REFERENCE FAILURE AND TRUTH-VALUE GAPS*

After the publication of Strawson's compromising article "Identifying reference and truth-values"[1] the issue of truth-value gaps seems to have lost the interest of philosophers, and the compromise seems to have been tacitly accepted by both the parties in the controversy. But really the problem is still with us because the consolation which the parties in the dispute derive from Strawson's compromise seems to be false and illusory.

Strawson uses two types of considerations to make the compromise, but without distinguishing them. Both can perhaps be shown to be pragmatic in technical sense, but they are sufficiently far removed from each other to be distinguishable. One of these is found when he points out that both the positions — that propositions like, say, "the present monarch of India is generous", where there is radical reference failure, are neither true nor false, and that such propositions are false — are "reasonable" because they have different (and presumably fairly good) reasons for denying and asserting falsity to such propotitions. Here he unknowingly implies that there are two senses of 'falsity', depending on two different criteria or modes of falsity, and that in one sense attribution of truth-value gaps in cases of radical reference failure is justified, whereas in the other sense the attribution of falsity is justified. Since which and how many concepts of falsity one uses in one's logical system is a question of semantics and logic proper, one may well say that if the abovementioned distinction between the two varieties of falsity can at all be shown to be implied by Strawson's remarks, this basis of compromise is purely logical and semanitical. An argument to show that this implication holds, will be given shortly.

The other consideration, which is undoubtedly pragmatic and far removed from the logical and semantical phenomenon, concerns the reasons of varying intuitive appeals for or against truth-value gaps theory. While

inquiring into these reasons, Strawson talks of different
interests of the two parties, and gives a strong impression
as he thinks of the dispute as only a disagreement of atti-
tudes, emphases or interests. If so, this will clearly trace
the grounds of the controversy in something non-logical,
and rather subjective and psychological. In fact, the very
question of different intuitive appeals sounds socio-psycho-
logical. He says, "What we have, in the enthusiastic defence
of one theory or the other, is a symptom of difference of
direction of interest. One who has an interest in actual
speech-situation, in the part that stating plays in commu-
nication between human beings, will tend to find the simpler
falsity theory inadequate and feel sympathy with —
though, as I say, he is under no compulsion, exclusively or
at all, to embrace — its rival. One who takes a more im-
personal view of statement, who has a picture in which
the actual needs, purposes and presumptions of speakers
and hearers are of slight significance — in which, as it
were, there are just statements on the one side and, on the
other, the world they should reflect — he will naturally tend
to brush aside the truth-value gap theory and embrace *its*
simple rival."[2] And then he goes on to show how different
types of statements, all having reference failure, carry dif-
ferent intuitive appeals for being classified as the cases
of truth-value gaps. In general, his principle is that if we
have a statement consisting of two referring expressions,
one of which is "guilty" of reference failure and the other
is not, then we have two ways of carving up the statement:
(1) the guilty referring expression may be treated as
absorbed into a predicate term which is attached to the
innocent referring expression to make the whole statement;
(2) the innocent referring expression may be treated as
absorbed into a predicate expression, and may be attached
to the guilty referring expression to make the whole state-
ment. When treated in the first way, the statement seems
to be worth categorising as false; when treated in the
second way, it seems more natural to say that the state-
ment is neither true nor false. Strawson deals with the
cases like "the present monarch of India is generous",

which have only one referring expression, and that the guilty one, by referring to the context in which they are asserted. Thus, the statement "the present monarch of India is generous" can be an answer to the question "who are the eminent contemporary figures who are generous?" If so, the present monarch of India is cited in this statement as an example of a previously introduced class, and since the class in question surely does not contain anything like the present monarch of India, we may say with certainty and plausibility that the statement in question is false. But, when seen out of any such context, we may find it more natural to say that the question of the statement's truth or falsity does not arise, as there is nothing which is the present monarch of India.

However, despite this incisive analysis of our use of the statements having referring expressions and the concerned logical appraisals, the old question may again pop up. We may ask, *if* we take the statement in question under the formulation in which its subject term comprises of the guilty referring expression, will it be more *reasonable* (not only more natural or appealing) to say that it has no truth-value or that it has the truth-value 'false'? Perhaps Strawson will say the former despite his efforts to act as a compromiser. This is strengthened by the fact that the considerations as to how the statement is to be viewed in terms of its construction and whether it is an answer to a certain question or a report of facts, and so on, are regarded by Strawson as revealing the conventions governing and affecting the *meaning* of the sentence in question. Because this will have the consequence that the *statement* or *proposition* expressed by the sentence under one of the abovementioned formulations is different from that expressed by the sentence under the other formulation. And then the result of Strawson's inquiry remains not much different from the one with which we started initially, viz., that there are some statements or propositions which are neither true nor false. The supporters of the classical two-valued logic will surely not be placated by any of the preceding con-

siderations of the second type, and will take issue on this matter with the gap theorists. In fact, as earlier pointed out, the question of truth-value gaps cannot reasonably be viewed as resting on any difference of interests or difference of personal and impersonal perspectives of statements. Both the positions here can be formulated in objective and impersonalistic terms and both are interested, it seems, in statements or propositions as distinguished from stating.

Thus, it appears, the real issue we are ultimately left with concerns the two criteria or modes of falsity, which were hinted at in the beginning of the paper. So, let us return to what we found to be seemingly logical consideration by which Starwson tries to make the reconciliation. Trying to show that both the positions in this controversy are reasoanble, he produces arguments for both of them, and maintains that both the arguments are right in their ways. The argument for truth-value gap theorists is that presumably a statement like "the present monarch of India is generous" is not true. But as it is not also a case of mischaracterisation, it cannot be called false either. Thus, here is a variety of statements which, because of radical reference failure, are neither true nor false. The argument for the opponents of this theory is that despite the lack of truth and mischaracterisation both, we can still call this statement false, because the state of affairs which, if existent, would have made this statement true, is in fact non-existent. That is, in order to call a statement false, we need not seek some mischaracterization in it; the lack of the truth-guaranteeing situation is enough to call it so.

Now, what these arguments show is that the two parties are adopting different criteria for applying the notion of 'falsity' on the case in question, and actually the case is such that the disagreement on criteria gives a reason for believing that there are two varieties or senses of 'falsity'. In general, the argument to show this can be thus formulated.

Let us take any predicate, say, F, and ask for the criteria for its application. Suppose, two criteria A and B are

provided. As long as these two criteria are satisfied together, there is no problem. But suppose that we have a case x which satisfies A but not B. Again, if there is a rule or agreement of usage in the community of the language users which clearly decides whether here x is F or not, there is no problem. But if there is no such rule or agreement or even decision, and if one says that both the views — that x is F and that x is not F — are correct in their own ways, then we have no alternative but to conclude that that person is admitting two *varieties* or *senses* of 'F'. In our example, it is the word "falsity" which is in question, and the two criteria used by the two parties are: (a) statement being a case of mischaracterization, and (b) the truth-guaranteeing situation being non-existent. The statement "the present monarch of India is generous", which is presumably not true, does not satisfy the first criterion, but satisfies the second one. And in this situation Strawson says that both the parties saying that this statement is not false and that it is false, are 'reasonable'. This implies, on the foregoing argument, that Strawson will have to admit two types of falsity, which we shall henceforth call 'denial-falsity' or 'DF' and 'contradiction-falsity' or 'CF', as subsequently we will be defining these types in terms of another distinction, 'denial' and 'contradiction'. In fact, although Strawson himself is not very much willing to accept this implication of his argument, this distinction of the two senses of falsity is sometimes maintained by his supporters themselves.[3] And his job of reconciliation seems to be best done by some such sort of distinction.

Before we proceed to compare the two senses of falsity, let us elaborate this distinction a little bit more. 'Denial-falsity' (DF) of a statement means the falsity of that statement in virtue of the truth of its denial, and the 'contradiction-falsity' (CF) of a statement means the falsity of that statement in virtue of the truth of its contradiction. In other words, a statement is DF if and only if its denial is true, and it is CF if and only if its contradiction is true. The denial of a statement p means that statement

which negates what is said in p to what is said about in p.
The contradiction of p is that statement which negates p
on the whole. Thus the denial of "the present monarch of
India is generous" is "the present monarch of India
is non-generous (or, ungenerous)"; and its contradic-
tion is "not that (or, it is not the case that) the present
monarch of India is generous". We propose to symbolise the
denial of a proposition p by 'p*' and its contradictory by
the usual tilde sign as '~p'. In functional calculus we pro-
pose to use either of the two symbolisms: to express the
denial of 'Fa' by 'Fa*' and its contradiction by '~Fa', or
to express the denial of 'Fa' by '($\sim$F)a' and its contradic-
tion by '~(Fa)'. A statement of the form 'Fa' will be a case
of *mischaracterization* if a does not have F, i.e., if a exists
but lacks F, and this means the truth of a proposition
attributing '~F' to a, which is in fact the denial of 'Fa'.
Thus, the first criterion of falsity previously traced in
Strawson's argument, is subsumed under what is here call-
ed 'DF'. What the contradiction of any proposition 'Fa'
asserts is simply the *non-existence of the state of affairs
intended to be reported by 'Fa'*. Thus this tallies with the
second abovementioned criterion of falsity. It will be
immediately clear that these two types of falsity are not
completely independent from each other. DF is stricter and
narrower than CF, and the former entails the latter. The
reverse entailment does not hold. Therefore, a statement
may fail to be either true or DF, and yet be CF. It is exactly
this which preserves the laws of Bivalency and Excluded
Middle in the situations of radical reference failure.

As soon as the abovementioned distinction is made, an
objection is raised. The distinction DF and CF is formu-
lated in terms of the distinction of 'denial' and 'contradic-
tion', and this is a distinction of two types of *negations*. In
fact, it seems quite reasonable to say that every sense or
variety of falsity corresponds to a sense or variety of
negation, and the different modes of falsity are actually
defined in terms of the corresponding negations. DF and
CF correspond to internal and external negations of

Russell. The objection is that the internal negation or denial cannot be taken to be a logical operator. In "x is $\sim$F" which is the denial of "x is F", a quality opposite of F is attributed to x, and the opposition between F and $\sim$F is known not by any logical considerations, but by having a grasp of the nature of the qualities F and $\sim$F. But this objection actually confuses between the cases like 'red' and 'blue' on the one hand and those like 'red' and 'non-red' on the other. A case can be built for maintaining that the incompatibility of the former set is known by knowing the nature of the properties red and blue, but it is not so in the case of the latter set. Any uniform and sensible substitution of the word "red" in the pair 'red' and non-red' will leave the opposition of the pair unimpaired. Thus, 'non' here can legitimately be treated as a logical operator. Of course, it qualifies only a part of a sentence, not the sentence as a whole, but this is no reason why it should not be regarded as a logical operator or even as a propositional operator. Whether qualifying a part of the proposition or not, it changes the truth-value of the initial sentence in a *logical* manner, and this is enough reason to call it a logical propositional operator.

Now, if we do not take the law of excluded middle on either of the two interpretations — in terms of DF and in terms of CF — as defining the notion of proposition or statement as well, we may conceive of two abstract possibilities of a proposition's having a truth-value gap: (i) when it admits of being negated in the relevant sense, that is, the relevant notion of negation applies to the sort of propositions it is, and yet neither it nor its negation is true; (ii) when the proposition is not true, and the relevant sense of negation does not apply to the sort of proposition it is, so that the question of its negation's being true does not arise. If the principle of excluded middle is interpreted in terms of DF, then and only then a proposition like "the present monarch of India is generous" will be a case of truth-value gap. Because there being no monarch of India at present, neither this proposition nor its denial "the pre-

sent monarch of India is ungenerous" holds true. But there is a difficulty in interpreting the principle of excluded middle in terms of DF, viz., that it seems to create truth-value gaps in the second manner which neither tick well with the ordinary usage nor are likely to be accepted by the Strawsonians too. For example, existential propositions provide an apparent case on which the application of the notion of denial seems to be impossible. If an existential proposition is interpreted as saying something about an indefinite subclass of a class, no genuine denial of it seems forthcoming. Because on this interpretation, an existential proposition like "some x are y" says something about some unspecified members of x. Its denial should say of *precisely the same* objects or subclass that they are not y. But the original reference being essentially indefinite, catching it in any other proposition and then attributing the opposite quality to it is not possible.

Another, perhaps more convincing, example of this type is offered by externally negated propositions. Every denial of a proposition has a contradiction of its own, but it is not clear how the denial of an externally negated proposition is to be formed. The original proposition and its denial retain the same topic of talk, and share the same referential presuppositions, if any. But when we frame the contradictory of a proposition by externally negating it, we do not retain any 'topic of talk' or 'subject' of the discourse; the contradiction eschews all the presuppositions of the original proposition, and simply disclaims any correspondence of the contradicted proposition in reality. That is, it is clear that the contradictory of "x is red" is "it is not the case that x is red" and the contradictory of the denial of "x is red", viz., "x is non-red", is "it is not the caes that x is non-red". But reversing the application of these two negation-operators is not so easy. It is not clear what the denial of "it is not the case that x is red" will be. So, one disadvantage, and a serious one, of interpreting the principle of excluded middle in terms of DF is that either one has to give up using the notion of contradiction in language, and thus to eliminate

all the externally negated propositions, or to accept that all such propositions lack a truth-value. Both of these alternatives are equally artificial and awkward.

Thus, it seems, the proper interpretation of the principle of excluded middle should be in terms of CF or the notion of contradiction. And in that case a proposition like "the present monarch of India is generous" does not present any truth-value gaps. In case this proposition is not true, its contradiction is, and it is this, not the truth of its denial whenever it itself is untrue, which is needed by the principle of excluded middle on the second interpretation.

Let us see how the foregoing discussion helps in saving the law of excluded middle, and yet does justice with the fact of presuppositions in ordinary language. Keeping in mind that p and p* always share the same referential presuppositions, and taking CF as a basic truth-value besides 'true', we can form the following truth-tables for p, p* an ~p.

P	CF/— ~ F	P*
T	CF	CF
CF	T	T or CF

Here the fact of the indeterminacy of p*'s truth-value in the second row reflects the *possibility* of a truth-value gap *if we are thinking in terms of DF and not CF*. If we take into account only p and ~p, there is not much difference in the logic, specially semantics, of Russell's analysis and the present analysis. But, first, the addition of the denial operator helps in picturizing the situation of what is called truth-value gaps in fully logical terms, and, secondly, it keeps a place for the fact of presuppositions in the pragmatics of the analysis. The indeterminacy of p* in the second row is to be explained by the possibility of there being some presupposition in p and thereby in p* too, and the possibility of that presupposition's being false (DF or CF). Russell's analysis, or that of Ayer who agrees with Russell

on this point and regards the whole question of truth-value gaps as that of policy, includes whatever goes by the name of presupposition in the very content of the sentence, and thus does not give them their proper place in the disoourse. Russell's analysis, in other words, is regimenting language for the sake of regimenting, whereas the present analysis combines regimentation with the facts of ordinary language.

Lucknow University   Roop Rekha Verma

NOTES

* The author is thankful to Prof. P. F. Strawson and Prof. Sir Alfred Ayer for discussing the ideas expressed here. She is also thankful to Prof Dana Scott for supervising her work on this subject during the Michaelmas Term of 1973-74.

1. *Theoria*; xxx (1964) Part 2; pp. 96-118.

2. *Ibid.*, pp. 109-110.

3. See Odegard: "On closing the truth-value gaps" *Analysis*; 25 (1964-65), pp. 10-12.