

Truth and Falsehood

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Our knowledge of truths, unlike our knowledge of things, has an opposite, namely *error*. So far as things are concerned, we may know them or not know them, but there is no positive state of mind which can be described as erroneous knowledge of things, so long, at any rate, as we confine ourselves to knowledge by acquaintance. Whatever we are acquainted with must be something; we may draw wrong inferences from our acquaintance, but the acquaintance itself cannot be deceptive. Thus there is no dualism as regards acquaintance. But as regards knowledge of truths, there is a dualism. We may believe what is false as well as what is true. We know that on very many subjects different people hold different and incompatible opinions: hence some beliefs must be erroneous. Since erroneous beliefs are often held just as strongly as true beliefs, it becomes a difficult question how they are to be distinguished from true beliefs. How are we to know, in a given case, that our belief is not erroneous? This is a question of the very greatest difficulty, to which no completely satisfactory answer is possible. There is, however, a preliminary question which is rather less difficult, and that is: What do we *mean* by truth and falsehood? It is this preliminary question which is to be considered in this chapter.

In this chapter we are not asking how we can know whether a belief is true or false: we are asking what is meant by the question whether a belief is true or false. It is to be hoped that a clear answer to this question may help us to obtain an answer to the question what beliefs are true, but for the present we ask only 'What is truth?' and 'What is falsehood?' not 'What beliefs are true?' and

'What beliefs are false?' It is very important to keep these different questions entirely separate, since any confusion between them is sure to produce an answer which is not really applicable to either.

There are three points to observe in the attempt to discover the nature of truth, three requisites which any theory must fulfil.

(1) Our theory of truth must be such as to admit of its opposite, falsehood. A good many philosophers have failed adequately to satisfy this condition: they have constructed theories according to which all our thinking ought to have been true, and have then had the greatest difficulty in finding a place for falsehood. In this respect our theory of belief must differ from our theory of acquaintance, since in the case of acquaintance it was not necessary to take account of any opposite.

(2) It seems fairly evident that if there were no beliefs there could be no falsehood, and no truth either, in the sense in which truth is correlative to falsehood. If we imagine a world of mere matter, there would be no room for falsehood in such a world, and although it would contain what may be called 'facts', it would not contain any truths, in the sense in which truths are things of the same kind as falsehoods. In fact, truth and falsehood are properties of beliefs and statements: hence a world of mere matter, since it would contain no beliefs or statements, would also contain no truth or falsehood.

(3) But, as against what we have just said, it is to be observed that the truth or falsehood of a belief always depends upon something which lies outside the belief itself. If I believe that Charles I died on the scaffold, I believe truly, not because of any intrinsic quality of my belief, which could be discovered by merely examining the belief, but because of an historical event which happened

two and a half centuries ago. If I believe that Charles I died in his bed, I believe falsely: no degree of vividness in my belief, or of care in arriving at it, prevents it from being false, again because of what happened long ago, and not because of any intrinsic property of my belief. Hence, although truth and falsehood are properties of beliefs, they are properties dependent upon the relations of the beliefs to other things, not upon any internal quality of the beliefs.

The third of the above requisites leads us to adopt the view—which has on the whole been commonest among philosophers—that truth consists in some form of correspondence between belief and fact. It is, however, by no means an easy matter to discover a form of correspondence to which there are no irrefutable objections. By this partly—and partly by the feeling that, if truth consists in a correspondence of thought with something outside thought, thought can never know when truth has been attained—many philosophers have been led to try to find some definition of truth which shall not consist in relation to something wholly outside belief. The most important attempt at a definition of this sort is the theory that truth consists in *coherence*. It is said that the mark of falsehood is failure to cohere in the body of our beliefs, and that it is the essence of a truth to form part of the completely rounded system which is The Truth.

There is, however, a great difficulty in this view, or rather two great difficulties. The first is that there is no reason to suppose that only *one* coherent body of beliefs is possible. It may be that, with sufficient imagination, a novelist might invent a past for the world that would perfectly fit on to what we know, and yet be quite different from the real past. In more scientific matters, it is certain that there are often two or more hypotheses which account for all the known facts on some subject, and although, in such cases, men of science endeavor to find facts which will rule out all the hypotheses except one, there is no reason why they should always succeed.

In philosophy, again, it seems not uncom-

mon for two rival hypotheses to be both able to account for all the facts. Thus, for example, it is possible that life is one long dream, and that the outer world has only that degree of reality that the objects of dreams have; but although such a view does not seem inconsistent with known facts, there is no reason to prefer it to the common-sense view, according to which other people and things do really exist. Thus coherence as the definition of truth fails because there is no proof that there can be only one coherent system.

The other objection to this definition of truth is that it assumes the meaning of 'coherence' known, whereas, in fact, 'coherence' presupposes the truth of the laws of logic. Two propositions are coherent when both may be true, and are incoherent when one at least must be false. Now in order to know whether two propositions can both be true, we must know such truths as the law of contradiction. For example, the two propositions, 'this tree is a beech' and 'this tree is not a beech', are not coherent, because of the law of contradiction. But if the law of contradiction itself were subjected to the test of coherence, we should find that, if we choose to suppose it false, nothing will any longer be incoherent with anything else. Thus the laws of logic supply the skeleton or framework within which the test of coherence applies, and they themselves cannot be established by this test.

For the above two reasons, coherence cannot be accepted as giving the *meaning* of truth, though it is often a most important *test* of truth after a certain amount of truth has become known.

Hence we are driven back to *correspondence with fact* as constituting the nature of truth. It remains to define precisely what we mean by 'fact', and what is the nature of the correspondence which must subsist between belief and fact, in order that belief may be true.

In accordance with our three requisites, we have to seek a theory of truth which (1) allows truth to have an opposite, namely falsehood, (2) makes truth a property of be-

liefs, but (3) makes it a property wholly dependent upon the relation of the beliefs to outside things.

The necessity of allowing for falsehood makes it impossible to regard belief as a relation of the mind to a single object, which could be said to be what is believed. If belief were so regarded, we should find that, like acquaintance, it would not admit of the opposition of truth and falsehood, but would have to be always true. This may be made clear by examples. Othello believes falsely that Desdemona loves Cassio. We cannot say that this belief consists in a relation to a single object, 'Desdemona's love for Cassio', for if there were such an object, the belief would be true. There is in fact no such object, and therefore Othello cannot have any relation to such an object. Hence his belief cannot possibly consist in a relation to this object.

It might be said that his belief is a relation to a different object, namely 'that Desdemona loves Cassio'; but it is almost as difficult to suppose that there is such an object as this, when Desdemona does not love Cassio, as it was to suppose that there is 'Desdemona's love for Cassio'. Hence it will be better to seek for a theory of belief which does not make it consist in a relation of the mind to a single object.

It is common to think of relations as though they always held between *two* terms, but in fact this is not always the case. Some relations demand three terms, some four, and so on. Take, for instance, the relation 'between'. So long as only two terms come in, the relation 'between' is impossible: three terms are the smallest number that render it possible. York is between London and Edinburgh; but if London and Edinburgh were the only places in the world, there could be nothing which was between one place and another. Similarly *jealousy* requires three people: there can be no such relation that does not involve three at least. Such a proposition as 'A wishes B to promote C's marriage with D' involves a relation of four terms; that is to say, A and B and C and D all come in, and the relation involved cannot be expressed otherwise than in a form involving

all four. Instances might be multiplied indefinitely, but enough has been said to show that there are relations which require more than two terms before they can occur.

The relation involved in *judging* or *believing* must, if falsehood is to be duly allowed for, be taken to be a relation between several terms, not between two. When Othello believes that Desdemona loves Cassio, he must not have before his mind a single object, 'Desdemona's love for Cassio', or 'that Desdemona loves Cassio', for that would require that there should be objective falsehoods, which subsist independently of any minds; and this, though not logically refutable, is a theory to be avoided if possible. Thus it is easier to account for falsehood if we take judgement to be a relation in which the mind and the various objects concerned all occur severally; that is to say, Desdemona and loving and Cassio must all be terms in the relation which subsists when Othello believes that Desdemona loves Cassio. This relation, therefore, is a relation of four terms, since Othello also is one of the terms of the relation. When we say that it is a relation of four terms, we do not mean that Othello has a certain relation to Desdemona, and has the same relation to loving and also to Cassio. This may be true of some other relation than believing but believing, plainly, is not a relation which Othello has to *each* of the three terms concerned, but to *all* of them together: there is only one example of the relation of believing involved, but this one example knits together four terms. Thus the actual occurrence, at the moment when Othello is entertaining his belief, is that the relation called 'believing' is knitting together into one complex whole the four terms Othello, Desdemona, loving, and Cassio. What is called belief or judgement is nothing but this relation of believing or judging, which relates a mind to several things other than itself. An *act* of belief or of judgement is the occurrence between certain terms at some particular time, of the relation of believing or judging.

We are now in a position to understand what it is that distinguishes a true judgement

from a false one. For this purpose we will adopt certain definitions. In every act of judgement there is a mind which judges, and there are terms concerning which it judges. We will call the mind the *subject* in the judgement, and the remaining terms the *objects*. Thus, when Othello judges that Desdemona loves Cassio, Othello is the subject, while the objects are Desdemona and loving and Cassio. The subject and the objects together are called the *constituents* of the judgement. It will be observed that the relation of judging has what is called a 'sense' or 'direction'. We may say, metaphorically, that it puts its objects in a certain *order*, which we may indicate by means of the order of the words in the sentence. (In an inflected language, the same thing will be indicated by inflections, e.g. by the difference between nominative and accusative.) Othello's judgement that Cassio loves Desdemona differs from his judgement that Desdemona loves Cassio, in spite of the fact that it consists of the same constituents, because the relation of judging places the constituents in a different order in the two cases. Similarly, if Cassio judges that Desdemona loves Othello, the constituents of the judgement are still the same, but their order is different. This property of having a 'sense' or 'direction' is one which the relation of judging shares with all other relations. The 'sense' of relations is the ultimate source of order and series and a host of mathematical concepts but we need not concern ourselves further with this aspect.

We spoke of the relation called 'judging' or 'believing' as knitting together into one complex whole the subject and the objects. In this respect, judging is exactly like every other relation. Whenever a relation holds between two or more terms, it unites the terms into a complex whole. If Othello loves Desdemona, there is such a complex whole as 'Othello's love for Desdemona'. The terms united by the relation may be themselves complex, or may be simple, but the whole which results from their being united must be complex. Wherever there is a relation which relates certain terms, there is a com-

plex object formed of the union of those terms; and conversely, wherever there is a complex object, there is a relation which relates its constituents. When an act of believing occurs, there is a complex, in which 'believing' is the uniting relation, and subject and objects are arranged in a certain order by the 'sense' of the relation of believing. Among the objects, as we saw in considering 'Othello believes that Desdemona loves Cassio', one must be a relation—in this instance, the relation 'loving'. But this relation, as it occurs in the act of believing, is not the relation which creates the unity of the complex whole consisting of the subject and the objects. The relation 'loving', as it occurs in the act of believing, is one of the objects—it is a brick in the structure, not the cement. The cement is the relation 'believing'. When the belief is *true*, there is another complex unity, in which the relation which was one of the objects of the belief relates the other objects. Thus, e.g., if Othello believes *truly* that Desdemona loves Cassio, then there is a complex unity, 'Desdemona's love for Cassio', which is composed exclusively of the *objects* of the belief, in the same order as they had in the belief, with the relation which was one of the objects occurring now as the cement that binds together the other objects of the belief. On the other hand, when a belief is *false*, there is no such complex unity composed only of the objects of the belief. If Othello believes *falsely* that Desdemona loves Cassio, then there is no such complex unity as 'Desdemona's love for Cassio'.

Thus a belief is *true* when it *corresponds* to a certain associated complex, and *false* when it does not. Assuming, for the sake of definiteness, that the objects of the belief are two terms and a relation, the terms being put in a certain order by the 'sense' of the believing, then if the two terms in that order are united by the relation into a complex, the belief is true; if not, it is false. This constitutes the definition of truth and falsehood that we were in search of. Judging or believing is a certain complex unity of which a mind is a constituent; if the remaining constituents, taken in the order which they have in the

belief, form a complex unity, then the belief is true; if not, it is false.

Thus although truth and falsehood are properties of beliefs, yet they are in a sense extrinsic properties, for the condition of the truth of a belief is something not involving beliefs, or (in general) any mind at all, but only the *objects* of the belief. A mind, which believes, believes truly when there is a *corresponding* complex not involving the mind, but only its objects. This correspondence ensures truth, and its absence entails falsehood. Hence we account simultaneously for the two facts that beliefs (a) depend on minds for their *existence*, (b) do not depend on minds for their *truth*.

We may restate our theory as follows: If we take such a belief as 'Othello believes that Desdemona loves Cassio', we will call Desdemona and Cassio the *object-terms*, and loving the *object-relation*. If there is a complex unity 'Desdemona's love for Cassio', consisting of

the object-terms related by the object-relation in the same order as they have in the belief, then this complex unity is called the *fact corresponding to the belief*. Thus a belief is true when there is a corresponding fact, and is false when there is no corresponding fact.

It will be seen that minds do not *create* truth or falsehood. They create beliefs, but when once the beliefs are created, the mind cannot make them true or false, except in the special case where they concern future things which are within the power of the person believing, such as catching trains. What makes a belief true is a *fact*, and this fact does not (except in exceptional cases) in any way involve the mind of the person who has the belief.

Having now decided what we *mean* by truth and falsehood, we have next to consider what ways there are of knowing whether this or that belief is true or false.

Fundamental Aspects of the Coherence Theory of Truth

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1. COHERENCE AS A CRITERION OF TRUTH

It is generally recognized that 'the coherence theory of truth' has historically not been a single monolithic doctrine but has taken significantly different forms—three in particular:

- (i) a metaphysical doctrine regarding the *nature of reality* (viz. that it is a coherent system).
- (ii) a logical doctrine regarding the *definition of truth* (viz. that truth is to be defined in terms of the coherence of propositions).
- (iii) a logico-epistemological doctrine as regarding the prime (or ultimate) *criterion of truth* (viz. that the canonical test of truth is to consist in assessing the mutual coherence of [suitably qualified] propositions).¹

Our present interest lies in the last two items. We propose to deal with the coherence theory solely in its logical and epistemological ramifications, leaving metaphysical issues aside in so far as is possible. The metaphysics of idealism is an issue outside the central concerns of present purpose.

No profound analysis is required to see that the coherence theory as we have outlined it does not purport to give a *definition* of 'truth'. Coherence is certainly not the *meaning* of truth. Idealistic adherents of the theory—F. H. Bradley prominently included—have generally been prepared to grant the merits of the correspondence approach to the intrinsic nature of truth: 'Truth to be true must be true of something, and this something itself is not truth. This obvious view I endorse.'² Rather, the aim of the coherence theory is—or should be—to afford a *test* or criterion of truth. As A. C. Ewing rightly insists, 'correspondence might well constitute the nature of truth without constituting its criterion'.³ Thus construed, the two doctrines are fitted to very different work. The matter of 'correspondence to facts' tells us a great deal about *what truth is*, but can fail badly as a guide to *what is true*. On the other hand, the factor of 'coherence with other (suitably determined) propositions' does not really provide a *definition* of truth, but is most helpful as a tool in the process of deciding whether given propositions qualify as truths.

The workable articulation of a coherence criterion of truth will clearly be a matter of importance in any case, quite apart from its role in anything so grandiose as a 'theory of truth'. For on anyone's approach to the matter—be he of coherentist sympathies or not—there will clearly be *some* cases in which the potential truth of a proposition is best assessed in terms of its coherence with other established or presumed truths. Coherence must be accorded some role, however partial or subsidiary, on *any* approach to the criteria of rational acceptance. It is therefore eminently desirable—quite separately from any penchant towards a coherence theory of

truth—to be clear as to the nature and workings of coherence considerations.

2. THE REVIVAL OF COHERENCE THEORY AMONG THE LOGICAL POSITIVISTS

Some coherentists outside the idealist school have, however, gone so far as to maintain that adoption of a coherence theory of truth calls for a complete rejection of the relationship of truth to correspondence to fact. Substantiation of this point calls for a brief historical excursus.

Idealism had died out as a widely accepted philosophical position by the 1920s. Only a handful of isolated sympathizers carried on the tradition—by 1930, A. C. Ewing in England, C. A. Campbell in Scotland, and Brand Blanshard in the U.S.A. virtually had the field to themselves in the Anglo-American domain.⁴ Yet in the early 1930s new devotees of the coherence theory of truth were to spring up in an unexpected quarter: the Vienna School of logical positivism.⁵ During the early 1930s some of the most influential members of the logical positivist school advocated a version of the coherence theory of truth. In a widely discussed paper of 1932,⁶ Rudolf Carnap had maintained that all of scientific knowledge can be built up from a certain class of basic statements characterized as *protocol sentences*, i.e. sentences that describe in an exact and incorrigibly correct manner the sensory observations of trained observers. Such sentences provide the evidential base of all factual knowledge, but 'require no verification' themselves. Carnap's position was sharply criticized by Otto Neurath who wrote:

There is no way of taking conclusively established pure protocol sentences as the starting point of the science. No tabula rasa exists. We are like sailors who must rebuild their ship on the open sea, never able to dismantle it in dry-dock and to reconstruct it there out of the best materials.

In unified science we try to construct a non-

contradictory system of protocol sentences and non-protocol sentences (including laws).⁷ When a new sentence is presented to us we compare it with the system at our disposal, and determine whether or not it conflicts with that system. If the sentence does conflict with the system, we may discard it as useless (or false). . . . One may, on the other hand, *accept* the sentence and so change the system that it remains consistent even after the adjunction of the new sentence. The sentence would then be called 'true'. The fate of being discarded may befall even a protocol sentence. No sentence enjoys the *noli me tangere* which Carnap ordains for protocol sentences.

Two conflicting protocol sentences cannot both be used in the system of unified science. Though we may not be able to tell which of the two is to be excluded, or whether both are not to be excluded, it is clear that not both are verifiable, that is, that both do not fit into the system.

If a protocol sentence must in such cases be discarded, may not the same occasionally be called for when the contradiction between protocol sentences on the one hand and a system comprising protocol sentences and non-protocol sentences (laws, etc.) on the other is such that an extended argument is required to disclose it? On Carnap's view, one could be obliged to alter only non-protocol sentences and laws. *We also allow for the possibility of discarding protocol sentences. A defining condition of a sentence is that it be subject to verification, that is to say, that it may be discarded.*⁸

Neurath's position is that (1) *all* factual statements are vulnerable to rejection—observation statements of the protocol type specifically included: 'The fate of being discarded may befall even a protocol sentence',⁹ and (2) that the standard by which any such statement is to be evaluated is that we are to 'compare it with the system at our disposal'. In effect, Neurath opposes to the intuitionist/constructivist approach of Carnap a theory of factual truth that is essentially of the coherentist variety.¹⁰ Coherence theorists have always insisted that empirical knowledge 'is not the direct awareness of an independent fact; of a solid constituent of reality, presenting itself, entire and complete, to the passively accepting observer'.¹¹

According to Neurath, scientific knowledge is

. . . a sorting-machine into which protocol sentences are thrown. The laws and other factual sentences (including protocol sentences) serving to mesh the machine's gears sort the protocol sentences which are thrown into the machine and cause a bell to ring if a contradiction ensues. At this point one must either replace the protocol sentence whose introduction into the machine has led to the contradiction by some other protocol sentence, or rebuild the entire machine.¹²

Neurath rejected all talk of truth as correspondence with reality. Indeed he rejects this entire conception as ultimately meaningless:

A social scientist who, after careful analysis, rejects certain reports and hypotheses, reaches a state, finally, in which he has to face comprehensive sets of statements which compete with other comprehensive sets of statements. All these sets may be composed of statements which seem to him plausible and acceptable. There is no place for an empiricist question: Which is the 'true' set? but only whether the social scientist has sufficient time and energy to try more than one set or to decide that he, in regard to his lack of time and energy—and this is the important point—should work with one of these comprehensive sets only.¹³

Thus Neurath not only restored the coherence theory to a place of prominence, he went so far as to invoke coherence as a basis for maintaining the invalidity of the whole concept of 'correspondence with fact'. For him—unlike idealistic coherentists such as Bradley—adoption of the coherence theory calls for rejection of the whole concept of truth as correspondence to fact. On our own view of the matter as set forth in the preceding section, this position that the coherence conception of truth *excludes* the very meaningfulness of correspondence is neither necessary nor desirable.

3. DOES COHERENCE PRE-EMPT CORRESPONDENCE?

Certain writers maintain that a coherence approach to truth *precludes* a correspondentist view of the nature of truth. They

argue that if coherence is to be the *test* of truth then it must also be its *nature*, pre-empting all claims of correspondence in this regard. Brand Blanshard is pre-eminent among those who espouse this line of thought.¹⁴

The earlier coherence theorists tended to view coherence as a characteristic mark of the truth without any very specific and definite commitment as to the exact nature of the 'mark' at issue. Is coherence a somehow necessary feature of the truth, is it a test of truth, is it a part of the definition of truth or even the whole of it? Such questions did not generally receive close attention. After F. H. Bradley, however, the issue could not readily be avoided, and Brand Blanshard faced it squarely in his characteristically hard-headed fashion. His answer is clear and emphatic—truth *consists* in coherence; coherence is not just a feature of truth, but its very nature.

The critical defect of this approach to the definition of truth in terms of coherence is that it leaves the link from truth to factuality not just unrationalized but unrationalizable. The linkage surely cannot be of *contingent* character. But yet how can the step from coherence to factuality possibly be a necessary one? Upon what sort of logical basis could one possibly erect an airtight demonstration that whatever satisfies conditions of maximal or optimal coherence must indeed be the case in actual fact? Surely this poses an insuperable difficulty.

Blanshard himself is, seemingly, perfectly ready to grant this. He writes:

Suppose that we construe experience into the most coherent picture possible, remembering that among the elements included will be such secondary qualities as colours, odours, and sounds. Would the mere fact that such elements as these are coherently arranged prove that anything precisely corresponding to them exists 'out there' [i.e. less eccentrically formulated, *is actually the case*]? I cannot see that it would, even if we knew that the two arrangements had closely corresponding patterns. . . . It is therefore impossible to argue from a high degree of coherence within experience to its correspondence in the

same degree with anything outside [i.e., with what is in fact the case]. . . . In the end, the only test of truth that is not misleading is the special nature or character that is itself constitutive of truth [viz. coherence].¹⁵

Given my (perhaps somewhat tendentious) reading of this argument against a correspondence theory, it would seem that Blanshard is fully prepared to regard the step from 'coherence' to 'correspondence with the facts of the matter' as problematic and potentially fallible.

Yet even if one utterly rejects the core thesis of the correspondence theory that truth *means* 'correspondence to fact' (*adaequatio ad rem* in the old formula), one is still left—in any event—with the impregnable thesis that a true proposition is one that states what is in fact the case. The link from truth to factuality is not to be broken, regardless of one's preferred conception of the definitional nature of truth. Even the most ardent coherence theorist must grant, certainly not the premiss of the coherence theory that truth *means* correspondence to the facts, but merely its consequence, that truths must correspond to the facts. Even if we follow the coherentist in rejecting the definitional route from the former to the latter, we must still be able to link them mediately, via coherence. But how can coherence of itself ever guarantee factuality? Cannot the clever novelist make his tale every bit as coherent as that of the most accurate historian? Given the (relatively clear) fact that the products of creative invention and imagination can be perfectly coherent, and given that alternate coherent structures can always be erected from given elements (as scientists frame different hypotheses to account for the same body of data), how can coherence possibly furnish a logical guarantee of fact? So runs one of the standard objections to the coherence theory of truth, one which—to all appearances—tells also against Blanshard's formulation of the theory. In seeking to impugn the correspondence theory by insisting that there is no infallible linkage between coherence and correspondence-to-

fact, Blanshard succeeds less in invalidating correspondence as a standard of truth than in highlighting a fundamental difficulty of the coherence theory of the type he espouses, one according to which coherence represents the very *nature* of truth.

Blanshard emphatically recognizes and stresses the critical difference between a criterion or *test* of truth and a *definition* thereof:

It has been contended in the last chapter that coherence is in the end our sole criterion of truth. We have now to face the question whether it also gives us the nature of truth. We should be clear at the beginning that these are different questions, and that one may reject coherence as the definition of truth while accepting it as the test. It is conceivable that one thing should be an accurate index of another and still be extremely different from it. There have been philosophers who held that pleasure was an accurate gauge of the amount of good in experience, but that to confuse good with pleasure was a gross blunder. There have been a great many philosophers who held that for every change in consciousness there was a change in the nervous system and that the two correspond so closely that if we knew the laws connecting them we could infallibly predict one from the other; yet it takes all the hardihood of a behaviourist to say that the two are the same. Similarly it has been held that though coherence supplies an infallible measure of truth, it would be a very grave mistake to identify it with truth.¹⁶

Recognizing in general the potential difference between a criterion and a definition, Blanshard argues that in the special case of truth this difference cannot be maintained: here definition must collapse into criterion once coherence is recognized as the criterion of truth.

The structure of his argument can be presented as follows:¹⁷

- (1) A coherence theory of truth cannot do less than take coherence as one, nay *the prime*, test of truth.
- (2) Now if the definition of truth finds the nature of truth to reside in something other than coherence, something which—like correspondence—is not logically tantamount to coherence but can potentially diverge from it,

then coherence cannot qualify as a foolproof guarantee of truth.

- (3) But since a coherence theory of truth must take coherence to be the prime test of truth (Premiss 1), it must see in coherence a foolproof guarantee of truth.
- (4) But then it follows (from Premiss 2) that a coherence theory of truth must take coherence to represent the nature of truth, and not merely to provide a test-criterion thereof. For only what is essential to its very nature can provide a conceptually foolproof guarantee for a thing, and not any mere test-criterion.

The upshot of Blanshard's argument is this: that a recognition of coherence as the test-criterion of truth forces the conclusion that coherence must represent the definitional nature of truth.

This argument seems to be perfectly unexceptionable: Given its premisses, the conclusion must be granted. But what is to be said about its premisses? Of the essential premisses (1)–(3) of this Blanshardesque argument, it seems clear that (1) and (2) are effectively beyond cavil. Only (3) is potentially vulnerable—and indeed actually so. For why must the coherence test be seen as providing a *foolproof guarantee* of truth? We are led back once more to the critical distinction between a *guaranteeing* criterion and an *authorizing* criterion. Recognizing this distinction, we may note that, on Blanshard's approach as enshrined in premiss (2), the partisan of coherence as the criterion of truth is committed to regarding coherence as a *guaranteeing* criterion. He is committed to regarding the link from coherence to truth as inevitable and necessary. Now subject to this presupposition, Blanshard's position is unquestionably a strong one. But why need this presupposition be made? Why could or should not the coherence theorist intent on taking coherence as a criterion of truth regard it as an authorizing rather than a guaranteeing criterion? Why, in short, should coherence not be accepted as a *generally effective test* of truth rather than an *inescapable aspect of its nature*?

From this perspective, Blanshard's version of the coherence theory of truth is

faulty because it gets off to a bad start. It goes amiss at a very fundamental point, by insisting on seeing in coherence the *very nature* of truth, and is not content with having coherence play simply the part of a restricted test-criterion for truth-determinations. This deprives Blanshard of the prospect of making sense of the ancient thesis that it is necessary that a true proposition should agree with the facts of the case, a thesis not abrogated by abandoning a definitional correspondence theory of truth, but rather one that must survive any such abandonment.

Blanshard is inexorably forced to this insistence that coherence represents the definitional nature of truth by two considerations: (1) the (essentially unproblematic) premiss that coherence is a key criterion of truth, and (2) the argument that the necessary linkage of truth-criterion to truth-definition cannot be preserved unless the criterial factor (viz. coherence) is taken over as definitional. Blanshard's *argument* here is perfectly correct, but his position is not. For it is neither necessary nor desirable for the adoption of coherence as a (or even *the*) criterion of truth to construe coherence as a *necessitating* or *logically guaranteeing* criterion rather than one that is *presumptive* and *epistemically authorizing*. And once such insistence upon a linkage of necessity is abandoned, the argument that coherence-as-criterion entails coherence-as-definition becomes abortive.

4. WHAT IS COHERENCE?

The groundwork of the coherence theory has its roots in the idea of *system*. Its basic insight is formulated by F. H. Bradley as follows: "Truth is an ideal expression of the Universe, at once coherent and comprehensive. It must not conflict with itself, and there must be no suggestion which fails to fall inside it. Perfect truth, in short, must realize the idea of a systematic whole."¹⁸ The coherence theory implements the fundamental idealistic conception that truth—and with it

the reality of which it is characteristic—represents an inclusive and appropriately connected systematic whole.

According to this doctrine, the truth of a statement or proposition is somehow to be located in its 'coherence'. But 'to cohere' is a transitive verb: all coherence must be coherence *with something*. Clearly this will be a matter of coherence with other statements or propositions. As one recent writer puts it: 'According to the coherence theory, to say that a statement is true or false is to say that it coheres or fails to cohere with a system of other statements; that it is a member of a system whose elements are related to each other by ties of logical implication. . . .'¹⁹ The 'coherence' at issue in the coherence theory is a matter of a proposition's relation to other propositions—not its 'coherence' with *reality* or with *the facts of the matter*. For to proceed thus is to attempt a surreptitious change of the coherence theory into a correspondence theory; and accordingly one recent writer quite properly objects that 'Any attempt to change the meaning of "coherence" from coherence with other statements to coherence with fact (or reality of experience) is to abandon the theory.'²⁰

Coherence is thus a feature that propositions cannot have in isolation but only in *groups* containing several—i.e. at least two—propositions. Just wherein does this feature lie? Coherentists have standardly regarded two factors as primary: consistency and connectedness. One recent expositor puts the matter thus:

But they [the Idealist coherence theorists] did in general follow him [F. H. Bradley] in holding that the real was coherent in a double sense, first in being consistent throughout in spite of apparent incongruities, secondly in being interdependent throughout, that is, so ordered that every fact was connected necessarily with others and ultimately with all.²¹

The 'coherence' of a propositional set is accordingly to be understood as requiring not simply (1) the obvious minimum of *consistency*,²² but also (2) the feature of being *con-*

nected in some special way. The next and major task is clearly to clarify what sort of connectedness is to be at issue.

The coherence theorists themselves have not always been too successful in explicating the nature of coherence.²³ Bernard Bosanquet's position is neatly summarized by one recent expositor as follows:

Particularly notorious in Bosanquet's logic was his insistence upon reciprocity. This appears most clearly in his analysis of hypotheticals. The typical hypothetical, for him, is the assertion that if *A* is *B*, *A* is *C*. Now, he argues, if *A*'s being *B* really necessitates its being *C*, this is simply to say that there is some system in which *A*, *B*, *C* cohere. Since coherence is symmetrical it will follow that *A*'s being *C* must also necessitate *A*'s being *B*. This conclusion, of course, cuts directly across the traditional view that hypothetical assertions are irreversible. But it is naturally connected both with the coherence theory of truth and with the Lotzean presumption that every proposition expresses an identity. Bosanquet admits that 'if he is drowned, he is dead', for example, does not seem to affirm reciprocal connexions. [But he insists that we must treat this as shorthand for 'if he is drowned, he is dead by drowning'.] Only by means of such an interpretation, he argues, can we satisfy logic's demand for coherence. All 'giving of grounds', in fact, is reciprocal—'it is only because the "grounds" alleged in everyday life are burdened with irrelevant matter or confused with causation in time', Bosanquet writes, 'that we consider the hypothetical judgment to be in its nature not reversible'. [See his 'Cause and Ground', *Journal of Philosophy* (1910).]²⁴

The point of reciprocity-coherence is this: that if we have, seemingly independently, a coherent group of propositions *A*, *B*, *C*, then what we *actually* have is

1. *A*-in-the-context-of-*B*-and-*C*
2. *B*-in-the-context-of-*A*-and-*C*
3. *C*-in-the-context-of-*A*-and-*B*

The only really coherent statement—and the only really true one—is one that carries its context implicitly along with itself, and so, in effect, is one that affirms everything else that is true. Fully coherent statements—and

so fully true statements—are equivalent because they all assert *all* the relevant facts, and this accounts for the reciprocal equivalences at issue.²⁵ Bosanquet's contention thus effectively justifies his reciprocity thesis, but does so only at the price of accepting two absurdities: (1) that only those declarations are *genuinely* true that state not merely 'nothing but the truth' but actually state 'the *whole* truth',²⁶ and (2) that only those propositional sets are fully coherent each of whose members entails all the rest—and so all of whose members are actually equivalent and thus completely redundant with the others. Strange though it may seem, this second thesis represents a doctrine widely espoused among the idealists. 'Fully coherent knowledge', Brand Blanshard tells us, 'would be knowledge in which every judgment entailed, and was entailed by, the rest of the system.'²⁷ This conception of coherence as assertive redundancy, and of a coherent system of propositions as one whose members simply repeat the same thing is not a very useful construction of the idea.

In his excellent book *Idealism: A Critical Survey*,²⁸ A. C. Ewing criticizes this Bosanquet-Joachim-Blanshard construction of coherence, arguing along the following lines:

Again, to say that no one proposition in a coherent system could be false if all the other propositions were *true* is not to say that no one could be false without all the other propositions being *false*. It is true that, given a really coherent system of propositions such as that which constitutes arithmetic, we could by a process of correct inference pass from the falsity of any one proposition in the system to the falsity of any other. Using \neq to represent 'is not equal to', we could if we assumed that $7 + 5 \neq 12$ infer, e.g. multiplying by 20, that $140 + 100 \neq 240$, or, subtracting 6 from both, that $1 - 1 \neq 0$, and could by similar processes reach conclusions contradicting the true result of every arithmetical operation; but this, carried to the extreme, would be a self-contradictory procedure, since we can only prove from this premiss that any accepted proposition in arithmetic is false by assuming as true another accepted proposition of arithmetic, e.g. $7 \times 20 = 140$, and so we could only infer from this premiss that all other accepted arithmetical propositions were

false by assuming that they were all true. Similarly, I suppose, with any other coherent system of propositions. So we cannot argue that one of the coherent propositions could not be false without their being all false, but only that it could not be false without some of them being so. Thus we need not, as far as I can see, accept coherence in the sense defined by Professor Joachim. . . .²⁹

As long as the propositions of a coherent system are not merely redundant with one another, they cannot stand and fall together in the lock-step fashion envisioned by the coherentists whom Ewing is criticizing.

Ewing himself explicates the connectedness-coherence of a set of propositions in the following terms:

A set of (two or more) propositions is coherent if

- (i) 'Any one proposition in the set follows with logical necessity if all the other propositions in the set are true' (p. 229)

and moreover

- (ii) 'No set of propositions within the whole set is logically independent of all propositions in the remainder of the set' (pp. 229–30)³⁰

According to these stipulations, a propositional set S (with two or more members) is coherent if:

- (i) For every $P \in S$, P is always derivable from the remaining S -elements:

If $P \in S$, then $S - \{P\} \vdash P$

- (ii) There is no proper subset S' of S such that every $P \in S'$ can be derived from $S' - \{P\}$ —that is, can be derived from S -elements without using elements outside of S' .³¹

Or equivalently—once (i) is given:

Every proper subset S' of S is such that there is some $P \in S'$ for whose derivation from $S - \{P\}$ some element of $S - S'$ is required.³²

Condition (ii) can be reformulated somewhat more simply as:

- (ii') There is no proper subset of S that fulfills condition (i).

This reformulation shows that 'coherence' in the sense at issue calls for a certain completeness or better *saturation*. The addition of *any* proposition whatever to a coherent propositional set immediately renders it incoherent.

With the reformulation at issue, it becomes quite clear that conditions (i) and (ii) do not entail the consistency of the set at issue: the set $\{p \ \& \ \sim p, \ \sim p \ \& \ p\}$ conforms to both (i) and (ii). One would certainly want to add the condition

- (iii) The set S is consistent.

Let p, q, r be independent propositions. Requirement (i) suffices to block not only $\{p, q, r\}$ as a coherent set, but also $\{p \ \& \ q, q, r \ \& \ p\}$ —since $r \ \& \ p$ is not derivable from the remaining elements. However, the set $\{p \ \& \ q, q \ \& \ r, r \ \& \ p\}$ does qualify under the first criterion—each of its elements is derivable from the rest. These examples show that this first condition amounts to a *requirement of (inferential) redundancy*: given *all* the others, any element can be dropped without any loss in inferential content.

The inferential redundancy requirement assures a certain *minimal* connectedness among the elements of a coherent set. The aim of stipulation (ii) is, as Ewing explains (op. cit., p. 229), to assure a yet greater degree of connection. Let A, B, C be three propositions any two of which yield the third as deductive consequence. And let D, E, F be another such set—but wholly independent of A, B, C . Then $S = \{A, B, C, D, E, F\}$ satisfies requirement (i), but is not fully 'coherent' (now = connected) because it falls into two logically disjoint parts. Stipulation (ii) is designed to block this case. This condition might be called *the requirement of (deductive) interlinkage*. Note that it follows from condition (ii) that a coherent set S cannot contain any two equivalent propositions A and B . If there were such propositions, then the set $S' = \{A, B\}$ would lead to a violation of (ii). Coherent sets must be redundant, but not too redundant.

We thus see that these two requirements

amount to the following two more generically formulated requirements:

- (1) If S is a coherent set, then if all-but-one of the S -elements are to be classed as true, then the truth of the remaining element is thereby determined and *all* must be classed as true.
- (2) If S is a coherent set, then there is no subset S' of S all of whose elements can be classed as false without the presence of falsity among the *other* S -elements (outside S') thereby being necessitated.

Together, these requirements assure that a coherent set of propositions forms an interrelation-family in point of truth status. With any such set, a specification of the truth status of certain elements must have repercussions for the truth-status of others.

One serious drawback of this definition is that a coherent set can always be made incoherent through the addition of nothing more than its own logical consequences. Thus suppose that the set

$$S = \{P_1, P_2, \dots, P_n\}$$

is coherent, and consider

$$S^+ = \{P_1, P_2, \dots, P_n, P_1 \& P_2 \& \dots \& P_n\}.$$

S^+ —which simply adds to S one of its logical consequences—is not coherent, since it violates condition (ii). For now there is (by the hypothesized coherence of S) no proposition P within the subset S of S^+ for whose derivation from S^+ some element of $S^+ - S = \{P_1 \& P_2 \& \dots \& P_n\}$ is needed. Thus the indicated procedure has destroyed the coherence initially present, and yet done so simply by making a coherent set 'yet more complete'.

Ewing's definition of 'coherence' has other serious shortcomings from the aspect of a coherence theory of truth. Such a theory must provide *some* basis for two implication-claims:

- I. If the members of a set of propositions are true then they are coherent.

- II. If the members of a set of propositions are coherent then they are true.

Now thesis I is, or rather can be, accommodated to the given concept of coherence, but, alas, in such a way as to trivialize the issue.

Let us assume—to face the 'worst' prospect—a set S of *entirely* independent propositions P_1, P_2, \dots, P_n . Consider now the set

$$S^+ = \{P_1, P_2, \dots, P_n, P_1 \& P_2 \& \dots \& P_n\}.$$

Clearly (1) S^+ will have no proper subset *each* of whose elements can be derived from all the rest, although (2) S^+ is such that each of its own elements can be derived from the rest. It is thus readily verified that S^+ is a coherent set in the sense of the definition. And yet in forming S^+ from the incoherent set S we have done no more than to add to S one of its own logical consequences. Accordingly, *any* group of (contingent) propositions—even completely independent ones—can be presented as a coherent set.

But the still more serious difficulty lies with thesis II. Given a set of propositions that is *coherent* in the sense of a definition like that of Bosanquet or Ewing we are entitled to make claims solely about the hypothetical truth-relations that obtain in the set. We can only make claims of the form: 'If such-and-such elements are true (false) then these-and-those elements are true (false).' That is, we have articulated coherence solely with regard to the *strictly internal relationships of implication that obtain within S*. It is problematic, to say the least, to show that a relationship obtains between *this* feature of S -elements and their actual truth status.

Moreover, there will be sets that are internally 'coherent' in the sense of the definition, and yet include externally incompatible elements. The following pair afford an example:

$$S_1 = \{p, q, p \& q\}$$

$$S_2 = \{\sim p, r, \sim p \& r\}$$

If—in the manner of thesis II—the step from mere coherence as such to truth could be taken, this would lead to the paradoxical result that a proposition and its contradictory would in some cases both count as true. It thus appears that Ewingesque coherence, of and by itself, cannot be enough to establish any linkage with truth.

5. THE STRATEGY OF COHERENCE

A coherence theory of truth may be seen in an essentially regulative role governing the considerations relating to the classification of empirical propositions as true, rather than claiming to present the *constitutive* essence of truth as such. In this regulative guise the central thesis of the theory is to be articulated in terms somewhat as follows:

For beings such as men, whose equipment for the acquisition and processing of data is imperfect, the truth is in general not the starting-point of inquiry but its terminus. To begin with, all that we generally have is a body of *prima facie* truths, i.e., propositions that qualify as potential—perhaps even as promising—*candidates* for truths. The epistemic realities being as they are, these candidate-truths will, in general, form a mutually inconsistent set, and so exclude one another so as to destroy the prospects of their being accorded *in toto* recognition as truths pure and simple. We are accordingly well advised to endorse those as truths that best ‘cohere’ with the others so as to ‘make the most’ of the data as a whole. Coherence thus becomes the critical *test* of the qualifications of truth-candidates for being classed as genuine truths.

In accordance with this line of thought our problem may be structured as follows. We begin with a set

$$S = \{P_1, P_2, P_3, \dots\}$$

of suitably ‘given’ propositions—that is, of *data*. These data are *not* given as true (then our criteriological problem would be solved), but rather given merely as *truth-candidates*—and in general competing (i.e. mutually inconsistent) ones. The problem to

which the coherence theory addresses itself is to bring order into *S* by separating the sheep from the goats, distinguishing what qualifies as true from what does not. A truth-candidate comes to qualify for acceptance as a truth through its consistency with as much as possible from among the rest of the data. The criterion thus assumes an entirely *inward* orientation: it does not seek to compare the truth-candidate directly with other facts *outside* the given epistemic context; rather, having gathered as much information (and this, alas, will include misinformation) about the facts as is possible, it seeks to sift the true from the false *within* this body. The situation arising here resembles the solving of a jigsaw puzzle with superfluous pieces that cannot possibly be fitted into the orderly picture in whose construction the ‘correct solution’ lies.

The conformity of its approach with the general pattern of the process of deriving significant and consistent results from an inconsistent body of information is a key feature of the coherence theory of truth. To implement the idea of coherence as a pivotal criterion of truth is to face the question of the inferences appropriately to be drawn from an inconsistent set of premisses. The initial mass of inconsistent information is the data for applying the concept of coherence as a criterion of truth, and its product is a consistent system of acceptable truths. On this approach, the coherence theory of truth views the problem of truth-determination as a matter of bringing order into a chaos comprised of initial data mingling secure evidence with shaky hypotheses. It sees the problem in transformational terms: incoherence into coherence, disorder into system, candidate-truths into qualified truths. From this perspective, the key task comes to be seen as that of devising the tactical means by which this strategy can be implemented.

NOTES

1. The doctrinal indeterminacy of the traditional coherence theory has often been stressed. Cf. A. C. Ewing, *Idealism: A Critical Survey* (London, 1934), p. 195.
2. F. H. Bradley, *Essays on Truth and Reality* (Oxford, 1914), p. 325. A. C. Ewing, a most sympathetic exposi-

tor of idealist thought, stresses 'the impossibility of dispensing with the relation described, perhaps very inadequately, as correspondence if we are to give any account of truth that applies to the truths known by us. The strength of the correspondence theory lies in the fact that a judgment is at once different from and yet dependent for its correctness on the object judged about. Whatever metaphysical view we adopt as to the ultimate nature of knowledge and reality we are forced to admit this fact . . .' (Ewing, *op. cit.*, p. 201). For a fuller discussion of Bradley's position in the quoted passage see pp. 201–2 of Ewing's book.

3. Ewing, *op. cit.*, p. 198. Ewing takes great pains to show that an idealist—even one strongly inclined to a coherentist approach—need not reject the correspondence theory of truth: 'It is true that, when we know, we know real facts, not merely ideas or propositions, but there is no difficulty in reconciling this with the other circumstance emphasized by the correspondence theory, namely that when we do know anything there is a special relation between the fact known and a certain factor in our cognitive process, which relation differentiates the latter from error. Whatever else it is, knowing must involve bringing our minds into accordance with reality, and this is also the case with right opinion. It is this that the correspondence theory rightly emphasises as the essential purpose of cognition' (*ibid.*, p. 204).

4. On the Continent there were rather more idealists, Carlo Gentile perhaps the most prominent among them. In his review of Blanshard's *The Nature of Thought* (London, 1939), published in *Mind* in 1944 (53, 75–85), Ewing wrote: 'It is a generation since any such sympathetic large-scale defence of what, for want of a better name, I shall call idealistic epistemology has been published' (pp. 75–6).

5. Some idealists had already given up the coherence theory. J. M. E. McTaggart, one of the central figures of later British idealism, rejected the coherence in favour of the correspondence theory of truth.

6. 'Die physikalische Sprache als Universalsprache der Wissenschaft', *Erkenntnis*, 2 (1931/2), 432–65. Tr. by M. Black in R. Carnap, *The Unity of Science* (London, 1934).

7. Cf. Carnap, *op. cit.*, pp. 439 ff. (*Unity of Science*, pp. 47 ff.).

8. 'Protokollsätze', *Erkenntnis*, 3 (1932/3). Tr. by F. Schick as 'Protocol Sentences' in A. J. Ayer (ed.), *Logical Positivism* (Glencoe, Ill., 1959), pp. 201–4.

9. *Ibid.*, p. 203.

10. Neurath's position was discussed critically by M. Schlick in a paper 'Über das Fundament der Erkenntnis', *Erkenntnis*, 4 (1933/4), 79 ff. Neurath answered Schlick in 'Radikaler Physikalismus und "wirkliche Welt"', *ibid.*, 346 ff. Carnap himself was won over to Neurath's position. For a detailed survey of the entire controversy see C. G. Hempel, 'On the Logical Positivists' Theory of Truth', *Analysis*, 2 (1935), 49–59. The background of the controversy is sketched in J. Joergensen, *The Development of Logical Empiricism* (Chicago, Ill., 1951; *Encyclopedia of Unified Science*, vol. 2, no. 9). A retrospective analysis from his own doctrinal

standpoint is given in K. R. Popper's *Conjectures and Refutations* (London, 1963), pp. 267–9. See also R. W. Ashby, 'Basic Statements' in P. Edwards (ed.), *Encyclopedia of Philosophy*, vol. 1 (New York, 1968), pp. 251–4.

11. H. H. Joachim, *Logical Studies* (London, 1906), p. 80.

12. 'Protokollsätze', *op. cit.*, p. 207. And again, 'Ignoring all meaningless statements, the unified science proper to a given historical period proceeds from proposition to proposition, blending them into a self-consistent system which is an instrument for successful prediction, and, consequently, for life' ('Sociology and Physicalism', *op. cit.*, p. 286).

13. *Foundations of the Social Sciences* (Chicago, Ill., 1944), p. 13.

14. B. Blanshard, *The Nature of Thought* (2 vols., London, 1939); see esp. ch. 25–7 of vol II.

15. B. Blanshard, *op. cit.*, p. 268; cf. B. Russell, *The Problems of Philosophy* (London, 1912), p. 191.

16. B. Blanshard, *op. cit.*, p. 260.

17. Blanshard sets out the argument in the following terms: 'As we saw at the beginning of the chapter, there have been some highly reputable philosophers who have held that the answer to "What is the test of truth?" is "Coherence", while the answer to "What is the nature or meaning of truth?" is "Correspondence". These questions are plainly distinct. Nor does there seem to be any direct path from the acceptance of coherence as the test of truth to its acceptance as the nature of truth. Nevertheless there is an indirect path. If we accept coherence as our test, we must use it everywhere. We must therefore use it to test the suggestion that truth is other than coherence. But if we do, we shall find that we must reject the suggestion as leading to incoherence. Suppose that, accepting coherence as the test, one rejects it as the nature of truth in favour of some alternative; and let us assume, for example, that this alternative is correspondence. This, we have said, is incoherent, one cannot intelligibly hold either that it is tested by coherence or that there is any dependable test at all. Consider the first point. Suppose that we construe experience into the most coherent picture possible. . . . Would the mere fact that such elements as there are coherently arranged prove that anything precisely corresponding to them exists "out there"? I cannot see that it would, even if we knew that the two arrangements had closely corresponding patterns. . . . It is therefore impossible to argue from a high degree of coherence within experience to its correspondence in the same degree with anything outside. And this difficulty is typical. If you place the nature of truth in one sort of character and its test in something quite different, you are pretty certain, sooner or later, to find the two falling apart. In the end, the only test of truth that is not misleading is the special nature or character that is itself constitutive of truth' (*ibid.*, pp. 267–8).

18. F. H. Bradley, *op. cit.*, p. 223.

19. A. R. White, art. 'Coherence Theory of Truth' in P. Edwards (ed.), *The Encyclopedia of Philosophy*, vol. 2 (New York, 1967), pp. 130–3 (see p. 130).

20. *Ibid.*, pp. 132–3.

21. B. Blanshard, *Reason and Analysis* (La Salle, Ill., 1962).

22. The consistency of the totality of truths is, of course, an essential aspect of truth from any reasonable point of view: here the coherentist is not in any special position. The following remarks of A. Tarski's are illuminating in this regard: 'I believe everybody agrees that one of the reasons which may compel us to reject an empirical theory is the proof of its inconsistency: a theory becomes untenable if we succeed in deriving from it two contradictory sentences. Now we can ask what are the usual motives for rejecting a theory on such grounds. Persons who are acquainted with modern logic are inclined to answer this question in the following way: A well-known logical law shows that a theory which enables us to derive two contradictory sentences enables us also to derive every sentence; therefore, such a theory is trivial and deprived of any scientific interest.'

'I have some doubts whether this answer contains an adequate analysis of the situation. I think that people who do not know modern logic are as little inclined to accept an inconsistent theory as those who are thoroughly familiar with it; and probably this applies even to those who regard (as some still do) the logical law on which the argument is based as a highly controversial issue, and almost as a paradox. I do not think that our attitude toward an inconsistent theory would change even if we decided for some reasons to weaken our system of logic so as to deprive ourselves of the possibility of deriving every sentence from any two contradictory sentences.'

'It seems to me that the real reason of our attitude is a different one: We know (if only intuitively) that an inconsistent theory must contain false sentences; and we are not inclined to regard as acceptable any theory which has been shown to contain such sentences' (*The Semantic Conception of Truth* in H. Feigl and W. Sellars (eds.), *Readings in Philosophical Analysis* [New York, 1949], pp. 52-84 (see p. 77)). [Pp. 186-98 in this volume. Ed.]

23. Thus H. H. Price says flatly that 'believers in the Coherence Theory do not themselves define this term' [*Perception* (New York, 1933), p. 183]. This judgment, as we shall see, is much too harsh, though the case would be otherwise if 'satisfactorily' were appended to Price's sentence.

24. J. Passmore, *A Hundred Years of Philosophy* (England, 1966), pp. 167-78.

25. Compare H. H. Joachim's thesis that 'a system possesses self-coherence (a) in proportion as every constituent element of it logically involves and is involved by every other; and (b) insofar as the reciprocal implications of the constituent elements, or rather the constituent elements in their reciprocal implications, constitute alone and completely the significance of the system' ('"Absolute" and "Relative" Truth', *Mind*, 14 (1905), 9).

26. To grant the perfectly sound point that 'the whole truth' can never be formulated in any single statement, is not to maintain the paradoxical thesis that something that is wholly true cannot be so encapsulated.

27. *The Nature of Thought*, p. 264. Blanshard goes on to observe: 'It is perhaps in such systems as Euclidean geometry that we get the most perfect examples of coherence that have been constructed. If any proposition were lacking, it could be supplied from the rest; if any were altered, the repercussions would be felt through the length and breadth of the system. Yet even such a system as this falls short of ideal system. Its postulates are unproved; they are independent of each other, in the sense that none of them could be derived from any other or even from all the others together; its clear necessity is brought by an abstractness so extreme as to have left out nearly everything that belongs to the character of actual things. A completely satisfactory system would have none of these defects. No proposition would be arbitrary, every proposition would be entailed by the others jointly and even singly, no proposition would stand outside the system' (ibid., pp. 265-6). (I have omitted Blanshard's text of a footnote citing H. H. Joachim [*Logical Studies* (Oxford, 1948)] as another adherent of this view.)

28. London, 1934.

29. A. C. Ewing, op. cit., pp. 233-4.

30. The motivation for this definition, and in particular of its second clause, is presented by Ewing as follows: 'The easiest way of understanding what coherence means is to consider those cases where the ideal of coherence is admittedly realised or almost realised, though only within a limited sphere. Such cases are provided by the mathematical sciences and perhaps by certain well-knit theories or bodies of doctrine outside mathematics. What are the characteristics of such sets of propositions? In the first place, in so far as they fulfill the coherence ideal, they are so related that any one proposition in the set follows with logical necessity if all the other propositions in the set are true, or, to put it negatively, so that, granted the truth of all the rest, it would be logically impossible for any one of them to be false; and I was first tempted to take this as a definition of coherence. But it is not sufficient without supplementation. For imagine a set of propositions A B C D E F where, writing ent. for entail, we have the relations A + B ent. C, A + C ent. B, B + C ent. A, D + E ent. F, D + F ent. E, E + F ent. D. In such a set every single proposition would be entailed by the remainder, but unless there were some further connection between A B C on the one hand and D E F on the other, it would certainly fall short of the demands of the coherence theory, for it is universally agreed that the latter is incompatible with any admission of the possibility that there might be several different systems of true propositions altogether logically independent of each other. We must therefore enlarge our definition ...' (ibid., p. 229).

31. Note that this condition precludes a coherent set from including logically necessary elements, i.e. propositions derivable even when there are no premisses whatsoever.

32. Actually, condition (ii) as given by Ewing differs somewhat from this formulation, but its effect is the same.