From a stronger reason

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Abstract: *a fortiori* argument may refer either to an argument structure (on a par with linked, convergent, serial, and divergent structures) or to an argumentation scheme (on a par with argument from expert opinion, argument from analogy, argument from oppositions, etc). I explore both possibilities starting from the analysis of "real" arguments. I develop an account of the argumentation scheme in the context of a Toulmin-style framework. Accordingly, *a fortiori* arguments are arguments involving scalar warrants. Finally, three different though interrelated forms of *a fortiori* argument are distinguished: arguments and meta-arguments from more and less, and arguments from strength comparison.

Keywords: *a fortiori*, analogy, argumentation scheme, backing, convergent, linked, *topos*, warrant.

1. Introduction

A fortiori argument (henceforth AF argument) is a traditional kind of argument that has been largely ignored by contemporary argumentation theorists. The concept of AF can be traced back to Aristotle's topic from more and less (*Rhetoric* II, 23). In fact most translators use *a fortiori* instead of *from more and less*, as does W. Rhys Roberts:

> "another line of proof is the a fortiori. […] The principle here is that, if a quality does not in fact exist where it is *more* likely to exist, it clearly does not exist where it is less likely".

Aristotle's examples include both theoretical arguments (If not even the gods know everything, human beings can hardly be expected to do so) and practical arguments (If Hector did well to slay Patroclus, Paris did well to slay Achilles).

A search in *Informal Logic* and *Argumentation*, two of the leading journals in the field of argumentation studies, only yields two papers devoted to this kind of arguments (Hage (2005) and Sartor (2005)). Nor does it appear in the current classifications of argument schemes. There are 96 argumentation schemes in Walton, Rees and Macagno (2007) compendium but AF is not mentioned. The interest in AF arguments seems mainly confined to legal argumentation theory, where AF is considered one of the classic interpretative arguments. In fact the two papers quoted above appeared in a monographic issue of *Argumentation* devoted to legal argumentation. AF has also received some attention in the French-speaking area, where it has been analyzed by Perelman and Plantin, among others.

The mixed fortunes of the AF argument are explained by the prevailing concepts of good argument. English-speaking argumentation theories traditionally use qualitative concepts of good argument, as the so called RSA (relevance-sufficiency-acceptability)

criterion. According to this criterion, an argument is cogent if and only if its premises (1) are rationally acceptable, (2) are relevant to its conclusion, and (3) provide sufficient support to its conclusion. Nonetheless this assumption has been challenged by Johnson's claim for the need of a dialectical tier, addressing alternative positions and standard objections to the argument under scrutiny (Johnson 2000, pp. 165 ff). On the contrary the prevailing concept of good argument in the French-speaking area, argument strength, is a comparative concept. This can be checked by reading chapter V of Perelman and Olbrechts-Tyteca (1989), where it is said that argument strength is a confuse but indispensable notion, or Anscombre and Ducrot (1983), where the following definition is given:

> A reason A is stronger than a reason B if and only if (1) in all circumstances and whatever the conclusion C is, if B is used for C, A should be considered usable for the same conclusion; (2) there are circumstances where A, but not B, may be used to for a particular conclusion C.

If, as I contend, AF is a complex argument involving a comparison of two or more subarguments, it can be expected that its study will be bound to the development of comparative concepts of good argument.

2. *A fortiori* as an indicator word: premise introducer

The core of AF arguments consists in a comparison of the strength of two arguments, as Goltzberg (2010, p.180) stresses: "The *a fortiori* argument is a complex argument presented as stronger in comparison with another situation." Being comparative in nature, AF arguments can be understood either as structures or as schemes. An argument structure arranges many arguments into a single argument, as in serial or convergent reasoning. Argumentation schemes are common patterns of transfer of acceptability from the premises to the conclusion. Each argumentation scheme represents a specific principle of transfer. Garssens (2001, p.81) puts it as follows: "In an argument scheme the "internal structure" of a single argumentation is revealed while the argumentation structure represents the "external structure" of the argumentation as a whole."

Although AF arguments involve essentially a comparison of the strength of two arguments, not every comparison of the strength of two arguments results in an AF (or in an argument by analogy). Comparison of strength seems implicit in the distinction between linked and convergent arguments. Walton (1996, pp.119-120) classifies five different tests used in the literature to determine whether an argument is linked or convergent. Three of them rest explicitly on a comparison (italics are mine):

> Suspension/Insufficient Proof Test: If one premise is suspended (not proved, not known to be true) the conclusion is not given *enough* support to prove it.
> Falsity/Insufficient Proof Test: If one premise is false, the conclusion is not given *enough* support to prove it.
> Degree of Support Test: reasons are dependent when together they make the overall *strength* of the argument much *greater* than they would considered separately.

Let us consider a real comparison of arguments.

> Possession by an accused of recently stolen property is sufficient to sustain a conviction of theft where a satisfactory explanation is not given, particularly where the nature of the items and their condition support an inference that they have been stolen (Court of Appeals of the State of Kansas, State of Kansas vs. Aaron McCammon. No102.713. 4/03/2011).

Judge Richard D. Greene compares two arguments:

> (1) An accused is in possession of a recently stolen property and gives no satisfactory explanation; so he can be convicted for theft.
> (2) An accused is in possession of a recently stolen property, gives no satisfactory explanation, and the nature and condition of the items support an inference that they have been stolen; so he can be convicted for theft.

Greene explicitly claims that the first argument is cogent but he adds a stronger argument, as the word "specially" indicates. So far as the first argument provides sufficient evidence, the second seems unnecessary. This leaves open the question of why an arguer would use such a redundant way or arguing. Greene may be anticipating the rebuttal of someone rejecting the sufficiency of the first argument. In any case, it is often said that an AF argument reinforces a claim already established. The following seems a suitable paraphrase of Judge Greene's declaration:

> Possession by an accused of recently stolen property is sufficient to sustain a conviction of theft where a satisfactory explanation is not given; *this is a fortiori so* where the nature of the items and their condition support an inference that they have been stolen

Judge Greene thinks that the premise "the nature and condition of the items support an inference that they have been stolen" can be suspended without ruining the argument. Thus according to the suspension/insufficient proof test (Walton preferred test) his is not a linked argument. At the same time, it is usually held that in a convergent argument each reason separately supports the conclusion (to some degree). Does the nature and condition of the items by itself support the claim that the vehicles have been stolen? Thus it can be argued that Judge Greene's is neither a linked nor a convergent argumentation. Perhaps we should consider a third mode of reason composition, besides linked and convergent arguments. In this case, AF would refer, not to a stereotypical pattern of defeasible reasoning, but to an argument structure.

I do not want to address here such controversial issues as the value and nature of the distinction between linked and convergent arguments. My purpose is rather to show that *a fortiori* can work as an indicator of complex argumentation. In the preceding case the Latin adverb *a fortiori* introduces a stronger argument after another deemed sufficient for the same conclusion. In a nutshell,

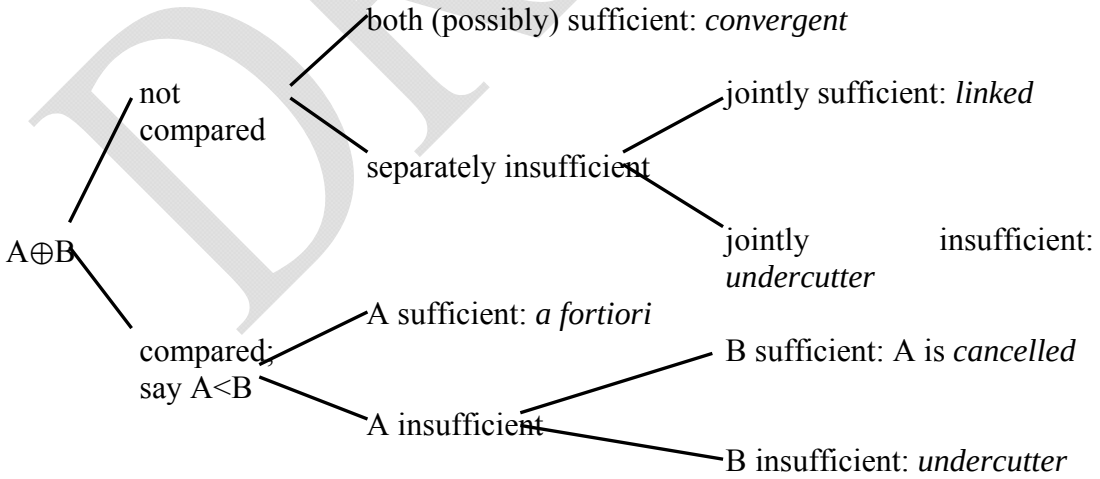
> Uttering "A so C and this is a fortiori so when B" the arguer means that, in the given situation, (1) argument "A so C" is sufficient, and (2) argument "A and B so C" is still stronger.

From a linguistic point of view it should be noted that *a fortiori* works here as a premise introducer. An argument from Ronald Dworkin provides a real example of this use of the adverb *a fortiori*:

> If two people lead roughly the same lives, but one goes suddenly blind, then we cannot explain the resulting differences in their incomes either by saying that one took risks that the other chose not to take, or that we could not redistribute without denying both the lives they prefer. For the accident has (we assume) nothing to do with choices in the pertinent sense. It is not necessary to the life either has chosen that he run the risk of going blind without redistribution of funds from the other. This is *a fortiori* so if one is born blind and the other sighted. (1981, p.296)

Dworkin means that (1) the premise "two people lead roughly the same lives and one goes suddenly blind" constitutes a sufficient ground to conclude that the resulting differences in their incomes cannot by explained either by saying that one took risks that the other chose not to take, or that we could not redistribute without denying both the lives they prefer. (2) The co-oriented argument starting from the premise "a man is born blind and the other sighted" is still stronger.

Goltzberg (2010, pp.183-184) has advocated for a classification of argument structures based on the way arguments are presented by the arguers. Often this intention is manifested by using indicator words or discourse markers. Argument structures are classified by two main parameters: orientation and strength. If for simplicity we consider only combinations of two arguments, a compound argumentation may assemble arguments supporting the same conclusion (co-oriented arguments) or arguments supporting opposite conclusions (counter-oriented arguments). Moreover the arguer may present one argument as stronger or weaker than the other, or may not make any comparisons. As implied by the preceding analysis, I suggest the addition of sufficiency as a third parameter. The following diagram illustrates the different possibilities for the joint use two co-oriented arguments on the resulting three-dimensional account.



3. *A fortiori* as an indicator word: conclusion introducer

A similar but slightly different case is described in Hodges (1991, p.358). Hodges points out that an AF argument can work like this: If condition X were true, then policy

A would be preferable to the other candidates. But the actual situation deviates from X in ways that favor A even more. Thus *a fortiori*, A is preferable.

Hodges gives the example of models of part failure used in USAF spare parts analyses. These models presume that part failures are more predictable than they really are. Nonetheless, they can be used to argue in support of supply systems that are flexible or responsive. If a responsive system is superior under conditions that are more predictable than actual conditions, then *a fortiori* it will be superior under actual conditions.

Unlike the cases described above the adverb *a fortiori* is being used here as a conclusion introducer. The first argument goes like this: models of part failures used in Air Force support of supply systems that are flexible or responsive, so supply systems are preferable. This can be seen as a sort of argument from expert opinion.

> **Argument from expert opinion** (Walton, Reed & Macagno, 2008, p. 310).
> Source E is an expert in subject domain S containing a proposition A.
> E asserts that A is true (false).
> ---
> Conclusion: A is true (false).

This argument is weak because models assume that part failures are more predictable than decades of research show them to be. Put otherwise, the argument is vulnerable to the fourth critical question Walton, Reed & Macagno attach to this schema:

> CQ4. Trustworthiness Question: Is E a honest (trusthworthy, reliable) source?

This contrasts with Judge Greene and Dworkin cases, where the first argument was taken to be sufficient. As Snoeck-Henkemans (2000, p.464) points out, if the argument is criticized for reasons of sufficiency, the arguer can attempt to remove the criticism by supplementing his argument with another argument. The supplementary argument is: part failures are less predictable than standard models assume, so responsive supply systems are preferable. The warrant of this argument seems to be a common sense principle, like when the variability of part failures is increased, an unresponsive system cannot adapt to the dislocations caused by the variability and a responsive system can. This principle can be given the form of a scalar correlation or *topos*: the less predictable part failures are, the more preferable flexible supply systems are.

The supplementary argument appears as stronger than the model-based argument: "thus *a fortiori*…". But the cogency of the additional argument seemingly depends on the partial acceptance of a bad model. Thus the two arguments contribute is some measure to the defense of the conclusion. How can the very same inaccuracies undermine one argument and at the same time strengthen the other? Perhaps this is a case of linked argumentation in which two arguments give some partial support to the conclusion, but the degree of support per argument varies. Were this the case, the adverb *a fortiori* would indicate which argument makes the largest contribution. Let us now turn to AF as an argumentation scheme.

4. Argumentation schemes and warrants

I will adopt Toulmin model to account for the different kinds of AF arguments. Argumentation schemes will be classified according to their warrant, i.e. according to the way the premises lead to the conclusion. This is consistent with the idea that

argumentation schemes are tools for analyzing and evaluating arguments used in everyday and legal discourse, since on Toulmin model argument strength depends on warrants. “Warrants are of different kinds, and may confer different degrees of force to the conclusions they justify” (Toulmin 2003, p.93).

The "template" of an argumentation scheme has four components: 1) a format representing the premises, the conclusion and the warrant of the scheme, 2) examples taken from argumentative practice, 3) an indicative set of critical questions, and 4) list of common variants.

The basic frame of argumentation schemes is *premises so conclusion since warrant*. This is not intended to be a description of the form of an argument. As Toulmin emphasizes usually warrants are appealed implicitly. In general warrant specification is not part of argument identification but of argument evaluation. No argument can lack premises or conclusion, but one can offer some statements to support a conclusion without having a clear idea of what should be the justification of the proposed inference. The only thing the arguer assumes is that the corresponding inference is justified. It is true that anyone who uses an argument can be required to account for this assumption. But failure to fulfill this dialectical obligation does not preclude the fact that he is arguing. The moral is that the warrant is not a component of the arguments in the same level as premises or conclusion.

An important fact about argumentation schemes is that they provide techniques of active evaluation. Each argument scheme has a set of critical questions attached to it. These critical questions act as a guide to asses arguments falling under the scheme, identifying possible objections and counterarguments. Thus evaluation through argument schemes runs at the same level as the argument being evaluated rather than at some metalevel. In other words critical questions are understood in the context of dialectical evaluation of arguments.

5. From AF arguments to AF meta-arguments

Let us consider one of Aristotle’s examples of argument from more and less: “The argument that a man who strikes his father also strikes his neighbours follows from the principle that, if the less likely thing is true, the more likely is true also” (*Rhetoric* II, 15-18). I take the so-called principle to be the warrant linking the premise and the conclusion stated in the first sentence.

A man strikes his father ⟶ So, a man strikes his neighbours

since

If the less likely thing is true, the more likely is true also

The asymmetry underlying AF arguments is explained through the scalar principle or *topos* serving as warrant. Anscombre and Ducrot (1983) define a *topos* (plural *topoï*) as a general principle authorizing the step from premises to conclusion and consisting in a correspondence between two scales. The general form of a *topos* is “The more/less object O possesses property P, the more/less object O possesses property Q”. This implies that the predicates in the *topos* admit degrees. However omniscience, used in another of Aristotle’s examples is not a gradual predicate. Ignoring for the moment this complication, the positive form of arguments from more and less can be represented as follows

O is P; O is ± R than O' ⟶ So, O' is P
since
± an object has property R, ± it has property P

When *a fortiori* is applied to this kind of argument, as some translators of Aristotle do, it roughly means "scalar warrant-using argument".

Scalar warrants give rise to a different and more complex type of argument. Usually, when P and R are correlated as above, the presence of (a certain amount of) R is a sign of P. Thus the scalar warrant enables the construction of arguments from sign: O has (to a significant extent) property R, so O has property P. Note that this is an argument from sign, not an argument from more or less. Now the strength of two such arguments can be compared in terms of the greater or lesser presence of R: if O is more/less R than O', the argument A_1 "O is R, so O is P" will be stronger than the argument A_2 "O' is R, so O' is P".

O is more R than O' ⟶ So, $A_2 < A_1$
since
± an object has property R, ± it has property P

This is an argument about arguments, a meta-argument. Hence "AF argument" can refer too to a variety of meta-arguments. The scalar warrant is used as a principle about argument strength. Once is has been established, $A_2 < A_1$ may serve as a principle for transferring sufficiency from A_2 to A_1.

A_2 is sufficient ⟶ So, A_1 is sufficient
since
$A_2 < A_1$

Thus we are bound to accept *a fortiori* an argument because of our prior acceptance of a weaker argument.

To sum up, as a name for an argument scheme, "AF argument" can designate:

a) an argument with a scalar warrant (sense 1);
b) a meta-argument concluding that an argument is even stronger than a previous one (sense 2); and
c) a meta-argument establishing the sufficiency of some argument on the grounds that a weaker argument is sufficient (sense 3).

AF arguments in sense 2 are a subtype of AF arguments in sense 1, since they do use of scalar warrants. From now on I will use "arguments from more and less" for sense 1, "meta-arguments from more or less" for sense 2, while considering sense 3 as a variant of arguments from strength comparison (*cfr.* below).

Despite their close affinity, the cogency of an argument from more and less do not entail the cogency of the corresponding meta-argument from more and less. The strength of A_1 and A_2 depends on their warrants, which are left unstated in the conclusion of the meta-argument, and different warrants can be envisaged for the same step. A_1 and A_2 are weighed against each other on the assumption that their conclusions are drawn according to the same *topos* relating R and P.

6. Arguments from strength comparison

AF is often considered a variant of analogical argument. According to the most popular view an analogical argument infers from the similarity between objects, along

some dimension, that if one has a property due to its inclusion in that dimension, the others do.

Arguments by analogy (Walton, Rees & Macagno 2007, p.315).
Similarity Premise: Generally case C1 is similar to case C2.
Base Premise: A is true (false) in case C1.
Conclusion: A is true (false) in case C2.

AF doesn't fit well this pattern since similarity is symmetrical while AF is essentially asymmetrical.

Woods and Hudak (1989) have advocate for a meta-argumentative account of arguments from analogy. Arguments by analogy, they say, argue that two or more target arguments stand or fall together and that they do so because they are relevantly at parity; the target arguments of the meta-arguments are analogues of each other (p. 127). If these are meant arguments which assert that two arguments stand or fall together, their pattern corresponds roughly to sense 2 of AF arguments.

A_1 and A_2 are relevantly at parity ⟶ So, A_2 and A_1 stand or fall together
since
…

But sometimes Woods and Hudak apparently have in mind something closer to sense 3 of AF arguments, as on p. 132:

> We have been proposing that an analogical argument is an argument to the effect […] that since argument A […] and another argument B […] both instantiate (or are cases of) an argument Q and, furthermore, since B draws an assessment-verdict, V, by virtue of its relationship to Q, so too should A draw down the same verdict.

Seen in this way, "the notion of analogical argument draws down a different and prior notion of analogy" (p.133). In other words, analogy is not established but presupposed as warrant.

B is sufficient ⟶ So, A is sufficient
since
A and B both instantiate an argument Q;
i.e., they are analogues of each other

It can be held that both arguments by analogy and AF arguments are arguments about arguments; the difference being that arguments by analogy are arguments by parity of reasoning, while AF arguments are arguments from a stronger reason. Hence both arguments by analogy and AF arguments can be considered as variants of the single scheme arguments by strength comparison. Arguments by strength comparison are built from ground-level arguments (or better yet, which are at a lower level), as explained in section 5. In this respect, analogy is a more general method, since it can build on any kind of arguments, while AF is constrained to scalar warrant-using argument.

There is a third class of arguments by strength comparison, which we could dub *paulo minor* argument. On the ground-level, it is exemplified by the phrase: "If

demigods are little more than humans, they are also slaves to their passions". An example of a familiar kind is given by the sentence "Anne is almost taller as Betty". Used in many familiar contexts this sentence implies "Anne is tall" and "presupposes Betty is tall". The underlying reasoning can be reconstructed as an argument from more and less:

Beryl is tall; Anne is almost taller as Betty ⟶ (since: x is taller than y, so x is tall) So, Anne is tall

The warrant correlates tallerness to tallness, so that an accrual of tallerness appears as an accrual of reasons for tallness. Commenting Plato's *Phaedo*, Priyedarshi Jetly claims that the monadic form tallness, making things tall, should be distinguished from the relational form tallerness, which makes a thing taller than something (1998, p. 303). Unlike tallness and shortness, tallerness and shorterness are not opposite but correlatives. If so, there are no degrees of tallness, and degrees of tallerness are to be correlated to degrees of justified belief.

> To end with, an example of *paulo minor* taken from everyday practice,
> If you're planning to become pregnant, taking certain steps can help reduce risks for both you and your baby. Proper health before deciding to become pregnant is almost as important as maintaining a healthy body during pregnancy. ("Pregnancy and Childbirth". Brigham & Women's Hospital. http://healthlibrary.brighamandwomens.org/Library/AdultLibrary/Pregnancy/85,P01229. Accesed june 9, 2012).

Here is a meta-argument from more and less based on this quote.

Proper health before deciding to become pregnant is almost as important as maintaining a healthy body during pregnancy ⟶ (since: ± important, ± constraining) So, A_2 is almost as strong as A_1

A_2 = You're planning to become pregnant, so eat a balanced diet.
A_1 = You're pregnant, so eat a balanced diet.

7. Legal AF arguments

To some extent legal reasoning seems the proper place for theorizing about AF arguments. So it is natural to turn to legal reasoning to gain new insights and test our hypothesis concerning AF.

> In the Supreme Court case Gail Atwater, et al., Petitioners v. City of Lago Vista et al., Justice Souter quotes the case Holyday v. Oxenbridge from 1631 that uses the term *a fortiori*: "In Holyday v. Oxenbridge, Cro. Car. 234, 79 Eng. Rep. 805 (K.B. 1631), the Court of King's Bench held that even a private person (and thus *a fortiori* a peace officer) needed no warrant to arrest a "common cheater" whom he discovered "cozen[ing] with false dice." (http://www.law.cornell.edu/wex/a_fortiori, Cornell University Law School, LII. Acceded on 4/06/2012).

What Justice Souter is discussing here is whether police officers need to obtain an arrest warrant to arrest someone for a minor criminal offense, such as a misdemeanor seatbelt violation punishable only by a fine. Justice Souter uses first an argument from precedent: the Court of King's Bench held that a private person needed no warrant to arrest a common cheater whom he discovered cozening with false dice; so in this case no arrest warrant was needed. Then he goes on to reinforce his argument with another: by a stronger reason a police officer can execute a warrantless arrest because a police officer has even more of a right to arrest than another person. At first sight it looks like a serial argument.

The Court of King's Bench held that a private person needed no warrant to arrest a common cheater
↓
A private person can execute a warrantless arrest
↓
A police officer can execute a warrantless arrest

The warrant of the second step would be that a police officer has even more of a right to arrest than another person.

The phrase *thus a fortiori*… refers to a comparison, but what exactly is being compared to what? A possible answer is that Justice Souter claims that the whole argument is stronger than the initial argument from precedent. This will contradict the weakest link principle. According to this principle an argument cannot be stronger than its weakest subargument. However it is line with the last-link principle defined in Prakken and Sartor (1997) for legal applications. Applied to defeasible arguments the last-link principle prefers an argument A over another argument B if the last rule used in B is less preferred than the last rule in A.

Alternatively, the statement of the warrant for the final step can be interpreted as a principle about argument strength: any reason for allowing a private person to execute a warrantless arrest is by itself a stronger reason for allowing a police officer to do the same. The application of this principle to the case at hand requires that precedents should be understood as the application of underlying principles, placing their binding force on the justification for the earlier decision, rather than in the ruling itself (see Lamond 2006, 2.2). The decision of the Court of King's Bench shows that there are reasons X to allow a private person to execute a warrantless arrest. This reasons are shown, not said (paraphrasing Wittgenstein), providing us something like a "virtual argument". The warrant *a police officer has even more of a right to arrest than another person* acts as an argumentative principle enabling us to transfer the soundness of this virtual argument to another argument, directly related to the point under discussion.

A_1		A_2
X		X
↓		↓
A private person can execute a warrantless arrest	<	A police officer can execute a warrantless arrest

On these grounds the argumentation can be reconstructed as a meta-argument from more and less. The implicit warrant will be some scale of arrestors (taking into account their status, the circumstances of the arrest, the nature of the offence, etc.) and placing police officers at the top.

A police officer has more of a right to arrest than a private person → So, $A_1 < A_2$
since
Scale of arrestors

An associate argument from strength comparison leads to the main conclusion: police officers can arrest someone for a minor criminal offense without warrant.

8. A hierarchy of AF arguments

> Suppose a thief steals a wallet and the £20 note therein. His victim will undoubtedly have a claim against him in wrongs, more specifically, in the tort of conversion. […] What is a matter of debate is whether the victim can maintain a common law strict liability claim in unjust enrichment. The existence of such a claim is said to flow as a matter of deductive logic from the availability of strict liability common law claims in unjust enrichment for mistaken transfers. Mistaken transferors recover because their consent to the transfer was impaired. In the posited case, the victim of the theft gave no consent whatever to the 'transfer' of the wallet and note to the thief. He was 'ignorant' of it. His ability to claim in unjust enrichment is, it is said, a fortiori from mistake. (Swadling, 2008, pp.627-628)[1].

Once again we are faced with a comparison of the strength of two arguments. This a typical legal AF argument. Legal *a fortiori* arguments are complex arguments from rules. Argument from rules supports a normative statement about the value of a situation or process by appealing to some evaluation or conduct rule. According to the current definitions, a legal *a fortiori* argument involves a rule and a fact or set of facts different from the ones expressly referred to in that rule. However it is contended that the rule may be applied "all the more" to the new facts. Thus we have a first, hypothetical, argument

Suppose the transferor's consent to a transfer were vitiated by a mistake → since → So the victim could claim in unjust enrichment

Mistake is a recognized by law as an unjust factor

invoked to gain acceptance for the main argument:

Suppose a thief steals a wallet and the £20 note therein → since ? → The victim can claim in unjust enrichment

Notice that "mistake is a recognized by law as an unjust factor" is not a scalar warrant. As the strength of an argument depends on its warrant, the accrual of strength characteristic of AF arguments must be explained in terms of the relationship between the warrants of the target arguments. Both arguments do have different warrants. For one thing the second argument does not deal with mistakes, so the explicit warrant is

[1] Swadling purports to demonstrate the falsity of this claim.

useless here. Secondly the missing warrant cannot be "theft is recognized by law as an unjust factor" without begging the question. Thirdly, it is a controversial matter whether English law also recognizes ignorance as an unjust factor. Even if it is arguably so, a warrant like "ignorance is recognized by law as an unjust factor" will lend less force to a conclusion than does the warrant "mistake is a recognized by law as an unjust factor". Hence some principle like "mistake is less than ignorance" or "ignorance is the most extreme case on the spectrum of vitiated intentions" (as Peter Birks puts is) is needed to tranfer acceptability from one argument to the other.

To explain the working of such complex forms of AF argumentation we have to resort to the notion of backing.[2] Backing appears when the warrant itself is challenged.

> "Standing behind our warrants … there will normally be other assurances, without which the warrants themselves would posses neither authority nor currency – these other things we may refer to as the backing (B) of the warrants" (Toulmin 2003, p.96).

Ad populum arguments, for instance, conclude that a statement is acceptable because many or most people believe it. Such arguments are traditionally considered fallacious because they rest on an unacceptable or dubious warrant ("If many believe so, it is so"). When it is called into question, not the acceptability of some particular *ad populum* argument, but *ad populum* arguments in general, what is needed is a backing for warrants. Hahn and Oaksford (2006, p.228) suggest a backing for this sort of arguments: "There is considerable evidence of group processes leading to more accurate estimates and decisions than those of individuals. […] These effects might be explained by the fact that large samples statistically lead to reductions in error variance. In other words, there is considerable scope for revising some of the traditional distrust of "mass opinion" that underlies the classification of *ad populum* arguments as fallacious."

It is natural to think that the relationship backing/warrant is similar, at least in some respects, to the relationship premises/conclusion (*cfr*. the discussion between Jones and Smith in Toulmin (2003), p.98). If I am right, backings may confer different degrees of force to the warrants they justify. That is, the bridge making the transition from backing to warrant can be a scalar principle. I contend that some legal AF arguments should be analyzed in this way. In particular the argument we are discussing may be modeled as an argument from more and less establishing the warrant of the argument from theft:

Mistake is an unjust factor; ignorance is more vitiating than mistake —since→ So, ignorance is an unjust factor

± vitiating, ± obligation for restitution

Let us specify that *unjust* enrichment is defined by unjust factors and can be remedied by restitution, so that unjust factors give a right to restitution.

Legal AF arguments compare two arguments from rules. An AF argument infers the existence and applicability of a rule from the existence of another rule. Although these are different rules, they prescribe the same treatment for two different situations, though not with the same force. Most scholars insist that AF arguments are not based on the similarity of cases but in the rationale behind the rule (which is often explained by referring to the will of the legislator). This rationale is just the backing for the rules.

[2] I guess that the same can be said for arguments by analogy.

Therefore, the identity of reason required by AF arguments can be located either in the passage from premises to conclusion (as in Aristotle's examples) or in the transition from backing to warrant. Toulmin model enables us to distinguish these different orders of AF arguments. Furthermore, as the backing for the warrant can be challenged in turn, a whole hierarchy of AF arguments is conceivable.

Despite all that, the target argument about theft is not stronger than the source argument about consent by mistake. There is no doubt that law of unjust enrichment applies to cases of transfer by mistake; however the argument we have been analyzing would be pointless if the same certainty held for cases of theft. The proponent of the AF argument claims that the rationale behind the agreed rule justifies even more likely the contentious rule. His claim doesn't contradict the fact that an agreed rule gives a stronger justification than does a conjectural or contentious one. This explains the relative weakness of AF arguments, which can be used only to fill a gap and are usually excluded from criminal law.

Conclusions

(1) AF can be seen as an argument structure collecting co-oriented arguments. If so, it has distinctive features that separate it from linked and convergent arguments. In this sense, AF consists in a comparison of two arguments which presents the weaker of them as giving sufficient support to their common conclusion.
(2) Hence a suitable theory of argument structure should be based on three main descriptive parameters: orientation, strength and sufficiency.
(3) As an argument scheme, AF arguments in its simplest form are scalar warrant-using arguments.
(4) The same scalar principle can perform a double role. It can warrant a conclusion about some fact or action or a conclusion about the relative strength of an argument for that conclusion.
(5) AF can be also used to argue that an argument is sufficient given that a weaker argument is too. This is an argument from strength comparison.
(6) There three variants of argument from strength comparison: by analogy, *a fortiori* and *paulo minor*. Arguments *paulo minor* are based on the principle that if an argument is almost as strong as a sufficient argument.
(7) The scalar principle characteristic of AF arguments can be located either in the passage from premises to conclusion or in the transition from backing to warrant. The later pattern is relatively common in legal argumentation.

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