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Commentary on Pinto

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In Response To: Robert Pinto's [Logical form and the link between premise and conclusion](#)

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Let's say that *formalism* is the (loosely characterized) view that argument validity (or "umbrella" validity) is at bottom a matter of logical form. Bob Pinto's stimulating paper is construed, by its author, as an attack upon formalism. Formalism itself, however, admits of a variety of formulations, and in this short commentary I want to articulate my own preferred version of formalism – what I call *generic formalism* – and explain why, in spite of his many cogent remarks, Pinto might consider endorsing this view as well. (Before I begin, I want to acknowledge that my views on formalism are inspired by, and deeply indebted to the work of my colleague, David Hitchcock.)

First, we need a notion of logical form. Let's say that argument A instantiates logical form F iff F is the result of uniformly replacing one or more nonlogical terms, occurring within A, with distinct variables. Now, this is perhaps too crude, but it is simple, and accurate enough for our purposes here today. So, for example, argument (A)

- (A) The person standing next to the prime minister is his sister.
The person standing next to the prime minister is female.

instantiates the logical form

- (F1) The person standing next to X is X's sister.
The person standing next to X is female.

This definition of logical form has three significant consequences.

(1) Every argument instantiates a number of different logical forms. (A), for example, also instantiates the form

- (F2) P
--
Q

(2) Logical forms, in the liberal sense defined above, allow for both purely factual and purely abstract content. (F2) is a purely abstract and, we might say, classical example of logical form. (F1), however, is not a logical form in the classical sense.

(3) Every argument shares any of its logical forms with countless other arguments. There are, for example, arguments comparable to (A), which share

form (F1), which are about presidents, architects, scuba divers, and next door neighbours, rather than prime ministers.

The salient point about logical form, then, is that a logical form captures, or displays a pattern of reasoning, articulated at some level of abstractness, shared by many different arguments.

Generic Formalism can now be defined as follows: Every valid argument is valid in virtue of the fact that it instantiates at least one valid argument form. (Note that generic formalism itself does not define the notion of validity.) I view generic formalism as making two implicit claims.

(1) An existential claim to the effect that, for every valid argument, there exists a corresponding, or underlying valid logical form.

(2) That the existence of this underlying form has explanatory value. For example, that (A) instantiates the valid logical form (F1) *explains* why (A) is valid.

I call this position *generic* formalism for the reason that the explanation of an argument's validity can occur at different levels of specificity or abstractness, and within different (very loosely defined) "genres" of discourse. Sometimes the logical form in question is purely formal, composed only of variables and logical constants, as in the case of modus ponens. Sometimes the form may incorporate nonlogical terms the *meaning* of which is crucial to the form's validity, as in (F1). And sometimes factual considerations may be relevant to the form's validity, as in the case of (F3).

(F3) X littered in a public park in Vancouver last summer.

X broke the law in Vancouver last summer.

For our purposes, generic formalism has one important consequence: No valid argument is "isolated." That is, identifying an argument as valid, and explaining wherein its validity consists, commits one to making comparable claims about an entire class of arguments; namely, all those arguments instantiating the same form. So, for example, if (A) is valid, then there is a corresponding class f(A) of valid arguments which are valid for precisely the same reason that (A) is valid. Logic, as a discipline, moves beyond the *particularity* of individual arguments, and seeks to establish interesting general claims of precisely this sort.

Now, given this (far too lengthy) stage setting, let me close by finally making two general sets of comments about Bob Pinto's paper.

(1) Pinto argues at some length that the premise of (A) *entails* the conclusion of (A), and that this fact can be understood without appealing to any underlying logical form (or any meaning postulate). However, my question is (and here I quote from Pinto): Which approach best "serves the aims of critical practice" --

viewing (A) as a valid argument because its premise entails its conclusion, or viewing (A) as a valid argument because it instantiates an underlying valid argument form. Though Pinto himself raises the issue, he says precious little in this paper about this pivotal question. He admits, of course, that it is a complex issue, and that there are no conclusive arguments yet on either side of the debate.

Let me offer two quick arguments in favour of formalism. First, the fact that the premise of (A) entails the conclusion of (A) does not, in itself, explain why (A) is a valid argument. Pinto himself acknowledges that entailment is neither a necessary nor a sufficient condition of validity. (Keep in mind that we are both talking about umbrella validity throughout our discussions.) Arguments which beg the question, for example, are not valid (in the appropriate sense). Pinto of course notes this exception, and notes that (A) does not beg the question. But how do we know that there are not other exceptions? (The paradoxes of entailment come to mind.) And, perhaps more importantly, if there *any* exceptions, as there are, then this suggests that entailment *alone* does not adequately *explain* validity. We need to know, at the very least, why certain entailments support valid arguments, and why certain other entailments do not. Entailment alone cannot be the whole story.

My second argument rests on a view of logic, hinted at earlier, to the effect that logic explores (or at least is far more interesting when it explores) general claims about entire classes of arguments. Whereas Pinto leaves us with the bare, isolated fact that (A) is valid, formalism explains (A)'s validity in terms of (A)'s membership in a large class of structurally similar arguments. To my mind, this better serves the interests of argument criticism in allowing an entire set of critical comments about (A) to be transferred automatically to all arguments within the class f(A). Formalism allows for far more potent tools of argument criticism.

My second very brief comment about Pinto's paper concerns the green/grue problem. And all I can say here is that Pinto's many interesting and intelligent remarks about this problem only reinforce my perception of formalism as an interesting and viable ongoing research programme. We may not yet have put our finger on a logical form which explains the validity of certain classes of inductive generalizations. However, Pinto certainly appears to be *looking* for one (in the extended sense of logical form defined earlier which can accommodate factual, contextual, and pragmatic matters) , and he also appears to have come close to finding one with (something like) form (F4)

(F4) N% of Xs in sample S are Y.

S is representative of the population P with respect to all those properties that affect whether Xs are Y.

N% of Xs in P are Y.

(I add parenthetically that I don't share Pinto's worries about (F4) since I

believe we often *are* in a position, when arguing about green emeralds, for example, to reasonably believe the second premise.)

Accordingly, Pinto has not only inadvertently kept the formalist programme alive and kicking, but he has credibly extended that programme into the domain of inductive generalizations, and I am happy to wish him continued success in that challenging and very exciting enterprise.