

DISJUNCTION, FACTUAL REFERENCE AND HESITATION

One of the fundamental questions regarding disjunction is : Does a disjunction indicate any fact or express a state of hesitation or perplexity ?

The present paper is an attempt to show that a disjunction does not indicate any fact but expresses a state of hesitation, and that hesitation is not the same as uncertainty or ignorance though in both cases the judgment is disjunctive.

A disjunctive judgment is said to involve a categorical assertion. Idealist logicians like Bradley and Bosanquet point out that the categorical assertion in the judgment 'the railway signal is either red or green' has to be expressed as 'the signal possesses some colour'. But the point is that the categorical assertion is not actually contained in disjunction because the element of disjunction is confined only to 'either red or green' and in this there cannot be anything categorical. If it were so, then the facts must be said to possess 'either-or' which is absurd.

Russell, in developing the point, considers the disjunction : (a) 'Oxford is along the right-hand road or Oxford is along the left-hand road'. Here if we suppose that in fact Oxford is to the right then it is a fact of geography. Similarly it refers to a fact if we suppose that in fact it is to the left. But 'right or left' does not refer to any fact of geography or does not indicate any third possible location.

If 'p or q' is true, it is true not because 'or' refers to any fact; it is true because of the truth of p or it is true because of the truth of q. Hence 'or' does not refer to primary language but to propositions or secondary language. So Russell says, "or lives in the world of propositions, and cannot form part of any language in which, as in the primary language, every word is directly related to an object, or to a set of objects, which is its meaning."¹

It is clear that 'or' says nothing about the world. If we assert 'p or q' then it does not say anything about the world. "Thus when some one asserts 'p or q', neither p nor q can be taken as

saying something about the world, as would be the case if we asserted one of the alternatives; we have to consider the state of the person making the assertion. When we assert *p*, we are in a certain state; when we assert *q*, we are in a certain other state; when we assert *p* or *q* we are in a state which is derivative from these two previous states, and we express this state, not something about the world. Our state is called "true" if *p* is true, and also if *q* is true, but not otherwise; but this is a new definition".²

But Russell goes further and speaks of a possible opposite answer. It may happen sometimes that a single word is logically equivalent to a disjunction in the sense that for certain purposes propositions containing a single word or a generic word are equivalent to propositions containing 'either-or'. Russell takes the propositions :

(a) Mrs. So-and-so had a child.

(b) Mrs. So-and-so had either a boy or a girl.

If someone is interested to know whether Mrs. So-and-so dies childless to inherit her money, then the first proposition will serve his purpose no less than the second. So if he knows the first proposition, he knows the second because the former is equivalent to the second in so far as it serves the same purpose. Russell points out that "for certain purposes, propositions containing the word "child" are equivalent to the same propositions with the words "boy or girl" substituted for "child"; but for certain other purposes the equivalence fails. If I am told "Mrs. So-and-so has had a child", I can infer that she has had a boy or a girl. But if I then want to know whether she has had a boy or a girl, I do not want to know whether she has had a child, since I know this already".³

Here Russell has properly understood the necessity of separating psychology from logic. He argues that in our daily conversation "...we use the word 'or', we do so, as a rule, because we are in doubt and wish to decide an alternative. If we have no wish to decide the alternative, we shall be content with a generic word covering both possibilities. If you are to inherit Mrs. So-and-so's money provided she dies childless, you will be interested in the question whether she has had a child, but only politeness will impel you to ask whether it is a boy or a girl.

And clearly you know, in some sense, something about the world when you know a child has been born, even though you do not know its sex".⁴

The main point of Russell, however, boils down to the following problem: if 'A' and 'B' are two predicates, 'A' is logically equivalent to "A-and-B" or "A-and-not B". In so far as logic is concerned any predicate can be replaced by a disjunction. But from the psychological point of view the picture is different. In this connection Russell says that "a predicate is disjunctive if we feel a desire to decide alternatives which it leaves open; if not, it is not. But this is not quite adequate. The alternatives must be such as the predicate itself suggests, not irrelevant possibilities. Thus "boy" is not to be considered disjunctive because it leaves open the question "dark or fair"? Thus a predicate is only disjunctive if it suggests a question and whether it does so or not depends solely upon the interests of the person concerned".⁵

In elucidating the psychological approach of the term 'or'. Russell clearly points out that 'or' only 'expresses' but does not 'indicate'. It is the outcome of a state of mind which, in his opinion, be termed 'hesitation'. Russell makes a distinction between the word 'or' and 'hot', 'cat' etc. He says that the latter words "are needed in order to indicate as well as in order to express, whereas the word "or" is needed only in order to express. It is needed to express hesitation. Hesitation may be observed in animals, but in them (one supposes) it does not find verbal expression. Human beings, seeking to express it, have invented the word "or".

The logician defines "p or q" by means of the conception of "truth", and is thus able to short-circuit the route through the belief expressed by "p or q". For our purposes, this short-circuit is not available. We wish to know what are the occurrences that make the word "or" useful. These occurrences are not to be sought in the facts that verify or falsify beliefs, which have no disjunctive quality, but are what they are. The only occurrences that demand the word "or" are subjective, and are in fact hesitations. In order to express a hesitation in words, we need "or" or some equivalent word".⁶

Russell holds that hesitation results from the conflict of two

motor impulses and may be expressed by a disjunction. If only one of the impulses exists, there can be no hesitation and it can be expressed in an assertion. But if both the conflicting impulses exist then there can be no assertion; on the other hand this conflict leads to a hesitation and may be expressed in a disjunctive form like 'this or that'. Russell takes such a following example.

If someone sees an aeroplane, then in ordinary circumstances he may assert that 'there is an aeroplane'. But if he is in charge of an anti-aircraft gun, he is to decide what sort of aeroplane it is before discharging his action. If he is in doubt he will say "*that aeroplane is either British or German*". So he will suspend all his action until he has decided the alternative. This, according to Russell, is a case of hesitation. Hence hesitation expresses a state of mind and not a state of fact, and may be expressed in a disjunction. Russell would go further and say that disjunction always expresses some hesitation and never facts.

It may further be pointed out that there may be a judgment which appears to be simple assertion, but on analysis, Russell maintains, it is found to be similar to a disjunction. He considers the judgment (a) '*The book is somewhere in the room*'. Usually it seems to be a judgment of perception because there is no 'either-or' in it. But Russell points out that this is not actually a judgment of perception because we cannot perceive 'somewhere'. We perceive the book in 'this place' of the room when we are in a certain state of mind. Or we perceive it in 'that place' when we are in another state of mind. When we judge (a) '*The book is somewhere in the room*', we are in that state of mind which contains what all these 'have in common, together with perplexity'. So the judgment (a) '*The book is somewhere in the room*' leads to hesitation or perplexity and may be expressed in a disjunction like (a) '*The book is either in this place or in that place of the room*'.

Russell would thus maintain that a disjunction does not express a fact; it expresses only a certain state of our mind, a point which, though realised by Bradley, could not be fully developed by him. There is no 'either-or' in the factual world and this works at the root of every disjunctive judgment. But

the question remains whether 'hesitation' or 'perplexity' can be treated as the same as 'ignorance'. Or whether in some cases disjunction expresses hesitation and in others it expresses our ignorance.

A disjunctive statement, sometimes, may be said to arise out of uncertainty. Thus, if we have uncertainty as to whether A is B, then this uncertainty gives rise to the disjunctive statement (which may be treated as the product of our ignorance) (a) 'A is either B or C' or in general, 'either B or C or D'.

Similarly, if we begin with uncertainty as to whether 'the man goes by this train', we may have the disjunction (b) 'The man goes either by this train or by that train'. This judgment, says Cook Wilson, expresses a state of uncertainty because we are not certain that the man must go either by this train or by that train. In other words, it may be the case that the man goes neither by this train nor by that. But a disjunctive statement like 'A is either B or C', does not always imply an uncertainty. On the other hand, it expresses the necessary differentiation of a universal. For example,

1. 'Lines are either straight or curved or crooked';
2. 'Number is either odd or even';
3. 'Triangles are either right-angled, obtuse-angled or acute-angled'.

In these cases there is no uncertainty because the subject being universal in character possesses all the predicates or characters. Thus, in the first case the character of 'being straight', the character of 'being curved' and the character of 'being crooked' must be predicated of lines. Similarly the character of 'being right-angled', that of 'being obtuse-angled' and that of 'being acute-angled' are predicated of triangles. In the same way oddness and evenness are predicated of number.

Though in the above three cases where the subject is universal in character, there is no uncertainty, yet when we have a disjunction in reference to a particular instance of the universal we have limited uncertainty. For example, (c) 'A triangle is either right-angled or obtuse-angled or acute-angled'. Here we have uncertainty because though a triangle must possess either one of these characters yet we do not know which character

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can be predicated of a particular triangle. But this uncertainty is limited, because we cannot go beyond these predicates or characters. That is, it is not the case that a triangle is neither right-angled, nor obtuse-angled, nor acute-angled.

Following the same line of approach of limited uncertainty Bosanquet maintains that it seems to us that we have uncertainty or ignorance in respect of a disjunction when the subject of disjunction is an individual and not an individuality or system. Thus in 'A triangle is either isosceles or equilateral or scalene' a triangle means any individual triangle and the judgment says that the subject must be one of the alternatives, but we do not know which one. So doubt or uncertainty arises. "But it seems obvious that this uncertainty is purely dramatic or fictitious, and is a mere corollary from the true disjunction, which is 'A three-sided plane figure as such must have all its sides equal, or two only equal, or all unequal'. Or we may take a case where the doubt is real, as often in common life; but here also it is a mere application of or inference from the true disjunction of knowledge. 'Being an Oxford man, he is either a University College man or a Balliol man, or & C'. This judgment, which is a real expression of doubt or ignorance, is based of course on the positive knowledge that the conditions of university life require the student as such (generically) to attach himself to some one of the corporate bodies enumerated in the judgment. With disjunctions of this type we must class the commonest of all expressions of doubt or ignorance. 'He is either angry or jealous'. 'He has either measles or scarlet fever'. These, like the above, differ not in principle but only in perfection from the ideal disjunction".⁷

But Bosanquet maintains that actually there is no doubt or uncertainty in these cases since we know atleast something within which fall the alternatives and which contain the alternatives. We, of course, cannot specify our knowledge. We know the concrete universal which can be predicated of the subject. In the very first example, though we do not know which alternative it is, yet we know that it is a plane figure bounded by three straight lines. It is the concrete universal which is referred to the subject. What Bosanquet calls concrete universal

in the disjunction Bradley calls categorical element. So far as this concrete universal or categorical element is concerned there is no uncertainty or ignorance in a disjunction.

But it has been pointed out by some that ignorance is no intrinsic to the nature of disjunction. Ordinary disjunction may be said to involve ignorance but this is because ignorance is only temporary and may disappear in subsequent stages of experience. This additional information which we may earn in our subsequent experience is not intrinsically connected with the disjunction; and there is no point in saying that in the absence of such additional information disjunction would disappear. Examples may be given from child and animal psychology which are as follows :

“If anything could be said confidently on the psychology of children and animals, examples could be picked up from that domain to substantiate the point when a child or a dog hesitates to approach a stranger it is not unlikely that it keeps confined to disjunction, pure and simple, without any metaphysical faith that reality is above disjunctive indeterminacy. The stranger is either a friend or a foe, and that is the end of the child’s or the dog’s philosophy. It does not proceed further to cogitate that the real must be definite.

Child and Animal Psychology apart, disjunction as such has no need of going beyond indeterminacy. It is not inconceivable that the additional knowledge which would dispel this indeterminacy may be wanting in some particular case. As none of us is omniscient even the most knowing of us may not be cognisant of things beyond the particular indeterminacies met with. Such indeterminacies are frequently arrived at in historical researches and speculations on the ultimate constitution of things. In the absence of decision in such cases it may not be a justified hope that nevertheless a decision will come”.⁸

The problem remains whether ‘hesitation’ is the same as ‘uncertainty’ or ‘ignorance’. It appears that the two phrases do not express exactly the same attitude of mind, though in both the cases our judgment is disjunctive.

A disjunction may be said to express ‘hesitation’ where, in the given case, the possible (exhaustive) alternatives are known

to us, but we are not sure 'which one', even though we are sure that 'some one'. It may be said to express uncertainty, where (1) The man does not (clearly) know the possible alternatives and he is not sure 'which one', but he is sure (very obscurely though) that 'some one', (2) the man does not know the possible alternatives and he is not sure 'which one', nor is he sure that 'some one'.

Thus, if a man knows that an aeroplane in a given situation must be either British or German and cannot be anything else, the disjunction which he expresses as (a) *The plane is either British or German* is a result of 'hesitation' because he knows the alternatives exhaustively, but does not decisively know which one of the alternatives is true of the given aeroplane. But he knows that some one of the two alternatives must be true.

Again if a man does not at all know the possible colours of a signal, the disjunctions which he expresses as (a') *The signal is either red or has any other colour* or (a'') *The signal has some colour* (apparently perceptual but basically disjunctive in Russell's sense) are results of his uncertainty or ignorance. Here the man is not sure that 'some one' is true of the subject. Even though he is sure in some sense, still it is a case of uncertainty because he fails to specify the number of alternatives within which 'some one' falls, because of his lack of knowledge (uncertainty) of the total range of alternatives.

Again, if a man starts with a specific set of alternatives which he takes (illicitly) to be exhaustive, but is not sure 'which one', then the disjunction which he expresses as (b) *The man goes either by this or by that train* will be treated as a result of uncertainty because he is also not sure that 'some one' will be true of the subject. Here the case might be that the disjunction turns out to be false because the man may go neither by this train nor by that train. He may go by a third train or by a bus or by any other car.

Examples (a), (a') and (a'') are cases of true disjunction, whereas example (b) will be a case of false disjunction. All the cases, however, may be broadly grouped under 'hesitation'; but examples (a') and (a'') and (b) will be found to involve an

attitude of mind which is more than 'hesitation', namely 'uncertainty'.

Thus disjunctions never point to any fact. They are always cases of hesitation; in some cases they are found to involve something more than mere hesitation which can be described as uncertainty or ignorance.

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NOTES

1. Russell, B. — An Inquiry into Meaning and Truth, p. 83.
2. *Op. cit.*, p. 85.
3. *Op. cit.*, p. 86.
4. *Op. cit.*, p. 86.
5. *Op. cit.*, p. 86.
6. *Op. cit.*, p. 210.
7. Bosanquet, B.—Logic or The Morphology of Knowledge, Page 325 (Vol. I, 2nd. edition).
8. Bhattacharya, K.,—Alternative Standpoints in Philosophy, p. 160.

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