

# ISSA Proceedings 2006 - Against Making The Linked-Convergent Distinction



## 1. Introduction

The intuition guiding the avowed distinction between linked and convergent argument structures is easy enough to grasp - in various arguments some of the premises appear to *link* together to form a single reason for the conclusion, while other premises appear to constitute separate reasons which independently converge on the conclusion. Though the intuition is easy enough to grasp, as James Freeman has recently pointed out: “the problem of clearly distinguishing linked from convergent argument structure has proven vexing.” (Freeman 2001, p. 397) Indeed, the question remains whether the intuition truly captures a real distinction.

In recent work, I have argued against one of the top contenders for how to make the linked-convergent distinction. (Goddu 2003) Here I shall argue against making the distinction at all. In section 2, I shall sketch out the problem and briefly discuss why the problem has proven so vexing. My suspicion is that the problem is vexing because it is impossible to solve. I shall not, however, attempt to prove that here. Instead, in section 3, I shall argue that, even if we grant there is a distinction to be made, there is no good reason to bother making the distinction. In particular, I shall present and rebut the three reasons that have been given to justify making the distinction.

## 2. Preliminaries

Suppose we have a given set of premises  $\{P_1, \dots, P_n\}$ , for a given conclusion  $C$ . If we are interested in this argument's structure, we are interested in how to partition  $\{P_1, \dots, P_n\}$  into subsets. Each subset is a reason for the conclusion. If a subset contains more than one premise, then those premises are linked and at least part of the argument's structure is linked. If a subset contains exactly one premise, then that premise is independent and at least part of the argument's structure is convergent. **[i]**

Solving the problem of argument structure, then, is just a matter of finding some relation that accurately partitions the set of premises into sets of reasons. In

particular, premises linked by the relation are in the same reason set and premises not so linked are not in the same reason set. The most plausible candidate for this relation is some articulation of 'dependent support'. To see this, consider the ways various authors try to articulate the notion of linked - "each of which needs the other to support the conclusion" (Thomas 1986, p. 58); "each premise is somehow incomplete in itself" (Freeman 2001, pp. 397-98); "the premises work together as a logical unit in such a way that the amount of support offered by one or more premises is dependent on the other(s)." (Bassham 2003, p. 69)

So why is the problem of clearly articulating the linking relation so vexing? Firstly, there is little consensus on what conditions an adequate version of the distinction must satisfy. For example, is an adequate linking relation one that, in principle at least, would allow us to partition the premise set of *any* argument? On the one hand, the failure of a given proposal to assign a structure to various cases has been used as a reason to reject that proposal. On the other hand, Douglas Walton and Robert Yanal explicitly reject this 'completeness' requirement in defense of their preferred proposal. But without some consensus on even moderately clear conditions of successfully solving the problem of argument structure, the problem is going to remain intractable.

Secondly, there are numerous distinct and sometimes conflicting intuitions involved in the crucial concepts of 'support' and 'dependence/independence'. On the one hand, the notion of support is often left unexplicated such that theorists rely upon their various intuitions to decide whether one statement supports another. [I fully admit that I will provide no improvement on this situation in this paper.] On the other hand, the various explications of the 'dependence/independence' of that support clearly show that there are multiple incompatible intuitions in play. For example, does it even make sense to talk in terms of one premise 'influencing' the support that another premise provides to the conclusion? Many say 'yes', but some say 'no' and the proposals for making the linked/convergent distinction differ accordingly. Even among those who say yes, intuitions differ over (a) whether the influence has to be zero for a premise to be independent or whether it just has to be below some (vague and unspecified) threshold, or (b) whether the influence has to be total for a premise to be dependent or whether it just has to be above some (vague and unspecified) threshold. With no clear set of success conditions available, adjudicating these differences in intuitions and the proposals that result from them is problematic at

best.

While the lack of clear adequacy conditions and the multiplicity of candidate dependence/independence concepts might be reasons for us to suspect that there is no viable linked/convergent distinction to make, they certainly do not prove there is no such distinction. Indeed, without a set of clear success conditions one can neither demonstrate that some proposal for the linking relation is adequate nor demonstrate that no proposal will be adequate. In order to refute the possibility of a coherent linked/convergent distinction, one would need to show that no proposal works for any plausible set of success conditions - a task I certainly cannot hope to undertake here. Instead I shall adopt another strategy. Putting aside my own suspicions that there is no coherent distinction to be made, I shall argue that regardless of whether there is a coherent distinction, there is no utility in making the distinction. The work we want to do in evaluating arguments can be done equally well without making the distinction. Hence, we ought not make it. I turn to the details of this argument now.

### *3. Against Making the Distinction*

Given the difficulty of specifying the relations that are being picked out by the linked-convergent distinction, the utility of making the distinction ought to be significant in order for us to keep trying to solve the problem. Even if we grant for the moment that there is a linked/convergent distinction to be made, the significance cannot merely be that we are recording a true fact about the given argument. After all, we could, for example, partition the premise set according to the number of atomic sentences involved in each premise. Premises with a single atomic sentence would go into one subset, premises with two into another, and so on. I suspect this partitioning would be easier to accomplish than the alleged linked/convergent partitioning. Yet, most would agree that partitioning the premise set in terms of the number of atomic sentences is not worthwhile. So defenders of making the distinction need to provide some reason to bother with making the distinction.

According to James Freeman, "that for *logical* reasons we should want to distinguish linked from convergent arguments is easily shown." (Freeman 2001, p. 403) Freeman argues that the distinction has "distinct implications for argument evaluation" (p. 405). In particular, "with convergent arguments, the unacceptability of one premise need not destroy the cogency of the entire case given for some claim. Notice however that should two or more premises be linked,

the unacceptability of one means that the entire reason constituted by these premises fails to be cogent.” (p. 405, see also p. 413) Douglas Walton writes, “the key, then, to understanding the purpose of determining whether an argument is linked or convergent resides in looking at the argument from a critic’s point of view. The critic needs to know whether it is necessary to refute both these premises, or if it is enough to find fault with just one, in order for the whole argument to fall down.” (Walton 1996, p. 175)[ii]

So, when it comes time to evaluate an argument, if we have determined its structure, i.e. whether some of the premises are linked or not, we will be able to see how much work needs to be done to refute the argument, at least in terms of rejecting premises. In particular, we need only refute one premise from each reason subset in order to reject all the reasons for a given conclusion. Why is rejecting a single premise from each reason subset sufficient? There is a strong and a weak answer to this question.

The strong answer is that only reasons provide support for conclusions. Hence, premises that are merely a proper part of a reason subset cannot provide support for the conclusion independently of being part of the reason. Freeman, who endorses what Walton calls the ‘Suspension/No Support Test’, viz. “If one premises is suspended, the conclusion is not given any support” (Freeman 2001, p. 411, p. 417) at least implicitly accepts the strong answer.

The weak answer is that only reasons provide sufficient support for conclusions. Hence, premises that are merely a proper part of a reason subset cannot provide sufficient support for the conclusion independently of being part of the reason. The premise might provide some support on its own, but not sufficient support. Advocates of what Walton calls the ‘Suspension/Insufficient Support Test’ would presumably accept the weak answer.

Unfortunately, counterexamples to both tests (and hence both the strong and weak versions of the key reason for making the linked/convergent distinction) seem legion. Consider, for example:

(A).

1. Either George is not male or George is a brother.
2. George is male.
3. Thus, George is a brother.

(A) appears to be a canonical example of an argument with a linked structure and yet it fails the Suspension/No Support Test, for surely premise 2 alone provides

some support for the conclusion. More generally, take any example of a two-premise argument, P1, P2 / C that is accepted as convergent. Now construct the following argument:

(B).

1. Either not both P1 and P2 or C.
2. P1
3. P2
4. Thus, C

(B) also appears to be a canonical example of a linked argument structure and yet it must fail the Suspension/No Support Test, since premises 2 and 3 clearly support the conclusion independently of either each other or premise 1. **[iii]**

Perhaps, in order to save the reason for making the distinction, one might bite the bullet and just accept that argument (A) and instances of (B) constructed in the right way are really arguments with a convergent structure. Freeman, however, cannot bite this bullet, since Freeman understands support in terms of positive relevance and then *analyzes* relevance in terms of canonical inference rules. He writes: "A set of statements P1, P2, ...Pn is relevant to a statement Q if there is some n-premised inference rule in C [the canonical set of inference rules] licensing the inferential move from P1, P2, ..., Pn to Q." (p. 415). Indeed, in his explication he takes it for granted that standard inference rules such as *modus ponens*, *modus tollens*, and, disjunctive syllogism are canonical inference licenses. He writes, for example, "just as clearly - the challenger being a normal human being - the inference rule *modus ponens* is part of her stock of inference licenses." (p. 418) Freeman explicitly links his analysis of relevance to the linked/convergent distinction as follows: "Our general understanding is that premises should be linked when there is some multi-premises inference rule which renders them together relevant to the conclusion. Premises are convergent when for each there is some warrant or inference rule which constitutes that premise a mark for the conclusion or renders it individually relevant to the conclusion." (p. 417) Call what Freeman advocates here, the Inference Rule Test for the linked/convergent distinction.

Freeman holds that the Inference Rule Test and the Suspension/No Support Test give the same answers. After all, he writes: "Our explication of the linked-convergent distinction through relevance and its explication through inference rules means that our approach favors Walton's Suspension/No Support Test." (p.

417) But, as the examples above show, the Suspension/No Support Test and the Inference Rule Test do not give the same answers. (B)-type arguments fail the Suspension/No Support Test, but are instances of canonical inference rules. Freeman has to give up something.

One option is to keep the Suspension/No Support Test, but give up his analysis of relevance in terms of inference rules. In this case, Freeman has to bite the bullet and say that what appear to be canonical examples of linked argument structures are really convergent. Indeed, once one gives up on the canonical examples, what sort of cases is Freeman left with as examples of linked argument structures? One example that seems to satisfy the Suspension/No Support Test is the following:

(C).

1. The moon is out.
2. Grass is green.
3. Thus, all is well in Denmark.

After all, if either premise is suspended, then the other gives no support to the conclusion. But (C) seems to be, on first glance anyway, an example of a convergent argument structure.

On the other hand, Freeman could give up the Suspension/No Support Test, but keep his analysis of relevance and the Inference Rule Test. But giving up the Suspension/No Support Test (or the Suspension/Insufficient Support Test) means giving up his justification for making the distinction in the first place.

Interestingly enough, Walton himself rejects both the No Support and the Insufficient Support Tests, so it remains unclear on what grounds Walton holds his 'key purpose for determining' an argument's structure. At the same time, though not as strongly committed as Freeman, Walton also stresses the importance of logical form. He writes: "The main clue to judging whether an argument is linked or convergent is the argument's structure" (Walton 1996, p. 160)**[iv]** Perhaps then one might try to hold to the Inference Rule Test (or Clue) as a justification for making the distinction - remove part of the inference rule and the reason for the conclusion no longer exists.

One problem is that simple inference rules, in Freeman's sense of rules, are easily embeddable in larger inference rules. The (B)-type cases above show this. Start with canonical inference rules P1/C and P2/C. Given that disjunctive syllogism is a canonical inference rule, the following is an allowable inference rule, viz. either

not P1 and P2 or C, P1, P2 /C. But in this case rejecting P1 does not remove all allowable inference rules to C from the premise set. Hence, a critic cannot rely merely on the argument's structure (at least according to the Inference Rule Test) in order to determine which premises need to be rejected.

But a more significant problem is that an argument's form is not the relevant variable in determining which premises need to be rejected in order to refute a given argument. Consider the following argument:

(D).

1. The die is red.
2. The die shows an odd number.
3. Thus, the die is a cube.

Situation 1: There are 8 red tetrahedral dice with only even number faces, 1 red standard cube die, and 8 blue standard cube dice. In this case, the premises together force the conclusion, but separately each premise alone provides very weak evidence for the conclusion. Hence, we only need to refute one.

Situation 2: There are 8 red standard cube dice, 1 red tetrahedral die with only even number faces, and 1 blue standard cube die. In this case, both premises strongly support the conclusion independently of the other, but together conclusively support the conclusion. Hence, assuming that the context allows 88% to count as sufficient support, each premise alone sufficiently supports the conclusion and so both premises would have to be refuted.

Situation 3: There are 8 red standard cube dice, 1 red tetrahedral die with only even number faces, and 10 blue standard cube dice. In this case, premise one strongly supports the conclusion, while premise 2 does so only weakly, but again together conclusively support the conclusion. In this case, only premise one would have to be refuted. The situation can be adjusted yet again so that only premise 2 would have to be refuted.

Argument (D) is a single argument with a single logical form, yet all possible patterns of what premises would need to be rejected to refute argument D can be instantiated. Hence, which premises need to be rejected to refute an argument need not co-vary with the argument's logical form. If argument structure is linked to argument form, as both Freeman and Walton maintain, which premises need to be rejected does not co-vary with an argument's structure either. But then what is

offered as the prime reason for making the linked/convergent distinction, i.e. giving the critic valuable information about which premises need to be refuted, isn't really a reason for making the distinction at all. [To see this another way, consider situation 2 split into two cases: Case 1: The support required in the context for the argument to count as acceptable is preponderance of the evidence. In this case, both premises need to be refuted. Case 2: The support required is 100%. In this case refuting either premise is sufficient. But then the actual support that the premises give, both individually and together, is not the determining factor for what premises need to be refuted - the variable is the degree of support required in the context.]

Are there other reasons to make the linked/convergent distinction? Walton gives two other reasons: (1) the distinction helps identify whether an arguer begs the question and (2) the distinction helps in identifying unexpressed premises. I shall address these two reasons in turn.

Suppose the justification for P1 of the argument, P1, P2 / C is C itself. According to Walton, whether this is a case of begging the question depends upon whether P1 and P2 are linked or not. If they are linked, then the reason for C is justified by C itself, which is a case of begging the question. If the premises are not linked, then only one of the reasons for C is justified by C itself, so is not a case of begging the question. (Walton 1996, p. 36)

This reason is a very specific case of the key reason discussed above. In this case we have a reason to reject premise 1 (at least insofar as it is used to justify C). The question then is whether this rejection is sufficient to reject the argument for C. But whether P2 is sufficient by itself for C depends (as argument (D) shows) on whether the support P2 gives by itself is more than what the context requires in order to accept C. But, as we have seen already, whether P2 gives this required support fails to co-vary with whether or not P2 is linked to P1. Hence, whether an arguer has committed a begging of the question does not depend on the argument's structure.

Walton's only comment on his final reason, i.e. that the distinction helps in identifying unexpressed premises, is as follows:

Over and above the recognition that an argument has an identifiable form, however, our main method for identifying non-explicit premises will be the method of diagramming itself. For example, if a stated premise is part of a linked structure that clearly requires some other unstated but presumed premise to



support its conclusion, then that unstated premise can be identified by the method of diagramming. Hence, a large part of the best method for filling in enthymemes is, in fact, the identification of linked structures, as part of the method of diagramming. (Walton 1996, p. 249)

This reason appears to assume that we can identify linked-structures independently of our access to all the premises involved in that structure. After all, we are supposed to use the structure and the explicit premises to which we have access in order to fill in the missing premise(s) of the structure. But what are these alleged structures? Given Walton's commitment to using an argument's form as at least a clue to its logical structure, one might think these structures are logical forms such as modus ponens, etc. But Walton's first sentence seems to suggest that these structures are something over and above the argument's form. If they are something over and above an argument's logical form, Walton needs to specify what they are and how we recognize them before we can evaluate his claims that identifying argument structure will help us identify unstated premises. If, on the other hand, the linked structures we can identify prior to having all the premises are just logical forms such as modus ponens, etc, then determining an argument's structure becomes completely superfluous to identifying missing premises. It is the form that is doing the work, not the additional fact that arguments with that form are linked (or convergent). Even if we assume that all modus ponens or whatever are linked (an assumption I am not fully prepared to make), a person could identify a suppressed premise for a modus ponens without even knowing of the linked/convergent distinction. Hence, we can identify unexpressed premises without ever appealing to the argument's structure at all.

#### 4. *Conclusion*

We do not need to make the linked/convergent distinction in order to

- a. identify what premises can be rejected to refute a given argument,
- b. determine whether the argument is a case of begging the question, or
- c. identify unexpressed premises.

Hence, unless other reasons are forthcoming to justify making the linked/convergent distinction, we have no good reason for making the distinction. That the problem of specifying the linked/convergent distinction has proven extremely vexing is beyond question. Should we keep expending effort trying to solve this problem? Not if, as I have established here, there is no good reason to make the distinction.

## NOTES

**[i]** Given this set-up, arguments with a single premise are automatically convergent. If this result is bothersome, just restrict the discussion to arguments with two or more premises.

**[ii]** Walton repeats the claim again on p. 176. Note also that earlier, on p. 169, Walton gives a version that makes it sound like a test, i.e. if need to refute just one, then linked; if both then convergent.

**[iii]** To generate a counterexample to the Suspension/Insufficient Support Test, just start with an argument where at least one of P1 or P2 is by itself sufficient for the conclusion.

**[iv]** By 'structure' here Walton means logical form in the sense of modus ponens, etc., though his subsequent discussion of arguments with no known structure, i.e. form, indicates that Walton's understanding of 'structure' is narrower than Freeman's sense in terms of inference licenses.

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