

AN ALLEGED CASE OF FACTUAL *A PRIORI*

“Nothing can be both red and green all over at the same time”. This and similar statements of the incompatibility of different determinate forms of the same determinable property seem to offer a very welcome evidence to the advocates of synthetic *a priori* propositions or of “natural necessity”. The statement “Nothing can be both red and green all over at the same time” seems certainly *a priori*; for it cannot be falsified. A person who begins to look for an empirical refutation of it would be declared to have failed to understand the meaning of the statement. It is therefore certainly not an induction from experience. On the other hand, it does not seem amenable to the usual treatment of *a priori* statements, viz. of calling them analytic or tautological, for it cannot be transformed into a logical truth by means of definitions of the terms included in it. Neither red nor green can be analysed and so they cannot be defined nonostensively. This has given ground to philosophers for saying that here at any rate is a statement which is synthetic *a priori*, or one which states a natural (as opposed to *logical*) necessity.

2. Why are red and green incompatible, whereas red and round or red and sweet are not? Is the incompatibility of the first pair or the compossibility of the other two a matter merely of linguistic conventions or are they grounded in fact? If the latter, does it not appear as if there were something like natural or factual necessity besides logical necessity?

3. The compossibility of red and round, a red and sweet, is easily explained as verified by experience. One example of a thing which is both red and round is enough to prove that they are compossible. After all that statement of compossibility of red and round asserts is the particular proposition that at least one thing is both red and round. But the matter is different with regard to the statement of incompatibility for it is a universal statement, and one which asserts no mere contingent universality of an inductive generalization, but the necessary universality which cannot be falsified by experience. The questions that arise in this connection are : (i) Why can't such a proposition be falsified? and (ii) How do we come to know such propositions? The pro-

posed answers to these questions are (i) that it is because of natural necessity and (ii) that this necessity is known by means of an intellectual intuition.

4. Unfortunately the whole conception of natural necessity is very obscure. It is certainly very difficult, not to say impossible to understand what can be meant by a necessity of fact, and even more difficult to understand how it can be known. Facts simply are. The modal distinctions in statements point out modes of thought, not modes of being. For if we were to suppose that modality is a feature of the world, we should have to admit the existence of possible facts, necessary facts and even impossible facts. I suggest that all facts are without exception contingent. They cannot be necessary and *a fortiori* they cannot be impossible. This I shall now try to show.

5. "Nothing can be both red and green all over at the same time" is undoubtedly true. This suggests that there is a fact corresponding to it. But the statement is negative. Must we then say that it asserts the existence of a negative fact? But that is not the end of the matter. For the statement is also necessary : it states something to be *impossible*. Are we to say that there are impossible facts in the universe? But surely this would be a contradiction in terms; for it would be to say that something impossible exists. This suggests the reflection whether facts *can* be negative or necessary. Since impossibility is a kind of necessity, if we must conclude there is no impossibility in the universe, it would seem to follow that necessity cannot be a factual matter. This suggests that necessity must be conceptual. Similar considerations seem to suggest that negation also cannot be in nature, but must be only in our mind. "Gold is yellow" states a fact; but does "Gold is not white" state a negative fact actually existing in nature? Can we say that "not being white" is a quality which belongs to gold? It would certainly be very odd to say that there are negative qualities. "There is a book on the table" states a fact which may easily exist in nature. But what about the statement "There is nothing on the table?" Must we say that "nothing" refers to a fact? Considerations like these suggest that the conception of a negative fact is, to say the least, dubious. The fact of the matter seems to be that negative statements are all second-order statements which are replies to implicit questions. When looking at a lump of salt we say

"This is not sugar" what has happened is that we expected it to be sugar and then discovered it to be something else. It is as if we asked ourselves: Is this sugar? and replied that it was not. A question is suggested to us either by others or by our own experience and a negative statement is the reply that something lacks the character we supposed it to have. A negative statement therefore is the rejection of a proposed description because the latter is found to conflict with the fact. Negation therefore is only in our thought, and not part of the universe.

6. But surely negation cannot be purely mental. It will be said that a negative statement may be both true and false and when true it must be because it agrees with some fact. If there is difference in the world, there must be negation too. For the difference between two things is their mutual negation. "A cat is not a dog." Surely this proposition is true because a dog is *really* different from a cat. Difference at any rate must be in the world. Our thought cannot make things different unless they are themselves so. And if difference is granted to be a part of the world, so must negation be, for difference is simply mutual negation or exclusion of two things.

7. I wish to argue here that the conclusion does not follow. Difference must certainly be granted to be part of the world; but it may be possible to hold that negation is not. Difference cannot be *known* without the use of negation, but there is no reason to suppose that difference cannot *be* without being known. Unless we grant this, we shall have to hold that *we* make facts different. The *concept* of difference cannot be understood or explicated without bringing in negation. But this does not mean that difference itself is impossible without things being compared and found to be mutually exclusive. A complete description of the world would be entirely in terms of what things are. A cat mews. A dog barks. A cow has hoofs, a cat paws. We say, "A cat has no hoofs"; but this is only because we start with the expectation of finding hoofs on a cat's legs and our expectation is belied. So all that the statement really asserts is that our expectation has not been fulfilled. Negation thus means denial, rejection of a proposal or an expectation. In the non-mental world there is no negation. (The conclusion will of course follow from this that the correspondence notion of truth does not apply to negative statements in a straight-forward fashion.

No doubt the negative statement "A cat has no horns" is true because it has basis in fact. But the agreement or correspondence cannot be a simple affair. Facts are all positive.)

8. If this conclusion is granted, the case for the factual necessity of certain negative propositions loses its plausibility. But this makes it imperative for us to explain the necessity of the statement about the incompatibility of colours. We have seen that their necessity is not logical. It is not logical because it does not follow from the rules of syntax governing the use of logical words like "nothing", "both", "and" and so on. Its necessity seems to proceed from the semantic or designatory rules which govern the use of descriptive words like "red" and "green". "Nothing can be both red and not-red" is logically true, for it is true by virtue of the meanings of the *logical* words, "nothing" "both...and" and "not". Not so the proposition "Nothing can be both red and green". This proposition is true because the words "red" and "green" designate the qualities they do designate. In short its truth proceeds from semantic rules governing the use of certain *descriptive* words. And it is this which makes the statement under discussion so very puzzling, for the linguistic or the conventionalistic theory of *a priori* propositions which reduces the latter to tautologies supposes their tautologous character to result from syntactical rules governing the use of *logical* words. How then are we to explain the necessity of the statement under discussion?

9. On the face of it the statement "Nothing can be both red and green all over at the same time" does not seem to be analytic. It would be analytic in a straightforward fashion if "red" included in its meaning "not-green" and "green" included in its meaning "not-red". But it is obvious that such is not the case. "Red" and "green" are names of simple qualities which are not susceptible of analysis and therefore neither could contain in its meaning the negative implication required. But I think that if we look at the matter closely we shall discover that even this statement is analytic or tautological, though its analyticity is not obvious. And this may be shown in the following way.

10. If some body said that a thing was both red and green at the same time, we should without stopping to look at that thing dismiss him by saying that he did not understand the meaning of colour-words. Doesn't this suggest that the incompati-

bility of colours depends on the way we use colour-words? The meaning of a word is solely determined by the rules which govern its use; and whatever follows from these rules, follows from the mere meaning of the word, and is therefore purely analytic, tautological, formal. The way colour-words are used, we just haven't a usage for the phrase "red and green". To say of a thing that its surface is covered with red colour and that the same surface is also at the same time covered with green colour is to utter a nonsensical expression. It is nonsensical not because we have never seen such a thing, nor because we cannot imagine such a thing (though both of these are true), but primarily because the rules governing the use of colour-words forbid such a use. Those rules imply that where one colour is another cannot be.

11. How this comes about is as follows. We learn to use colour-words in the process of describing the variety of the world. They are employed to pick out the difference that exist in the universe around us. If there were no differences of colour in the world, different colour-words would not be required. It is obvious that we cannot learn the use of one colour-word only to refer to the quality that is normally referred to by it. To learn the meaning of one colour-word, say "red", it is necessary also to learn the meaning of at least another colour-word. It is to learn that where one colour-word is applicable another is not applicable. A person who described a colour both as red and green would not be said to have learnt the meaning of either word. It is thus clear that to be able to use the word 'red' significantly about a colour includes the ability to withhold the use of any other colour-word in reference to that colour. Thus though to call something both red and green is not a formal contradiction, nevertheless the way those colour-words are used a contradiction is clearly involved and therefore the statement, "Nothing can be both red and green all over at the same time" turns out to be analytic and tautological like *a priori* statements of logic and mathematics.

12. But is all this merely a matter of words? Has it nothing to do with the nature of things? Rather is it not the case that the behaviour of colour-words mirrors the behaviour of colours? Surely it is not mere arbitrary convention that two colour-words are not applicable to the same thing. And if so, must we not say

that the necessity of the statement is really grounded in fact and is therefore a factual necessity ?

The reply is that the convention which forbids the use of two colour-words to describe the same colour is no doubt based on the differences of colours as they actually exist in nature. No doubt one colour is different from another, and what is red is not green. But this can give rise at best to the universal *assertoric* proposition that nothing *is* red and green at the same time, and this proposition would have to be an induction from experience and therefore contingent. The question at issue concerns the *necessity* of the statement "Nothing *can* be both red and green"; and this necessity cannot be the result of a mere lack of evidence of the co-existence of the two colours in our experience. We see around us a world in which two colours nowhere co-exist; what we want to know is how we get from this to the necessary knowledge that they *cannot* coexist. The difficulties in the way of supposing necessity to be a part of the world I have tried to indicate in the first half of this paper; and therefore we are left with the alternative defended in the second half, viz. that all necessity must be conceptual, proceeding from the rules governing the use of words.

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