the universal is primarily a discussion on generalism. Three phases² can be distinguished in the discussion on the *a fortiori* and the universal. The first focuses on whether a syllogistic treatment of *a fortiori* argument is possible; it took place between April 1914 and July 1915, with Mercier and Shelton taking the lead. This question derived in July 1915, from Mercier's 'The necessity of a universal in reasoning', in the question of whether the possibility of arguing and reasoning depends on the existence of general rules, principles or universals. It is this second phase, in which Pickard-Cambridge also played a prominent role, that is of particular interest to me. Finally, by October 1917, the question shifted to the existence of formally valid patterns of reasoning, with Schiller and Shelton as protagonists.

4 Background of the Debate

Mercier, a psychiatrist and leading expert on forensic psychiatry and insanity, had published in 1912 *A New Logic*, a book in which he criticized and rejected all the varieties of logic available at the time (traditional logic, inductive logic, Bosanquet's metaphysical logic and symbolic logic) as useless for any practical purpose and not reflecting the way we actually reason. He proposed, therefore, to replace them with a "New Logic" based on the methods used in his practice of psychiatry to reach conclusions.

Shelton sharply criticized *A New Logic* in *The Quarterly Review* in a state-of-the-art in logic paper in which he mentioned it as an attack on traditional logic that did not question the ideal of formal validity. In his state of the art, Shelton called the New Logic 'quackery', according to Mercier (1915, p. 387). The latter replied that "his account of my book is such a travesty that I feel sure he has jumbled it up with some of the six or seven other books he was reviewing at the time." (Ibid.). With the publication in *Mind* in April, 1914 of Mercier's 'Is inversion a valid inference?' they found a new occasion to argue with each other. In his paper Mercier denied the validity of inversion, and compared traditional logic to astrology, accusing it of being as obsolete as Ptolemy's crystal spheres and Hippocrates' four humors, and calling it a game for idlers, "a better game than draughts, but little inferior to backgammon" (1914a, p. 249). Nevertheless, traditional logicians fared better than Bosanquet's logic:

Dr. Ross and Dr. Rieber and Mr. Hicks play with counters which have a certain small value, say a hundred to the penny, and the game has certain rules that they observe; but Dr. Bosanquet and his critics play a game of spoof, the basis of which is that they pretend to understand each other, and so impress the outsider with their profundity. They engage in transactions of enormous magnitude. [...]

² This term designates a block of exchanges with a high degree of thematic or pragmatic cohesiveness (Kerbrat-Orecchioni (2004), p.9).

They play their game fairly enough among themselves, and neither of them wins or loses, and if they did it would not matter, either to themselves or to any one else. The fun of the game lies in spoofing the outsider. (1914a, p. 250).

Shelton's response was not long in coming, and in the next issue of *Mind* appeared his 'Dr Mercier and the logicians'. Shelton began by saying that he felt compelled to reply to the irrelevant and uncalled-for attack on Bosanquet, although after defending traditional logic from Mercier's accusation of being a mere game, he asserted that "[w]ith this introduction, it will not be necessary to say much about the attack on Dr. Bosanquet" (Shelton 1914, p.404). In his rejoinder Shelton alluded to *A New Logic*, stating that "[o]nce again, Dr. Mercier's remarks on logic as a game, coming from him, are foolish and meaningless." (1914, p. 402). The idea of logic as a game — Shelton argues— comes from Schiller and is consistent with his rejection of the ideal of formal validity, the inferring of conclusions formally implicit in the premises, but it cannot be adopted by anyone who "attempts, however inadequately, to formulate new methods of the explication of what is implied in propositions" (op.cit., p.403). In conclusion, Shelton invited Mercier "to leave logic alone, and to acknowledge that he has written on a subject he does not understand." (1914, p. 404).

Mercier immediately replied in an even more aggressive mood. Mercier reiterates that, in his view, the subject matter of logic is the modes in which we reason, and logic must show how reasoning processes are conducted in practice, something that traditional logic fails to do. The article ends with a Postscript, in which, citing a paper by Shelton in *The Quarterly Review*, he issues a challenge, which is the starting point of the discussion to be analyzed here.

He tries to secure the honours of war by asserting 'It is correct to say that we can always, if we wish, express valid reasoning syllogistically'. Can we? Then perhaps Mr. Shelton will express the argument *A fortiori* syllogistically. (Mercier 1914b, p. 567)

But before, with his reply, Shelton inaugurated the discussion on generalism and particularism, Schiller intervened briefly by allusion, confirming the views on formal logic that Shelton attributed to him and defending Mercier's right "to denounce Formal Logic as a silly game." (Schiller 1914, p. 569).

5 Background of the Discussion on the *a Fortiori*

Mercier briefly discusses the *a fortiori* on pp. 304–307 of his *A New Logic*. Mercier does not explicitly characterize *a fortiori* arguments, and merely gives a list of examples³:

³ To be precise, Mercier states (1) as $A=B=C$, (2) as $A>B>C$, and the rest of them in conditional form and only makes the antecedent explicit. Thus (3) is stated as *if A precedes or follows B and B precedes or follows C*, and so on.

- (1) A is equal to B, and B is equal to C, therefore A is equal to C.
- (2) A is greater than B, and B is greater than C, therefore A is greater than C.
- (3) A precedes or follows B, and B precedes or follows C, therefore A precedes or follows C.
- (4) A is the cause of B and B the cause of C, therefore A is the cause of C.
- (5) A controls or depends on B, and B controls or depends on C, therefore A controls or depends on C.
- (6) A is simultaneous with B, and B with C, therefore A is simultaneous with C.
- (7) A kills B, and the death of B saves C from the gallows, therefore A saves C from the gallows.

(1)-(6) seem to fit the same pattern, since they "involve a transitivity relation in the context of a series of comparisons of the type 'more—or greater—than' or 'less—or smaller—than'. (Vega 2011, p. 16; my translation). On the contrary (7) seems different, since two relations appear in its premises. But perhaps it could be rephrased as an instance of (4):

(7') A causes the death of B, and the death of B causes C to be saved from the gallows, therefore A causes C to be saved from the gallows.

During the debate Mercier mentions one more example of a *fortiori*:

(8) If I answer an antagonist who is confused and discourteous, then, a *fortiori*, I shall answer one who is clear and courteous (Mercier 1918, p. 85).

This argument is quite different from the previous ones, and resembles the Johannean example (1 John 4:20) of Pickard -Cambridge (1917, p. 209):

(9) If a man love not his brother whom he hath seen, how shall he love God whom-he hath not seen?

Neither (8) nor (9) are arguments, but conditional propositions. The corresponding arguments involve a correlation between an action A and a property P, whose presence reinforces the reason for doing or expecting A: S does A in the absence of P, so all the more reason S should do/will do A in the presence of P.

While almost all the manuals of logic mentioned by the disputants identify the a *fortiori* as a form of inference whose reduction to syllogistic form is problematic, only two of them take the trouble to explicitly define the a *fortiori* argument. De Morgan (quoted in Shelton 1919) writes in this regard:

This sort of argument is called à *fortiori* argument, because the premises are more than sufficient to prove the conclusion, and the extent of the conclusion is thereby greater than its mere form would indicate. Thus, 'X is less than Y, Y is less than Z, therefore, à *fortiori*, X is less than Z,' means that the extent to which X is less than Z must be greater than that to which X is less than Y, or Y than Z (De Morgan 1847, p. 21)

The argument a *fortiori* may then be defined as a universally affirmative syllogism, in which both of the premises are shown to be less than the whole truth, or greater. Thus, in 'Every X is Y, Every Y is Z, therefore Every X is Z', we do not certainly imply that there are more Ys than Xs, or more Zs than Ys, so that we do not know that there are more Zs than Xs. (op.cit., p. 22).

While the idea of comparing conclusive force is part of any definition of a fortiori, presenting it as a universal affirmative syllogism departs considerably from the way the protagonists of the debate understand it. So, Mercier, taking a particularist stance, emphasizes that the validity of (1)-(7) does not depend on whether we take 'A', 'B', 'C' as names of individual things or as variables standing for any magnitude, i.e., whether we take the propositions as particulars or as universals (1916, p. 84). And Shelton, taking the side of generalism, insists that the validity of an argument a fortiori presupposes the truth of a non-explicit universal statement, while acknowledging that "[o]n the surface, the argument a fortiori seems as if it were an exception to the rule that deduction proceeds through a universal" (1917, p. 351).

Coffey (cited in Shelton 1918, 1919) gives another definition of a fortiori, that fits well with examples (1)-(6) above:

The class of arguments of which (I) [2] is an example, includes all mediate inferences *from judgments which express each a relation of degree between two measurable magnitudes*. All a fortiori arguments belong to this class; e.g. "A is hotter than B; B is hotter than C; therefore, a fortiori, A is hotter than C" (1938 [1912], p. 388).

As noted above, logic textbooks mentioned in the discussion, when they address the a fortiori at all, point out the difficulty of reducing it to the ordinary syllogistic form. John Neville Keynes, who like Mercier rejects that the a fortiori is reducible to the syllogistic form, is the one who dwells most on the question (1884, pp. 259–263). Keynes argues that, if propositions of the type A is greater than B consist of a subject A and a predicate is greater than B, the a fortiori contains four terms, in contrast to the three of the syllogisms. He considers some attempts to reduce (2), such as.

Whatever is greater than a greater than C is greater than C,
A is greater than a greater than C,

therefore,

A is greater than C

and concludes that they are mere cases of *petitio principii* since they presuppose the very principle of a fortiori (the major premise). Furthermore, in the case above, he indicates that it cannot be right because 'B' has disappeared from the premises. His diagnosis is that what is needed to account for a fortiori and other forms of inference not reducible to the syllogism is a logic of relations which accounts for relations generally, rather than merely those which are indicated by the ordinary logical copula 'is' (1884, p. 263).

In *A New Logic* Mercier maintains that while (1)-(7) are not reducible to syllogistic form, "In each case a simple, unmistakable, inevitable inference not only arises, but is violently hurled against both the asserter and the receiver of the proposition"

(1912, pp.304–305). Just like Keynes, he points out that traditional logic cannot account for the validity of such inferences because of "the limitation of the ratio of the logical proposition to the copula, and the limited interpretation that logicians place on the copula," which prevents it from "taking account of any relation other than that of class inclusion and exclusion." (op.cit., p. 305).

Moving closer to the terms of the discussion with Shelton, Mercier criticizes a possible syllogistic treatment of (1):

(1') Things that are equal to the same thing are equal to one another,
A and C are equal to the same thing.

Therefore,

A and C are equal to one another.

Mercier raises three objections to this analysis, which will reappear in the discussion in Mind. The first is that (1') is not equivalent to (1) since in (1') B is not mentioned, as Keynes had already noted. The second is that (1') does not reflect the reasoning process leading from premises to conclusion. Mercier argues that we draw the conclusion directly from the premises, without the assistance of "a principium of such gigantic dimensions" as Things that are equal to the same thing are equal to one another (op.cit., p. 307). Finally, he claims that one cannot reconstruct the rest of the examples of a fortiori argument using a similar principle and in particular so with (2) — Things which are greater than the same thing are greater than one another is not a valid principle.

Mercier explains the validity of a fortiori arguments by means of a peculiar substitution rule (op.cit., p.308): any term in a postulate may be replaced by one that is implied in it for the purpose of the argument. The purpose of (2) is to establish the relationship between A and C. Since A is greater than B, and B is greater than C, C is implied in B for the purpose of the argument, and C can replace B in the first premise to determine its relation to A. The rule of substitution and the very notion of purpose of an argument will be questioned by Pickard-Cambridge (1915, pp. 537–538).

6 The Framework of the Debate on the *a Fortiori* and the Universal

Before setting out in some detail the discussion, I will summarize in a Table 1 the essentials of the interaction between Shelton and Mercier's arguments along the central phase of the discussion, in which it is more clearly debated whether the possibility of arguing depends on having general rules, principles or universals. Concerning the degree of dialogue engagement, unbalanced refutations (A1 and A5) and arguments with mutually inconsistent premises (A10 and A16) are significant, because they reveal a clash of intuitions.

Table 1 Interaction between Shelton's and Mercier's arguments in the debate's central phase

Turn	Particularist	Generalist	Remarks
Mercier 1914b	<p><i>Challenge:</i> Can Mr. Shelton express the argument <i>a fortiori</i> syllogistically?</p>		<p>The question introduces the presumption that <i>a fortiori</i> arguments are not expressible syllogistically, unless proven otherwise</p>
Shelton 1915a		<p>A₀: general principles are necessary to explain the validity of (2) and the invalidity of (10) A is next to B, B is next to C. Therefore, A is next to C</p>	<p>A₀ is a direct response to what was asked in turn 0</p>
Mercier 1915	<p>A₁: This is not the form that the mind naturally adopts in this kind of reasoning A₂: (2) and (10) are not formally similar A₃: The validity of (2) and the invalidity of (10) is explained by the rule of substitution</p>		<p>A₁ is a refutation of the proposition that every argument implies the assertion of a universal rule (the generalist thesis) A₂ is an objection to A₀ Thus turn 2 is a multiple attack on A₀, and hence a direct response to what was stated in the previous turn</p>
Shelton 1915b		<p>A₄: The objection is aesthetic rather than logical A₅: It is the unconscious assumption of this universal which makes the argument <i>a fortiori</i> valid and convincing</p>	<p>A₃ is a rebuttal of A₀ A₄ is a dismissal of A₁ Once A₁ has been dismissed, A₅ is not directly related to the arguments in the previous turn. Are A₀ and A₅ the same argument?</p>
Mercier 1916	<p>A₆: Mercier's dilemma A₇: No single universal covers all <i>a fortiori</i> valid arguments A₈: It is not easier to recognize the validity of <i>a fortiori</i> when it is stated in a general way than when it is stated in a particular way A₉: We cannot reach the conclusion through a universal that we never formulate until after the conclusion is reached,</p>		<p>A₆, A₈ and A₉ are refutations of the generalist thesis A₇ is a rebuttal of A₅</p>

Table 1 (continued)

Turn	Particularist	Generalist	Remarks
Shelton 1917		<p>A₁₀: Bringing a negative instance is the most common way to refute an <i>a fortiori</i> argument</p> <p>A₁₁: What other means have we of arguing the validity of such inference?</p> <p>A₁₂: It is possible for the mind to use in reasoning principles unconsciously.</p> <p>A₁₃: What is the exact nature of the 'adaptation' in the substitutional account of the validity of <i>a fortiori</i> arguments?</p> <p>A₁₄: The answer to 'Why this inference is valid' can hardly be other than because it is an example of a universal rule</p>	<p>A₁₀ is a new argument for the generalist thesis</p> <p>A₁₁ is a refutation of the thesis that some arguments do not imply the assertion of a universal rule</p> <p>A₁₂ is a rebuttal of A₉</p> <p>A₁₃ is a dismissal of A₂</p> <p>A₁₄ seems to be a slightly different formulation of A₀ and A₅</p>
Mercier 1917	<p>A₁₅: Generalism lacks a convincing epistemology</p> <p>A₁₆: <i>A fortiori</i> arguments cannot be criticized as arguments from a general rule to a particular case</p>		<p>A₁₅ and A₁₆ are refutations of the generalist thesis</p> <p>A₁₆ premises are inconsistent with A₁₀ and A₁₁ premises</p>

Arguments A10-A13 were formulated by Pickard-Cambridge (1917), but Shelton explicitly endorses them: "As a reply to those who, with Dr. Mercier, deny that such an argument as the *a fortiori* does, in fact, rest upon a universal, I cannot sufficiently commend the last contribution of Mr. Pickard-Cambridge" (Shelton 1917, p.351).

7 The Discussion on the *a Fortiori*

Shelton (1915a) does not place much importance on Mercier's challenge to express syllogistically *a fortiori* arguments, because it seems to him that the answer is obvious, even to his opponent. So as not to distract the reader from more important questions, he relegates it to an appendix. Shelton, following a suggestion by Alfred Sidgwick, proposes to rephrase (2) as:

Major Premise. All cases where, of three things, the first is greater than the second and the second greater than the third, are cases when the first is greater than the third.

Minor Premise. A, B, C, is a case where, of three things, the first is greater than the second and the second greater than the third.

Conclusion. A, B, C is a case when the first is greater than the third.

Shelton agrees that this "is not the form that the mind naturally adopts in this kind of reasoning", but he insists that his paraphrase makes it clear that *a fortiori* inferences, however simple they may seem, presuppose an unexpressed universal (1915a, p.78).

This highlights a fundamental disagreement in their understandings of logic. For Mercier (a psychiatrist) logical analysis should reveal the way in which we actually reason.

What object is served by casting the argument into a stupid, cumbrous, complicated, ridiculous form that is admitted to have nothing to do with the process of thought? (Mercier 1915, p.389).

Whereas for Shelton (a philosopher) it should serve to reveal the assumptions on which their validity depends,

What is more important than the precise form of expression is the realisation of the truth that it is the unconscious assumption of this universal which makes the argument a *a fortiori* valid and convincing. (Shelton 1915b, p. 527).

Hence, Mercier's particularism and Shelton's generalism are not, in principle, incompatible. Mercier denies that reasoning consists in the application of general rules, while Shelton claims that such rules are necessary to account for the validity of some arguments and the invalidity of others.

To show the necessity of the assumed major premise, Shelton (A0) compares (2) with a formally similar, but invalid, argument:

(10) A is next to B,
B is next to C.

Therefore,

A is next to C.

Since (2) and (10) do not differ formally, the reason (2) is valid and (8) is invalid is to be sought in its implicit premises. While (2) presupposes a true premise, viz. 'All cases where, of three things, the first is greater than the second and the second

greater than the third, are cases when the first is greater than the third', (10) presupposes a false premise, viz. 'All cases where, of three things, the first is next to the second and the second next to the third, are cases when the first is next to the third'. As the fully explicit formulations of (2) and (10) do not formally differ formally either, that shows, according to Shelton, that the validity of an a fortiori argument depends on the relation involved, and the a fortiori, though valid, is not formally valid. This shows that general principles are necessary to explain the validity of (2) and the invalidity of (10).

Mercier (A1) says he is amused by Shelton's attempt to put the argument a fortiori in syllogistic form, using "an old device of Jevons" and calls the Shelton-Sidgwick-Jevons paraphrase a "useless monstrosity" since it does not correspond to the way we reason, as Shelton himself had conceded (Mercier 1915, p. 389).

Mercier (A2) reiterates the substitutional explanation of the validity of a fortiori that he had already presented in *A New Logic*. What explains the validity of (2) and the invalidity of (10) is that the rule of substitution can be applied in the first case but not in the second (op.cit., p.390). Therefore, no unexpressed universal is required to explain the validity of (2) and the validity of (10).

(A3) It further follows that (2) and (10) are not formally similar. The point, according to Mercier, is that in (2) the second premise reveals that C, for the purpose of the argument, is implied in B, without the same being true for (10) (1915, p.392). Thus, he rejects one of the premises of Shelton's argument for the necessity of the major premise (op.cit., p. 391).

8 Universals, Major Premises, and Warrants

The subject of the discussion shifts from the a fortiori to the universal when Mercier declares:

I deny most positively and strenuously that a universal is necessary to argument. I deny most positively that there is any universal in the a fortiori or in any of the great majority of arguments. (Mercier 1915, p. 389).

Mercier challenges Shelton and Sidgwick to justify the thesis, which he qualifies as an "irrational superstition" (1915, p. 393), that every argument contains a universal. Remarkably, he considers it to be equivalent to the thesis that "there is only one mode of reasoning, and that this is by bringing a particular case under a general law" (1915, p. 395). It is his interpretation of the major premise of a syllogism as a rule, in the manner of Toulmin's warrants, that once accepted by their opponents, turns the debate into a debate about generalism.

The assimilation of the major premise to a rule is clearly displayed in passages like this (A16):

If we really are arguing from a general rule to a particular case, the objector has two lines of defence: 1. The case does not come under the rule; 2. The rule is invalid. If the a fortiori were indeed dependent on a universal, either of these defences would be open to us. As neither of them is conceivably open to

us, I think we must conclude that the a fortiori does not depend on a universal. (Mercier 1917, p. 349).

Mercier's two lines of defense correspond to Toulmin's distinction between "the question whether or on what conditions a warrant is applicable in a particular case", and the question of "why in general this warrant should be accepted as having authority" (Toulmin 2003 [1958], p. 95). As for Shelton,

we cannot make any deduction from premises, and say that our deduction is formally or absolutely valid, without implying that some rule is absolutely or universally true. (Shelton 1919, p. 183).

Mercier and his opponents discuss syllogisms of a particular type, in which the minor premise is particular and the major premise universal, which is precisely the type of syllogism that Toulmin compares to his model in *The Uses of Argument* (2003 [1958], pp.100–114). The ambiguity of this type of syllogism —Toulmin points out— consists in the fact that the major premise can be interpreted either as the warrant or as the backing of the warrant. While the backing is categorical and factual, and expresses a piece of information, the warrant is hypothetical and permissive, and expresses a guarantee in accordance with which we can safely take the step from our datum to our conclusion (2003 [1958], pp.105–106). The distinction is important for an argument expressed in the form 'Datum; warrant; so, conclusion' can always be set out in a formally valid manner, but this could never be done for arguments of the form 'Datum; backing; so, conclusion' (Toulmin 2003 [1918]: p.114).

If the major premise of the syllogism is a general rule and any argument can be put in syllogistic form, any argument consists in applying a general rule to a particular case to reach a conclusion, or as Mercier says, "[i]t is asserted that there is only one mode of reasoning, and that this is by bringing a particular case under a general law" (1915b, p. 395). Although Mercier is willing to admit that in some cases reasoning does consist in bringing a particular instance under a general law, he insists that this is not the only mode of reasoning, and, in particular, this is not the one used in a fortiori reasoning (Mercier 1915, p. 395). Mercier thus advocates for a form of weak particularism.

9 The Debate between Generalism and Particularism

Shelton's reply begins by warning that he is going to confine himself to deductive reasoning, of which the a fortiori is an instance (1915b, p. 527). He then repeats that it is necessary to appeal to an implicit general principle, as the major premise in his reconstruction of (2), dubbed as the J.S.S. principle by Mercier, to account for its validity. This suggests that Shelton endorses an atomistic concept of argument, according to which the premises of an argument are all those statements relevant to its appraisal.

But Shelton goes a step further (A5) when he declares that this general principle is a general truth assumed unconsciously by the arguer, a statement that will provoke Mercier's mockery that gives the title to this paper. It is one thing to maintain that the J.S.S. principle explains the validity of.

(2) P1: A is greater than B, and
P2: B is greater than C.

Therefore

Q: A is greater than C

and quite another thing that whoever considers (2) to be valid unconsciously assumes this principle, thus attributing psychological reality to it. But Shelton dabbles in ambiguity:

From the premises A has a specified relation to B, B has the same relation to C, no conclusion can be drawn. To obtain any conclusion what is required is a universal stating the implication of the relation (Shelton 1915b, p. 528).

To 'draw a conclusion' is an action, something that someone does, unlike to 'follow from', which designates a relationship between abstract entities. That Q follows from P1, P2 and the J.S.S. principle, but not from P1 and P2 alone, does not imply that anyone who concludes that Q from P1 and P2 unconsciously assumes the J.S.S. principle, as Shelton himself later acknowledges.

The conclusions of practical life are commonly arrived at by processes which are not reasoning at all, and often by very bad reasoning. Occasionally they are little the worse, but sometimes they are very wrong and very untrustworthy. It seems to me that it is the business of logic to formalise only a small part of what we will call (for lack of a better name) practical reason. It is erroneous to depreciate the value of what can be formalised. It is equally erroneous to attempt to formalise that part of human faculty which is essentially not formal but empirical and instinctive. (Shelton 1917, p.356).

Shelton even says that the unconscious assumption of that universal is what makes the a fortiori argument convincing (1915b, p. 527), thus extrapolating the assumption from the arguer to the audience. Shelton concedes (A4) that the J.S.S. principle may not be an elegant formulation of the unconsciously assumed universal, but, in his opinion, this only shows that Mercier's objection is aesthetic and not logical (Ibid.).

A second reply to Mercier (1915) by Pickard-Cambridge appeared in issue 96. After noting that Mercier rejects Shelton's (1915a) explanation of the validity of (2) and the invalidity of (10) because it can be better explained in terms of a substitution rule, without appeal to an implicit universal principle, Pickard-Cambridge credits Mercier with the thesis that the reason why the substitution of B and C in the first premise to arrive at the conclusion is legitimate in (2) and illegitimate in (10) lies in an unspecified difference in the purpose of each argument. But, Pickard-Cambridge argues,

Whether your inference about certain relations follows or does not follow from the premises cannot depend upon your object in attempting to draw it, or in starting the inquiry. It depends upon a difference between the relations them-

selves and their nexus or implication with one another (Pickard-Cambridge 1915, p.37).

The merit of the syllogistic paraphrase of an argument is precisely to bring out the role played by our awareness of a necessary nexus of relations.

Mercier replies that while it is true that attending to the purpose of the argument may help to realize that substitution is legitimate in one case but not in another, he has never said that validity or invalidity depends on a difference in the purpose of the argument. His position is that "The validity or invalidity of an argument depends, among other things, upon the adaptation of the relation in the premises to the purpose of the argument." (1916, p.88). The purpose of the argument is the same in both cases, to obtain a relation between A and C, but, but while the relation 'is greater than' allows the substitution of B for C, the relation 'is next to' does not. After accepting Mercier's clarification, and thus that he had misunderstood him on this point, Pickard-Cambridge still thinks (A13) that Mercier's explanation is unsatisfactory because he does not define what this adequacy of the relation to the purpose of the argument consists in (1917, p.213).

Let us get back to the main course of the discussion. In his rejoinder to Pickard-Cambridge's and Shelton's contributions, Mercier emphasizes that we see directly that the conclusion in (2) is valid, without reference to any implicit external principle. He offers two arguments for dismissing the need for such principles in a fortiori arguments.

Mercier argues first (A6) that (2) can be either an argument, if 'A', 'B' and 'C' are names of individual things, or an argument scheme, if they are variables standing for any magnitudes whatever. As an argument scheme, (2) is equivalent to the J.S.S. principle. Mercier constructs then a destructive dilemma against the necessity of an implicit universal premise in argument (2). If we were able to recognize immediately the validity of scheme (2), without adding any universal to its premises, we would be equally able to recognize immediately the validity of argument (2), because "whether we take the propositions as particular or as universal, does not matter a straw to the validity of the argument, or to our ability to arrive at the conclusion directly from the premisses" (1916, p. 84). If, on the contrary, we needed to add a universal outside and beyond the argument to validate (2), then we would need a higher and more comprehensive universal to validate the resulting argument, and a still higher and more comprehensive universal to validate the new argument, and so on ad infinitum (Ibid.).

The first horn of the dilemma reveals the tension between generalism and formalism (the thesis that the validity of an argument depends on its form). The second horn of the dilemma depends on the assumption that the general rule (or warrant, in Toulmin's terminology) is a premise, which connects the remaining premises to the conclusion. But in fact, the threat of a regress can be used to argue that the warrant is not a premise—and even, adopting a holistic stance, that neither is it a part of the argument.

Mercier's second argument (A7) appeals to the diversity of a fortiori arguments. Mercier contends that arguments (2),

(8) I answer an antagonist who is confused and discourteous.
Therefore, *a fortiori*,

I shall answer one who is clear and courteous.

and.

(11) A is less than B, and
B is less than C.

Therefore, *a fortiori*,

A is less than C

clearly fit the same pattern: they are sums in proportion, from which he concludes that the mental process employed in reaching the conclusion is the same in every specimen of the *a fortiori*. But the generalist hypothesis cannot account for the unity of the *a fortiori* for no single universal covers all of them.

Mercier next (A_8) compares the substitutional explanation of his New Logic of the validity of (2) to the one of the “old logic”. According to the old logic, we immediately recognize the validity of scheme (2). Then we grasp that argument (2) is analogous to scheme (2), and from there we conclude that argument (2) is also valid. To say that they are analogous is to say that the relations between the three terms are the same in both cases. This explanation is incoherent, Mercier argues, because.

Analogy is the comparison of relations, and the nature of an analogy is not altered, and its truth is not altered, by altering the nature of its terms, as long as the proportion (or relation) between them is maintained’ (*New Logic*, p. 346). For this reason I deny that the truth of the *a fortiori* is any more evident in the universal than in the particular [...] (Mercier 1916, p.86).

Mercier further argues (A_9) that the scheme and the general rule are posterior to the individual instances. We first apprehend the validity of many arguments that resemble each other, and through generalization we arrive at the general rule (op.cit. pp. 86–87).

Prior to the next interventions by Mercier and Shelton, Schiller and Sidgwick contributed to the discussion in issue 100 and Pickard-Cambridge in issue 102. Schiller asked the participants to clarify the key terms, avoiding vagueness and ambiguity, to allow for an effective discussion. In the same vein of conceptual clarification, Sidgwick points out that it is necessary “to distinguish between reaching a new judgment and supporting a proposed conclusion.” (1916, p. 519); that is, between the process of drawing a conclusion and the relation of support between statements. The former can be done without recourse to a universal, but what is being discussed is the support relation, and this cannot be analyzed without reference to a universal. When we evaluate an argument, Sidgwick says, two issues arise: whether the premises are true and whether they are sufficient for proof.

Where a complete syllogism is set out-as seldom happens in serious reasoning nowadays-these questions refer respectively to the truth of the minor and the

major premiss. But where facts only are asserted as reasons, and their sufficiency is left to be assumed, it is often worth while to express this assumption in the form of a concocted universal in order to see whether the arguer is prepared to defend it in its full extent or not. (Sidgwick 1916, pp. 520-521).

Sidgwick thus advocates for generalism with respect to evaluation standards, dismissing the question of guidelines for criticism as irrelevant. As might be expected, Mercier openly disagrees:

I do not know what Mr. Sidgwick means by irrelevant, but it must have to him some meaning very different from what it has to me. I cannot for the life of me see how it is irrelevant to ask the very question that I propose to discuss, and do, to the best of my ability, discuss (Mercier 1917, pp.343-344).

In his second intervention, Pickard-Cambridge adopts a position somewhat different from Sidgwick's, since does not consider it irrelevant to the discussion how we arrive at the conclusion in (2).

This universal necessity we see directly; the inference in the particular case we draw only indirectly or mediately, *through* the rule, or because we see the case to be an instance of the rule (Pickard-Cambridge 1917, p. 205).

His main argument (A_{10}) is that bringing of a negative instance of the presupposed rule, to find an exception, is in fact the commonest way of refuting such *a fortiori* arguments when mistaken. But, he says, we could still go further (A_{11}), because the idea that one can argue without invoking a general rule makes it impossible to rebut an argument.

Could we ever get beyond the deadlock in which one man says, 'I see such and such a conclusion emerging from these particular premisses', and the other says, 'Well, I don't'? The usual way, in fact, to get out of that deadlock is (as here) to try to show that, one side or the other is making some unwarranted universal assumption. On Dr. Mercier's view, as no universal consideration enters into the reasoning at all, this very common resource would of course be an absurd irrelevance. But what other means. have we of arguing the validity of such inferences? Or are they unarguable? (op.cit., p. 208)

Pickard-Cambridge overlooks the possibility of rules with exceptions, general but not universal, as suggested by Schiller. Since the general validity of a rule does not prevent drawing a false conclusion in unusual cases, Schiller argues, "it is simpler and better to conceive the problem as one of adding specifications to a general formula, in order to apply it to an actual case" (1917, p.462). This holistic advice urges to distinguish between reasons and enabling conditions —considerations which, without being reasons in themselves, must obtain for something to function as a reason. (Dancy 2004, p. 52).

Pickard-Cambridge (A_{12}) rebuts argument (A_9) that no understanding of a universal rule guides reasoning *a fortiori* because we do not formulate it until we have used it, on the grounds that the processes of our mind may operate implicitly before they are made explicit (op.cit., p. 211).

The following contributions by Shelton and Mercier appeared in the same issue of *Mind*, contravening turn-taking. Shelton declares that he is going to deal more with the consequences of the view that in all deduction we necessarily reason through a universal than with the view itself (Shelton 1917, p. 351). Shelton argues (A_{14}) that when we substitute in (2) ‘A’, ‘B’ and ‘C’ for names, e.g.:

(2*) Mexico City is greater than Lima, and

Lima is greater than New York.

Therefore,

Mexico City is greater than New York,

We may legitimately ask why this inference is valid,

The answer can hardly be other than because it always is so, because the relation is an invariable property, an essential attribute of all entities to which the terms greater and less can be applied. Our inference is, therefore, a particular example of a universal rule (Shelton 1917: p.351).

The universal thus plays the role of Toulmin’s warrant: it answers the question ‘How do you get there?’ (Toulmin 2003 [1958], p.90).

In his 1917 contribution Mercier answers Schiller’s request specifying that by ‘valid’ he means conclusive and incontestable, so that ‘valid’ means a personal attitude towards an argument or a conclusion (Mercier 1917, p.340). Mercier subsequently attacks the claim that a universal is needed to validate any argument. First, he reiterates (A_8) that when we evaluate (2), we do not care whether ‘A’, ‘B’ and ‘C’ are names or variables. Second, he adds a new argument (A_{15}). Mercier argues that there are only two ways of arriving at the general rule that allows us to draw a particular conclusion: either we deduce our rule from a more comprehensive rule, or we arrive at it by generalization from particular cases. Hence, on pain of regress, we must ultimately come to a rule which is a generalization from particular cases. Therefore,

if a universal rule is valid, it can be so only because the particular instances out of which it is constructed are valid. Not until the individual instances are appreciated and found to be valid does it occur to us to formulate a rule. (op. cit., p. 348)

But then it is possible to reason without resorting to general rules.

Mercier’s criticism is similar to Dancy’s charge that the subsumptive option (moral reasoning consists of the subsumption of the particular case under some universal principle) lacks a convincing epistemology.

There remains the question how we are to know which principles are the right ones and which are mere pretenders. We certainly cannot hope to extract principles from our judgements about particular cases, because that sort of judgement is supposed to be based on principles. If judgement is subsumptive, it needs principles to start from, which cannot be got from further judgement on pain of a regress. But how else are we to distinguish true principles from false

ones? It is not attractive to suppose that the true principles will somehow bear truth on their face, so that one only has to contemplate them long enough to tell that they are true. Nor is it attractive to suppose, as the subsumptive option does, that particular cases can never be tests for principles. (Dancy 2004, pp. 4-5)

Pickard-Cambridge had already anticipated Mercier's new argument by stating that we see the necessity of the universal or general rule immediately, unlike that of particular cases (1917, p.205). Although Dancy considers it an unattractive possibility in the case of moral principles, its appeal might be greater in the case of rules of reasoning.

Third, Mercier (A_{16}) argues that arguments from a general rule to a particular case can be attacked by alleging either that the case does not fall under the rule or that the rule is invalid. But for many arguments (including *a fortiori* arguments) none of these lines of attack is conceivable; so, we must conclude that not every argument consists in the application of a general rule to a particular case. Thus, Mercier rejects as inconceivable what Pickard-Cambridge held as certain.

In his last interventions (Shelton 1918 and 1919), Shelton vindicates the normative character of logic. The object of logic is not to describe the way we reason, nor even the way we reason correctly, but to provide standards for judging the validity or invalidity of our reasoning. The syllogistic paraphrase of an argument is not intended to reveal its 'true form', but to restate an argument in a way that facilitates the application of logical standards. One who argues is committed to the existence of a universal rule that authorizes the step from the premises to the conclusion: "we cannot make any deduction from premises and say that our deduction is formally or absolutely valid, without implying that some rule is absolutely or universally true." (Shelton 1919, p.183). If a universal rule is applicable to the case, the argument is valid; otherwise, it is invalid. Shelton concludes that every argument, valid or invalid, is paraphrasable in syllogistic form:

This follows from the two principles already laid down (a) that every argument implies the assertion of a universal; (b) that for purposes of formal logic any paraphrase is allowable which does not assert more than the implied universal (op.cit., pp. 191-192)

Given a 'raw' argument, in which only the premises and the conclusion are specified, the logician must find a general statement, which added to the explicit premises yields a formally valid argument. The tension between generalism and formalism would then be resolved. But the added universal must be the one implied by the argument, which suggests that it is a part of it.

10 Final episode: Atomism vs Holism

From 1917 onwards, Schiller and Shelton are the protagonists of a new phase of the discussion, which revolves around the existence of formally valid patterns of reasoning. This phase starts with Schiller's response to Pickard-Cambridge's note

of April 1917, as can be seen in the chart of the discussion. The question is no longer whether every argument presupposes a universal rule or form, but whether there are universal rules or forms at all. So, the issue of atomism vs. holism takes center stage.

Schiller argues that formal validity is an illusion, since formally valid schemes have invalid instances, depending on the material circumstances of the case. Conversely, he continues, formally invalid schemes have valid instances. Schiller ignores an obvious asymmetry: a scheme is formally valid if and only if all its instances are so, but for it to be formally invalid it suffices that it has some invalid instance.

Pickard-Cambridge (1917, p.206) offers the following example of valid *a fortiori* argument:

(12) A ferret exterminates rats more quickly than a terrier, and
a mongoose exterminates rats more quickly than a ferret.
Therefore,
a mongoose exterminates rats more quickly than a terrier

while stating that if there were a case in which A is faster at his task than B and B than C, and yet A is not faster than C, he would have to retract (11), because as the supposed general rule now turns out not to be universal but to have exceptions, "I cannot make the inference in the particular case: I have no guarantee (without further information) that it will not be another of those exceptions." (Ibid.).

Schiller remarks that 'a' does not mean, in such propositions, 'any' or 'all', but 'the average'. It would therefore be unsafe to infer from (11) that a particular terrier is inferior as a rat killer to a particular mongoose, or that any terrier could not do better than any mongoose on a cold day (Schiller 1917, p. 464). Note that 'it is a cold day' functions here much like a Toulminian condition of exception or rebuttal, indicating a circumstance in which the general authority of the warrant would have to be set aside (Toulmin 2003 [1958]. p.94).

The moral Pickard-Cambridge draws is that (12) is ambiguous, and encompasses both formally valid arguments, as.

(12') Any ferret exterminates rats more quickly than any terrier, and
any mongoose exterminates rats more quickly than any ferret.
Therefore,
any mongoose exterminates rats more quickly than any terrier

and formally invalid arguments, as:

(12*) A ferret exterminates rats more quickly than a terrier, and
a mongoose exterminates rats more quickly than a ferret.
Therefore,
any mongoose exterminates rats more quickly than any terrier

Appropriate qualifications will remove ambiguity by separating valid from invalid forms.

For Schiller this is but an ad hoc maneuver to save the concept of formal validity. What the supposed ambiguity reveals is that the application of any form to a particular case requires additional conditions not specified in the form itself. Thus, the application of a valid form to true premises does not guarantee the truth of the conclusion. Schiller adopts a holistic position, since the conditions of exception are relevant to evaluate the argument, without being, unlike the universal rule of the generalists, part of it. Both agree, however, that Schiller's proposal implies rejecting outright the idea of formal validity or invalidity.

In his reply to Schiller, Shelton concedes that no strictly logical argument by itself guarantees the preservation of empirical truth. (1918, p.467). But he maintains, to Schiller's perplexity (Schiller 1919, p.215) that this does not make formal validity worthless, because logic is, like mathematics, a purely conceptual science. In his 1919 paper, a sequel of the discussion on the universal and the *a fortiori*, Shelton proposes to reserve 'logic' for the formalization of deductive reasoning, and to use 'methodology' for the study of methods of attaining material truth, which are not capable of strict formalization (1919, p.188). Schiller had already pointed out that the formal validity could be saved "by making our terms very abstract and arguing not about actual cases with their pitfalls and infinite complications, but about A's and B's, X's and Z's" (1917, p.464), but considered it a proof of the futility and fatuity of the concept of formal validity.

11 Conclusion

I have shown that in the discussion on the *a fortiori* and the universal the participants took sides for either generalism or particularism, making explicit statements in one or the other sense, and, in a later phase and derived from the first, for atomism or holism.

The discussion unfolds as a quasi-engaged dialogue. First, there is only one counterargument to a counterargument: the sequence A0-A2-A13. Second, there are six arguments that are neither replies to other arguments nor are they replied to (A6, A8, A10, A11, A15 and A16). Worse, sometimes the parties argue from mutually inconsistent premises (arguments A10 and A11 vs. A16). Consequently, the discussion is, in part, a clash of intuitions.

Blair proposes to reserve the term 'dialectical' for the properties of arguments related to their involving doubts or disagreements with at least two sides, and the term 'dialogical' for those belonging exclusively to turn-taking verbal exchanges. Then we could say that both duet arguments and solo arguments are dialectical, but only duets are dialogues (Blair (2012 [1998], p.243). If most philosophical argumentation develops today as a quasi-engaged dialogue, as the debate on the *a fortiori* and the universal and the Harman-Thomson exchange do, we could say that philosophical argumentation is dialectical but not dialogical. I guess that this is presumably due to the fact that today philosophical argumentation is above all written argumentation. (On the 'de-dialogization' of deductive reasoning by the increased prominence of the written medium, cf. Dutilh Novaes 2021).

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Declarations

Complain with Ethical Standards I ensure objectivity and transparency in research, and we also ensure that accepted principles of ethical and professional conduct have been followed.

Conflict of interests There are no potential conflicts of interest (financial or non-financial) to report.

Animal or Human Rights The research has not involved human participants. The research has not involved animals.

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