HEMPEL AND INSTANTIAL CONFIRMATION

P.H. Wiebe

May 7, 1976
Abstract:

The concept of a positive instance has figured significantly in Hempel's study of confirmation. In fact, Hempel's study has been interpreted as an attempt to explicate the concept of a positive instance. In this paper I examine the concept of an instance and discuss its role in Hempel's study. I show that Hempel's notion of direct confirmation is closely related to that of a positive instance. This fact, however, does not warrant an uncritical identification of Hempel's explicandum with the concept of a positive instance, and I argue that such an interpretation of Hempel's study is grossly inadequate.
The concept of a positive instance has been significantly included in
the study of qualitative confirmation, at least since Hempel's controver-
sial and stimulating work on the topic was published three decades ago.
His study made extensive reference to positive instances, and the infa-
mous paradoxes of confirmation were first generated in connection with
what is known as "the instantial criterion of confirmation," which as-
serts that any universal generalization is confirmed by its positive in-
stances. There have been several assessments of Hempel's study which
view his work as an attempt to explicate the concept of a positive in-
stance rather than a concept of confirmation. Israel Scheffler offered
such an interpretation of Hempel's study some years ago, and John Pollock
has very recently presented a similar interpretation. This assessment
of Hempel's study has not been challenged, to my knowledge, and I shall
do so here. Before doing so, however, I shall discuss the concept of a
positive instance and indicate its relations to Hempel's study of con-
firmation.

The expression 'is an instance of' is commonly used as a synonym for
'is a positive instance of'. Positive instances have as their counter-
part negative instances, and a parallel here between positive and nega-
tive instances and confirmatory evidence and disconfirmatory evidence is
evident. The qualifiers 'positive' and 'negative' appear to have been
introduced in order to refer to sentences (or objects, perhaps) which
have been thought to constitute confirmatory and disconfirmatory evidence,
respectively. I think it is true to say, however, that the expression
'is a positive instance of' has not been regarded as synonymous with the
expression 'is confirmatory with respect to'. (A similar comment could
be made about negative instances and disconfirmatory evidence, but shall
confine my attention in the sequel to positive instances) The point I am
making here is somewhat complicated by the fact that the expression 'is
confirmatory with respect to' has been understood in a number of diffe-

2 Pollock, "Laying the Raven to Rest," Journal of Philosophy, LXX (1973),
pp. 747-754.
rent senses. I shall not attempt to list all the different senses in which this expression has been understood and used, but I shall restate the point I wish to make by saying that there is no significant sense of 'is confirmatory with respect to' which can be reasonably identified with the sense commonly attributed to 'is a positive instance of'. In other words, one cannot assume that sentences which are positive instances of a hypothesis are ipso facto confirmatory (in any sense) with respect to that hypothesis. The instantial criterion of confirmation, said by Hempel to be one of the most widely asserted rules of induction, would be a mere tautology rather than a substantive inductive rule if the concept of confirmatory evidence expressed was identical with the concept of a positive instance. For this reason it is disquieting to read John Pollock's statement: "Positive instances are those instances which, upon being amassed, lead to greater and greater confirmation of the hypothesis." Pollock appears to offer this as a definition of positive instances, and this suspicion is borne out by the fact that he assumes not only that e is confirmatory with respect to h if e is an instance of h but also that e is an instance of h if e is confirmatory with respect to h. The former assumption is not startling since confirmation theorists have often made it, but the latter assumption is. The assumption is contained in a passage in which he purports to reproduce the reasoning which led Hempel to discover the paradox of the ravens. Referring to some of Hempel's conditions of adequacy, he establishes that '(-Ac & -Be)' confirms '(x)(Ax ⊃ Bx)', and then erroneously concludes that the former must also be counted as a positive instance of the latter. Hempel, it may be recalled, explicitly rejected as a necessary condition of e's confirming h that e be an instance of h, and so Pollock's restatement of Hempel's argument is incorrect. More serious perhaps, is the failure to distinguish the concept of an instance from the concepts of confirmation.


6 Pollock, "Laying the Raven to Rest," p. 748.

The concept of a positive instance has been discussed primarily in connection with generalizations of the form: 'All P are Q'. It is sentences such as 'x is P and x is Q' (or objects which have properties P and Q) which have been viewed as positive instances par excellence of such a generalization. In the language of a symbolic logic, it is sentences of the form: '(Px & Qx)' which are viewed as positive instances of universal generalizations of the form: '(x)(Px ⊃ Qx)'. It is doubtful that the concept of an instance has been understood so that non-conditional generalizations might be construed as having instances, for example, existential sentences such as 'Something is P' are not usually construed as having instances, but it is not difficult to imagine the concept of an instance being extended to include such sentences, and a rational reconstruction of the concept of an instance might do just that. I shall not attempt that, however, and shall comment later on the relative importance of the concept of an instance. I shall assume, then, that only universal conditional sentences can be construed as having instances, and shall discuss the concept of a positive instance and the matter of its adequate definition with respect to universal conditionals.

Hempel offers a number of definitions for the concept of a positive instance. In one place he defines it as '... the conjunction of two full sentences obtained by replacing each individual variable in the molecular matrix which constitutes the antecedent by some individual constant, and by performing the same substitution in the consequent.' (Definition (1)). This definition certainly allows one to count 'Pa & Qa' as an instance of '(x)(Px ⊃ Qx)', but it is not broad enough to cover Hempel's own understanding of a positive instance. For Hempel wants sentences which are logically equivalent to positive instances as defined in (1) to count as positive instances also, e.g., not only shall '(Pa v -Pa) & (-Pa v Qa)' count as a positive instance of '(x)((Px v -Px) ⊃ (-Px v Qx))', but '(-Pa v Qa)', which is logically equivalent to the former, shall too. More generally, any sentence which satisfies the antecedent and the consequent of a universal conditional is an instance of that conditional, and Hempel defines positive instances in this way on several occasions.

Hempel frequently speaks of Nicod's criterion of confirmation, which was formulated using the concept of instance of a hypothesis, as restricted to universal conditionals, thereby suggested that he understands the concept of an instance in such a way that only universal conditionals have instances.


See Hempel, "Studies," p. 11, for example.
When the notion of satisfaction is spelled out in more detail, we have the following definition: "'i is an instance of universal conditional c' = df 'i entails the development of the antecedent of c and the development of the consequent of c, for those objects mentioned essentially in i'." (Definition (2)). Definition (2) isn't broad enough to cover Hempel's conception of an instance either, however, for Hempel wants sentences which are instances (as defined in (2)) of universal conditionals logically equivalent to c to be counted as instances of c, e.g., '(-Qa & -Pa)' is regarded as a positive instance not only of '(x)(-Qx ⊃ -Px)' but also of '(x)(Px ⊃ Qx)', which is logically equivalent to '(x)(-Qx ⊃ -Px)'. This suggests yet another alternative to the definition of a positive instance, namely: "'i is a positive instance of universal conditional c' = df 'i entails the development of the antecedent and the development of the consequent of c, or of some universal conditional logically equivalent to c, for those objects mentioned essentially in i'." (Definition (3)). Definitions of the concept of a negative instance, corresponding to (1), (2), and (3), could easily be given, but I shall not take the space to do so.

Which definition is adequate to the concept of a positive instance? Definition (2) contains an idea quite central to the concept of an instance, namely, that a positive instance is a sentence describing an object of which the properties occurring in the antecedent and the consequent of the conditional of which that instance is an instance are true. What about definition (3)? This definition goes beyond definition (2) in an important way, but in so doing it raises the spectre of paradoxes — paradoxes of instancehood, in this case. According to the definition suggested, for example, '-Pa' must be construed as a positive instance of '(x)(Px ⊃ Qx)', for '(x)(Px ⊃ Qx)' is logically equivalent to '(x)((-Px & Qx) ⊃ (Px ⊃ Qx))', and '-Pa' is a positive instance of the latter (according to (2)). Similarly, '-Qa & -Pa' is an instance of '(x)(Px ⊃ Qx)', according to (3). Such paradoxes, if indeed they are paradoxes, must not be confused with the paradoxes of confirmation. The paradoxes of confirmation were generated by adopting the instantial criterion of confirmation and the equivalence condition for hypotheses, where the latter condition pertains to a concept of confirmation, not the concept of a positive instance. The paradoxes of confirmation amount to the claim that it is paradoxical to regard evidence sentences as confirmatory with respect to certain hypotheses. The paradoxes of instancehood would amount to the claim that it is paradoxical to regard certain sentences as positive instances of certain conditionals.

It is not obvious how strong the claim that definition (3) generates counter-intuitive consequences is. It seems to me that the consequences are counter-intuitive enough to warrant rejecting the definition, but others might not agree. The concept of a positive instance as I understand it, is a logical concept, not an epistemic one. We might give

11 See Hempel, "Recent Problems," pp. 119-20, where he introduces the idea of positive instances of different types.
assent to the epistemic principle that if e confirms h and h' is logi-
cally equivalent to h, then e confirms h' (that is, that the confirmation
of a hypothesis does not depend upon the form in which it is expressed),
but this does not require commitment to the superficially similar prin-
ciple that if i is an instance of h and h' is logically equivalent to h,
then i is an instance of h'. The logical form in which a conditional
sentence is expressed seems to be significant in determining whether or
not another sentence is a positive instance of that conditional. Defini-
tion (3) strikes me as unacceptable for that reason. I shall endorse
(2) as a reasonably adequate definition of a positive instance.12

It is well known that Hempel considered as a sufficient condition of
e's confirming a universal conditional (in one variable)13 h that e was
a positive instance of h. The close relationship between Hempel's con-
cept of confirmation and the concept of a positive instance can be fur-
ther illustrated by considering his satisfaction criterion of confirma-
tion and his criterion of a positive instance. Consider the universal
conditional in one variable H: \((x)(Px \supset Qx)'\), and the possible evidence
sentences which one can form concerning the object a using the predicates
'P' and 'Q'. The number of logically distinct molecular sentences is
sixteen and are as follows:

<table>
<thead>
<tr>
<th>TABLE I</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) -Pa &amp; -Qa,</td>
</tr>
<tr>
<td>(iii) -Pa,</td>
</tr>
<tr>
<td>(v) Qa,</td>
</tr>
<tr>
<td>(vii) Pa &amp; Qa,</td>
</tr>
<tr>
<td>(ix) (Pa v -Pa) &amp; (Qa v - Qa),</td>
</tr>
<tr>
<td>(xi) -Pa v - Qa,</td>
</tr>
<tr>
<td>(xiii) Pa v Qa,</td>
</tr>
<tr>
<td>(xv) -Qa,</td>
</tr>
<tr>
<td>(ii) -Pa &amp; Qa,</td>
</tr>
<tr>
<td>(iv) -Pa v Qa,</td>
</tr>
<tr>
<td>(vi) Pa \supset Qa,</td>
</tr>
<tr>
<td>(viii) Pa &amp; -Pa,</td>
</tr>
<tr>
<td>(x) Pa \supset -Qa,</td>
</tr>
<tr>
<td>(xii) Pa v - Qa,</td>
</tr>
<tr>
<td>(xiv) Pa,</td>
</tr>
<tr>
<td>(xvi) Pa &amp; -Qa,</td>
</tr>
</tbody>
</table>

According to Hempel's criterion, sentences (i) - (viii) directly con-
firm H, (xvi) disconfirms H, and (ix) - (xv) neither disconfirm nor di-
rectly confirm H. It can be shown that a sentence in Table I directly
confirms H if it is an instance of H or of some conditional logically e-
quivalent to H.14 Table II enumerates the eight evidence sentences which

12 Perhaps (2) is even too broad. It allows 'Pa & Qa & La' (where 'L'
is independent of 'P' and 'Q') to be an instance of '(x)(Px \supset Qx)',
and it is obvious that the atom 'La' is superfluous. It might be more
accurate to view 'Pa & Qa & La' as containing a positive instance,
namely, 'Pa & Qa'.

13 This qualification is necessary, Hempel argues in "Studies," p. 14.

14 Definition (2) is assumed here. According to definition (3), a sen-
tence directly confirms H if it is a positive instance of H.
directly confirm $H$ and a corresponding hypothesis-sentence (logically equivalent to $H$) of which the specified evidence sentence is a positive instance.

### TABLE II

<table>
<thead>
<tr>
<th>Evidence Sentence</th>
<th>Hypothesis-Sentence</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) $-P_a &amp; -Q_a$</td>
<td>$(H_i) (x)(-Q_x \Rightarrow -P_x)$</td>
</tr>
<tr>
<td>(ii) $-P_a &amp; Q_a$</td>
<td>$(H_{ii}) (x)((P_x \lor Q_x) &amp; (-P_x \lor -Q_x)) \Rightarrow (P_x \Rightarrow Q_x)$</td>
</tr>
<tr>
<td>(iii) $-P_a$</td>
<td>$(H_{iii}) (x)((P_x \lor Q_x) \Rightarrow (P_x \Rightarrow Q_x))$</td>
</tr>
<tr>
<td>(iv) $-P_a \lor Q_a$</td>
<td>$(H_{iv}) (x)((-P_x \lor P_x) \Rightarrow (P_x \Rightarrow Q_x))$</td>
</tr>
<tr>
<td>(v) $Q_a$</td>
<td>$(H_v) (x)(P_x \Rightarrow Q_x)$</td>
</tr>
<tr>
<td>(vi) $P_a &amp; Q_a$</td>
<td>$(H_{vi}) (x)(P_x \Rightarrow Q_x)$</td>
</tr>
<tr>
<td>(vii) $P_a &amp; Q_a$</td>
<td>$(H_{vii}) (x)(P_x \Rightarrow Q_x)$</td>
</tr>
<tr>
<td>(viii) $P_a &amp; -P_a$</td>
<td>$(H_{viii}) (x)((P_x &amp; -Q_x) \Rightarrow (P_x &amp; -P_x))$</td>
</tr>
</tbody>
</table>

Although some of the hypotheses in Table II are easily obtainable by trial and error, there is a general method enabling one to obtain these and other suitable hypotheses. I shall illustrate the method using the evidence sentence '-Pa'.

Let $H'$ be some universal conditional sentence logically equivalent to $H$ and of which '-Pa' is a positive instance. Since $H'$ is in the form of a universal conditional, it can be symbolized as '(x)(C_x \Rightarrow D_x)', where 'C_x' and 'D_x' are complex expressions formed using 'P_x', 'Q_x', and logical symbols, but in a combination not yet evident. The matrices of $H'$ are logically equivalent and so 'P_a \Rightarrow Q_a' is materially equivalent to 'C_a \Rightarrow D_a'; hence their truth tables will be the same. The following truth table for 'P_a \Rightarrow Q_a' (and hence for 'C_a \Rightarrow D_a') and '-Pa' can be constructed:

### TABLE III

<table>
<thead>
<tr>
<th>P_a</th>
<th>Q_a</th>
<th>P_a \Rightarrow Q_a</th>
<th>C_a \Rightarrow D_a</th>
<th>-P_a</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>T</td>
<td>T</td>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>F</td>
<td>T</td>
<td>T</td>
<td>T</td>
<td>T</td>
</tr>
<tr>
<td>F</td>
<td>F</td>
<td>T</td>
<td>T</td>
<td>T</td>
</tr>
</tbody>
</table>

Since '-Pa' is an instance of '(x)(C_x \Rightarrow D_x)', it will entail 'C_a' and 'D_a'. From this information and the truth table for 'C_a \Rightarrow D_a', a partial truth table for C_a and D_a can be constructed as follows:
The truth values for the second, third, and fourth rows of Table IV are fairly obvious. Any assignment of values to the first row is possible except assigning T to 'Ca' and F to 'Da'. Suppose that 'Ca' is assigned the value F and 'Da' the value F in the first row. Then the function of 'Pa', 'Qa', and logical symbols which has the values for 'Ca' is 

\[-(Pa & Qa)\], i.e., 'Ca' = '-(Pa & Qa)'. The function of 'Pa', 'Qa', and logical symbols which has the values for 'Da' is '¬Pa'. Thus 'Ca \supset Da' is expressible as '(-Pa & Qa) \supset -Pa)', and 'T(x)(Cx \supset Dx)', that is H', is expressible as 'T(x)(¬(Px & Qx) \supset -Px)'. An examination of this conditional quickly reveals that '¬Pa' is indeed a positive instance of it. The same method can be used to obtain universal conditional hypotheses which are logically equivalent to H, each one of which has one of the sentences (i) - (viii) as a positive instance.

TABLE IV

<table>
<thead>
<tr>
<th>Ca</th>
<th>Da</th>
</tr>
</thead>
<tbody>
<tr>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
</tr>
<tr>
<td>T</td>
<td>T</td>
</tr>
<tr>
<td>T</td>
<td>T</td>
</tr>
</tbody>
</table>

In order to show that the sentences (ix) - (xvi) are not positive instances of any universal conditional sentences logically equivalent to H, one can use a reductio ad absurdum argument. I shall illustrate this for the sentence 'Pa v Qa'. That is, I shall show that there is no universal conditional sentence H", which is logically equivalent to H, of which 'Pa v Qa' is a positive instance. Suppose that 'Pa v Qa' is a positive instance of a universal conditional H" which is logically equivalent to H and which has the form: 'T(x)(Cx \supset Dx)', where 'Cx' and 'Dx' are formed using 'Px', 'Qx', and logical symbols. Again 'Pa \supset Qa' will have the same truth table as 'Ca \supset Da'. The following table of truth values for 'Pa \supset Qa' (and hence for 'Ca \supset Da') and for 'Pa v Qa' is obtained:

TABLE V

<table>
<thead>
<tr>
<th>Pa</th>
<th>Qa</th>
<th>Pa \supset Qa</th>
<th>Pa v Qa</th>
<th>Ca \supset Da</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>T</td>
<td>T</td>
<td>T</td>
<td>T</td>
</tr>
<tr>
<td>T</td>
<td>F</td>
<td>F</td>
<td>F</td>
<td>T</td>
</tr>
<tr>
<td>F</td>
<td>T</td>
<td>T</td>
<td>T</td>
<td>T</td>
</tr>
<tr>
<td>F</td>
<td>F</td>
<td>T</td>
<td>F</td>
<td>T</td>
</tr>
</tbody>
</table>

Now consider the possibility of obtaining truth values for 'Ca' and 'Da' from the values for 'Ca \supset Da' and the information that 'Pa v Qa' entails 'Ca' and 'Da' (since, ex hypothesi, 'Pa v Qa' is an instance of H").

Only the second row of the values for 'Ca \supset Da' and 'Pa v Qa' needs to be considered. Since 'Ca \supset Da' has the value F, 'Da' must have the value F. Since 'Pa v Qa' entails 'Da' and has the value T, 'Da' must have the
value T. Contradiction! Hence 'Pa v Qa' is not a positive instance of any universal conditional sentence logically equivalent to H. The same method can be used to establish that none of sentences (ix)- (xvi) are positive instances of universal conditionals logically equivalent to H.

It should be recalled, of course, that Hempel views the relation of direct confirmation as much narrower than the relation of confirmation. So the fact that the foregoing relationship between the concept of an instance and the concept of direct confirmation can be shown (and that only for conditionals in one variable) certainly does not warrant a hasty generalization about the concept of a positive instance and the (general) confirmation relation. It cannot be denied, however, that the concept of a positive instance figures in an important way in Hempel's study of confirmation, and the foregoing is partially indicative of that.

IV

There are several authors, however, who have contended that Hempel's attempt to explicate a concept of confirmation can be understood as an attempt to define the concept of a positive instance. Pollock, for example, asserts that Hempel "... laid down conditions of adequacy for a formal analysis of instance confirmation and then produced an analysis satisfying those conditions," where "instance confirmation" is explained to be confirmation of a general hypothesis by its 'positive instances'. Pollock goes on to confuse the concepts of instancehood and confirmation as I indicated above. A more significant example of confusion is provided by Scheffler's study of Hempelian confirmation.

Scheffler identifies Hempel's explicandum with the concept of a positive instance, for he asserts that Hempel "... wants... to define the conditions under which e accords with h, or represents a positive instance of h". In dealing with Scheffler's interpretation of Hempel's explicandum, I shall not consider the locution 'e accords with h'. Scheffler evidently considers this locution to be a synonym (or near synonym) of 'e represents a positive instance of h'. Hempel occasionally uses 'accords with' as a synonym for 'confirms' and so this part of Scheffler's remark is of no interest. Scheffler is very concerned to avoid begging the question of whether "... every instance that accords with a hypothesis h in fact confirms it." Scheffler here understands

15 Truth tables for these sentences, where 'Pa' and 'Qa' have the values shown in Table V, all have the value T in the second row, whereas 'Pa ⇒ Qa' (and hence 'Ca ⇒ Da') always has the value F in the second row.


18 Scheffler, Anatomy, p. 237.
'e confirms h' to mean 'e accords with h but not also with the contrary of h', or 'e is a positive instance of h but not of the contrary of h', i.e., 'e confirms (in Hempel's sense) h but not the contrary of h'. Hempel, he contends, tries to explicate the underlying notion of a positive instance of hypothesis. Now Hempel indeed asserts that the concept of confirmation he is concerned to explicate is closely connected with the concept of an instance of a hypothesis, but he never goes farther than saying that a sufficient condition of a sentence's confirming a given hypothesis is that that sentence is an instance of the hypothesis.

A very little reflection will reveal the inadequacy of Scheffler's identification. In the first place, if i is a positive instance of h then h must be a universal conditional sentence, for the class of sentences which can be construed as having instances are universal conditionals. Hempel, however, clearly allows sentences of any logical form whatsoever, not just universal conditionals, to serve as hypothesis-sentences. This point would not be vitiated if the concept of a positive instance were to be understood so that any general sentence (that is, one containing a non-vacuous quantifier) were judged to have instances, for Hempel allows sentences of molecular form to be hypothesis-sentences.

In the second place, and more importantly, the logical conditions of adequacy which Hempel enunciated as representing important characteristics of his explicandum can hardly be viewed as characteristics of the concept of a positive instance. One important condition which Hempel requires any adequate explication of the concept of confirmation to fulfill is the entailment condition: If e entails h then e confirms h. If Scheffler is correct in his interpretation of Hempel, then Hempel must be construed as requiring that the following conditions be fulfilled: If e entails h then e is a positive instance of h. It is absurd to suggest that such a condition represents an important characteristic of the concept of an instance of a hypothesis, e.g., it is absurd to suggest that '(x)(Px)' is a positive instance of 'Pa'. A consideration of other conditions of adequacy yields similar highly objectionable results.

It would be no use for Scheffler to reply that Hempel is offering a rational reconstruction of the concept of a positive instance, and that some intuitively acceptable judgements will have to be sacrificed for the sake of generality, comprehensiveness, etc., for such a reply overlooks the widely acknowledged requirement that any proposed explication must be in sufficiently close agreement with the customary meaning of the explicandum. One further example illustrates the implausibility of Scheffler's interpretation of Hempel's explicandum. Hempel allows 'Pa' as confirmatory with respect to 'Pb'. Given Scheffler's interpretation of Hempel's explicandum, 'Pa' would have to be construed as a positive instance of 'Pb'. Such examples constitute exactly the kinds of counter-intuitive results which count decisively against Scheffler's identification.
I wish, in conclusion, to make a few remarks concerning the importance of the concept of a positive instance in relation to confirmation theory. I think that the concept of a positive instance is of relatively little importance for several reasons. In the first place, the concept of an instance can serve at best as a sufficient condition of confirmation, since only universal conditional have instances. In the second place, the concept of a positive instance is of possible interest only in relation to dyadic concepts of confirmation. I indicated above that 'to confirm' has been understood in several senses. One rather important concept of confirmation is the triadic concept expressed in the locution 'e confirms (i.e., makes firmer) hypothesis h on the basis of prior evidence b'. It is not difficult to see that even though e is a positive instance of h, e might not confirm h (that is, make h firmer) given any b whatsoever. For example, when the prior evidence b conclusively disconfirms the hypothesis '(x)(Px ⊃ Qx)', the new evidence report 'Pa & Qa' (which is an instance of the hypothesis) can hardly be judged to make the hypothesis firmer than it was on the basis of that prior evidence. It is arguable, I think, although I shall not attempt to do so here, that the triadic concept just considered is of more interest in the study of scientific method than any dyadic concept of confirmation (excepting 'e confirms h' in the sense of 'h is firm on e'). In such circumstances, the importance of the concept of an instance would be negligible.

One final comment. Theorists have been anxious to lay to rest the paradoxes of confirmation, but perhaps the time has come to lay to rest the paradox-engendering concept of a positive instance, and then go on to the more constructive tasks of confirmation theory.

Dr. P.H. Wiebe
Department of Philosophy
Brandon University
Brandon, Manitoba
Canada