DESCRIBING   BEHAVIOUR

A PHILOSOPHICAL   ANALYSIS

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by

I. A. BUNTING

CONTENTS

CHAPTER 1.

PROBLEMS

I

Questions revolving around the possibility and justi-
fiability of reductive analyses of the concept 'act', lie at
the heart of many of the problems in the philosophical inter-
pretation of act-descriptions.[1]   In this thesis, I wish to show,
by discussing various problems in the logic of act-descriptions,
that, and why, reductive analyses must be unsatisfactory.

In this chapter, I hope to raise a few basic problems
that must be faced in analysing the logic of act-descriptions.

II

It will often be found that descriptions of the
grammatical form, "agent-act-object", e.g. "I ate the food",
"He returned the book to the shelf", can be analysed, or
'unpacked', into a complex list or series of descriptions of
the same grammatical structure.   For example, the description,
"I ate the food", can, at least , be unpacked into the descriptions,
'I opened my mouth', and, 'I moved my jaw in such-and-such a way'.

There are two problems associated with this:
(i)   Will we arrive at a point at which further analysing or
'unpacking' of the original description into descriptions of the
'agent-act-object' form will be impossible?

(ii)   Must we say that the first act-description consists of more
than one other act-description?   Or must we say that the original
act-description is single, in the sense that it cannot consist of
a multitude of act-descriptions?

Any answer that is given to the above questions must
be governed by the following considerations: Because the
subsidiary descriptions are derived from one act-description, we
will have to show how these other descriptions are related to the
original description.   If we think of the subsidiary descriptions
/as a list ....

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1.   By "reductive analysis" is meant any analysis which reduces act-
descriptions . to parts consisting of descriptions of (non-purposive)
bodily movements, and/or descriptions of mental or physiological
events.

as a 'list', our first consideration will be to give some account
of the relatedness of the list.   But, even though these descriptions
are derived from one act-description, if the list is to represent a
proper unpacking, it must contain descriptions which refer to
separately identifiable items of behaviour, of different classi-
fications.   We will, therefore, have to show that the items on this
list are, in some ways, unrelated, and we will have to account
for the unrelatedness of the list.

        There seem to be two possible ways in which questions
(i) and (ii) can be answered.

        (a)   It can be argued that in describing any behaviour
as an act of a certain kind, our description will always be of a
single act of a single kind.   This implies that no act-description
can be unpacked into **a list** of descriptions of _acts_.   If an act-
description can be unpacked into subsidiary descriptions, these
descriptions will refer to essential _parts_ of an act, but these
subsidiary descriptions cannot be act-descriptions.   The relation of
the descriptions in the list to the original description, will,
therefore, be that of parts to the whole.   In this way, we can
give some account of the relatedness of the list.   But the
difficulty will be to account for the unrelatedness of the list.
For we still have to show how it is that these subsidiary descrip-
tions /of _separately identifiable_ items of behaviour of different
      can be descriptions
kinds, and yet can be _parts of_ an act-description.

        (b)   The other possibility would be to argue that the
subsidiary descriptions must themselves be descriptions of acts
of different kinds.   These descriptions cannot, therefore, be
descriptions of _parts_ of a single act.   They cannot be constituents
of an act, in the sense of being parts of a whole, but will be
descriptions of acts that are somehow involved in the successful
performance of the original act.   The difficulty with this account
will be to show just how these subsidiary act-descriptions are
involved in the description of the first act.   However, some
indication will be given of what is meant when we speak of the
unrelatedness of the list.   For the list will, as has been said,
consist of act-descriptions, which refer to acts of different
kinds.   The list may, therefore, consist of act-descriptions
which need not have any real or necessary connection with each
other.

III

Let us consider the first possibility in some detail.
Suppose that we want to know what a man in a restaurant is doing,
and that we receive the following answers to our query: 'He is
moving his hand', 'He is writing his name', 'He is signing the bill',
'He is charging the dinner'.[2]

According to the theory which we are considering, there
can be one and only one true description of what the man is doing.
Any other description of his behaviour will either be a false descrip-
tion, or will be a subsidiary description of the sort to which we
have been referring. "He is charging the dinner", seems to be
a description, from which the others can be derived. In order to
charge the dinner, the man must sign the bill. In order to sign
the bill, he must write his name. In order to write his name,
he must move his hand. It can be said, therefore, that we have,
in this example, a single act-description, and three subsidiary
descriptions, derived from the act-description.

How did we decide which of these four descriptions is
the act-description, and which the subsidiary descriptions?
One answer would be that we determined the act-description by con-
sidering the point at which a list such as "Moving his hand",
"Writing his name", "Signing the bill", "Charging the dinner",
must terminate. The terminating point will be the point at which
further determination will be superfluous.[3] The terminating
point will, then, be the description of The Act of the man in
the restaurant.

The relation of the other descriptions to the description
of The Act, can now be supposed to be that of parts to the whole.
For this is what could be suggested by the metaphor "terminating
point". It could be the point at which the sum of the parts
becomes equal to the whole.

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. For the discussion that follows, I am largely indebted to the
work of D.S. Shwayder - The Stratification of Behaviour, London:
Routledge and Kegan Paul, 1965. I shall refer to Shwayder
frequently, but without thereby indicating that I am either giving
an exposition of, or criticising, his work.

3. Cf Shwayder, op. cit., p. 134 ff.

There are, however, difficulties associated with this notion of a "terminating point". If the relation of a,b,c to d is that of parts to the whole, then we can say that (a.b.c) ⊃ d, and that d ⊃ (a.b.c.). We should be able to say, then, that the description of The Act - "He is charging the dinner" ⊃ "He is moving his hand. He is writing his name. He is signing the bill". If, therefore, we are to use the notion of a "terminating point" in such a way that it includes the notion of the parts/whole relation, then we should be able to say that generally the conjunction of the subsidiary descriptions entails the description of The Act. But this we cannot do. The man, e.g., may be moving his hand, writing his name, signing the bill, in order to give his autograph to the waiter. The Act will, then, properly be described by, "He is giving his autograph to the waiter". We should, therefore, say that the complex description, "He is moving his hand. He is writing his name. He is signing the bill", "terminates" in the description, "He is giving his autograph to the waiter."

If these same subsidiary descriptions can "terminate" in at least two different act-descriptions of different kinds, how can we continue to speak of the relation of the subsidiary descriptions to the description of The Act, as that of <u>parts to the whole</u>? The notion of the "terminating point" must, then, be reinterpreted. But a more important point is involved. The idea that the subsidiary descriptions refer to parts is dependent upon the notion that these parts are not separately identifiable purposive elements, but "movements", e.g. muscle-movements, which are essential for the successful performance of The Act.

If, now, these same "movements", described by the subsidiary descriptions, can be constituents of different kinds of acts, then these "movements" cannot simply be non-purposive. We will either have to say that <u>circumstances</u> alter the "terminating point", or say that the subsidiary descriptions do refer to purposive behaviour. "Circumstances" cannot be used here to refer to some additional, non-purposive, factor involved in the description of the behaviour, as this will simply push our problem one step further back, without solving it. "Circumstances" must clearly involve the "background" or "scene" of the behaviour, which in turn involves the physical environment, plus the notions, interests, and desires, of the agent of the act, and of a describer of the act. The concept of "purpose" must, then, be involved in the notion of "circumstances of an act".

/We are therefore, ...

We are, therefore, it seems, forced to say that
"parts" of the description of The Act must be purposive elements.
Are we also compelled to say that the subsidiary descriptions
are descriptions of acts, which are identifiable apart from The
Act? If we do admit this, we will have already reduced the
first answer to questions (i) and (ii) to the second possible
answer.

It can, however, be argued that the list of descriptions,
into which the description of The Act unpacks, does refer to
purposive elements, but not to acts separate from The Act. These
purposive elements can be called "collateral acts".[4] A
collateral act is an essential part of The Act, and is not
separate or distinct from The Act. Collateral acts and The
Act are the same act. So, e.g., the signing of the bill must
be purposive, but as it is a collateral act, it is not separate
from The Act. There would, therefore, be no sense in saying
that "He signed the bill", and "He charged the dinner", are
alternative descriptions of the same behaviour. The descrip-
tion, "He charged the dinner" is a description of The Act, and
"He signed the bill", is a description of the same act via a
collateral act. There will still, therefore, be only one true
description of any act. The descriptions, into which the
original act-description could unpack, will be descriptions of
essential constituents of The Act - movements and/or collateral acts.

The difficulty with this will be that we must still
give some content to the notion of the "terminating point" of a
list of descriptions. There are at least four ways in which a
list of descriptions of collateral acts and/or movements could
"terminate" in the description of The Act:

(a)   1.   "M1"   (b)   "M1")
   2.   "M2"   "M2")
   3.   "M3"   "M3")   "The Act"
   4.   "The Act"   "M4")

    "M1")   )   (d)   "M1")
    "M2") "collateral act"$_1$) "The   "M2)
    "M3")   ) Act"   "collateral)
(c)   )   act$_1$")   "The Act".
    "M1")   )   )
    "M2") "collateral act"$_2$)   "M1")
    "M3")   )   "M2")
                "collateral)
                act$_2$")

4. cf Shwayder, loc. cit., p 133-141.

There are difficulties inherent in all four possible interpretations. If (a) represents simply a list, without any real or obvious connections between the "items" on the list, what, if any, will be the relation between these items? If there is no real relation between the descriptions of M1 - M3, and the description of The Act, why bring in the description of M1 - M3 at all? If there is a real relation, why should the relation be represented in this way, rather than, e.g., the way represented by (b)? (a) seems, in fact, to be simply a list, in which there are no real connections between the items on the list. (a) is, therefore, an inadequate representation of what could be meant by "terminating point".

If (b) offers some solution, in what sense do we have a list of descriptions of movements "terminating" in an act-description? We have spoken of descriptions of movements "constituting" an act-description and (b) does seem to represent a constitution. But in what sense is the description of The Act in (b) the terminating point of a list of descriptions of movements? Can we say that "M1 . M2 . M3" ⊃ "The Act"?

The " ⊃ "-relation can here refer to a causal relation between the referents of the descriptions. That is, it is possible to say that, given M1, M2 and M3, The Act results as an effect of these movements. This, however, is unsatisfactory. The causal representation implies that there is a sense in which we can say that the movements and The Act are separately identifiable. This is contrary to the thesis which we have been developing. It has been said that neither the constituting movements, nor the collateral acts, can be separately identifiable in the way that a cause and an effect must be.

The causal representation seems also to suggest a schema such as that of (a), rather than that of (b). If (b) does represent a constitution of descriptions of movements in the description of The Act, the constitution cannot be a parts/whole representation, for the descriptions of M1 - M3 can be constituents of more than one act-description.

If (c) correctly symbolises the meaning of "terminate", why should the descriptions of M1, M2 and M3 terminate in both the descriptions of collateral acts and the description of The Act if there can be no alternative descriptions of acts?

/If, e.g., the descriptions ...

If, e.g. the descriptions of M1 - M4 terminate in the description of The Act, via descriptions of collateral acts, why shouldn't the description of a collateral act be simply an alternative act-description of The Act? This possibility, which is again contrary to our thesis, is obviously not ruled out by the way in which interpretation (c) is represented.

Interpretation (d) is unsatisfactory for the same reasons as (a) and (c). How can we adequately explain how the descriptions of the movements and the description of the collateral act are related? If the relation refers to a causal relation between the referents of the descriptions, then the movements and the collateral act must be separately identifiable. But, according to this theory, they cannot be separately identifiable, as both the movements and the collateral acts are essential parts of The Act, and any description of a movement, or of a collateral act, is really a description of The Act. If the same movements can terminate in two collateral acts, how can we adequately explain how those non-purposive elements can be involved in two purposive elements? Also, why shouldn't the collateral acts be alternative descriptions of the same act?

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One further important point emerges from the notion that an act-description may be constituted by descriptions of non-purposive movements: I should at all times be able to describe all the behaviour I actually observe, without using any act-description. Because act-descriptions can be unpacked into subsidiary descriptions of non-acts, if I am uncertain about the behaviour of, e.g., a particular man, I will be able to satisfactorily describe his behaviour by means of a complex description, which does not imply purposiveness. Therefore, all human behaviour can be characterised as non-purposive.

IV

It can be seen that there are serious objections, which can be brought against this first possible answer to our two original questions. Let us now consider the second possible answer in some detail. [5]

/It was said ...

5. For the points that follow, I am indebted largely to E. D'Arcy, Human Acts, Oxford: Clarendon Press, 1963. Again, I shall neither be explicitly discussing, nor criticising D'Arcy's work.

It was said that a possible solution to these two
questions would be to argue that the subsidiary descriptions into
which an act-description can "unpack" must themselves be act-
descriptions. These act-descriptions cannot, then, be related
to the original act-description, in the sense of a parts/whole
relation. So, on this basis, we could account for the
unrelatedness of the original "list" of descriptions, for, as each
description is itself an act-description, these descriptions must
refer to separately identifiable items of behaviour. But, as
was indicated earlier, the problem will then be to account for the
relatedness of the list - i.e. to show how these subsidiary act-
descriptions are "involved" in the original act-description.

This solution, however, clearly undermines the thesis
that there can be one and only one true description of any act,
and that for each act-description there is a list of descriptions
of characteristic movements and/or collateral acts, which "constitute"
the act described. If an act-description may be unpacked into a
"list" of act-descriptions, then the notion of a descriptive list of
movements and/or collateral acts, which (i) is indifferent to content
and (ii) terminates in a description of The Act, will fall away.

Consider the following example: A sheriff has planned
the execution of an innocent negro, in order to prevent the
indiscriminate lynching of four other negroes. The question now
arises: What is the description of the sheriff's act? It
could be the description just given, but twelve other candidates
may be mentioned:

1) "He tensed his forefinger."
2) "He pressed a piece of metal."
3) "He released a spring."
4) "He pulled the trigger of a gun."
5) "He fired a gun."
6) "He fired a bullet."
7) "He shot a bullet at a man."
8) "He shot a bullet towards a man".
9) "He shot at a man".
10) "He killed a man."
11) "He committed judicial murder."
12) "He saved four lives."

Now, as was seen, the notion of a "terminating point of
a list", whatever meaning is given to this, presupposes that the
list will remain unaltered even if the notions, interests, desires,
/of any describer ....

of any describer should vary.   Or in a weaker sense, this implies
that, at least, the descriptions contained in the list are all
made from the same point of view by the same describer.[6]
This implies that the question, "What did the sheriff do?", can
be answered in one and only one way, independent of any specialised
interests, for one and only one of the twelve listed descriptions
can be <u>the</u> description of The Act of the sheriff.

According to the theory that we are now considering,
because an <u>act-description</u> may unpack into subsidiary act-
descriptions, questions of the form, "What did x do?", need not
be answered in one and only one way.   Thus a person introduced to
firearms for the first time, and having learnt to load, cock and
point a gun, may, after watching the sheriff cock and point the
gun and shoot the negro, ask, "What did he do?"   The questioner
may be wanting to know what the sheriff did, i.e. what his <u>act</u> was,
after pointing, etc, the gun.   <u>In this context</u>, the description,
(1) "He tensed his forefinger", may be the most appropriate
answer.   A student of ballistics, on the other hand, may know
that the hammer of a gun explodes a cartridge, and that bullets
are driven by gasses suddenly released by exploding cartridges.
But he may not know how the sheriff made the hammer have such an
impact.   The question, "What did he do?", would then, <u>in this
context</u>, be most appropriately described by, (3) "He released a
spring."

The specialised interests of <u>the agent</u>, and not necessarily
just the <u>describer</u>, may also lead to different act-descriptions
being appropriate.   Three people, A, B and C, may be performing
the same/^{overt} act, but because of their different <u>intentions</u>, or interests,
etc., it may be true to say of A that he is x-ing, of B that he is
y-ing, and of C that he is z-ing.   Four people may, for a signi-
ficant period, be abstaining from food.   One person may be dieting,
another hunger-striking, another fasting, and another conducting
experiments on the nutritional needs of the human body.   But it
will be false to say, e.g., that the hunger striker is dieting.

By implying that 1) - 12) could, in different contexts
/or circumstances ....

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6.   The list must not be thought of on the model of a judge
sifting the evidence of different witnesses, but rather on the model
of a single (reliable) witness.

or circumstances, all be answers to the question, "What did he
do?", and hence that all these descriptions could be
descriptions of separately identifiable acts, we are further
implying that a reductive analysis, such as that outlined in
the previous section will not work.

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Although this new theory does contradict the reductive
theory outlined earlier, a serious objection may be raised
against it.   If any description of any _doing_ can, depending on
context and occasion, be an act-description, we will be defining "pur-
pose" in terms of "circumstances", which must include the notions,
interests, etc. of both agent and describer.   An act-description
will, then, be defined in terms of circumstances, in the above
sense of this term.   From this it follows that, because the
interests, etc., of an agent and a describer and those of
different describers may differ, incompatible act-descriptions
could be valid descriptions of the _same_ act.   For the implication
is that _any_ description will do as _the_ act-description of the act
in question.

It further follows that, if any act-description will do,
there can be no _one_ true description of an act.   But a new
difficulty is involved in this.   If there can be no one true
act-description, how can we speak about a list of act-descriptions
involved in _one_ act-description?   For each of these subsidiary
descriptions may, in certain circumstances, do as _the_ description
of the act.   How then, can we decide whether a given description
is a member of the list, or an independent act-description?

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In order to answer the above questions, we must attempt
to revise the theory that act-descriptions can only be unpacked into
subsidiary _act-descriptions_ in such a way that we remove the
implication that any description will do.

Consider, therefore, this example: [7]
A man is pumping water into a cistern supplying the
                            /drinking water ...

7. cf Anscombe, G.E.M., _Intention_, Oxford: Basil Blackwell, 1957.

drinking water of a house. The water supply has been
systematically poisoned with a poison, the effects of which
cannot be immediately noticed. The house is regularly used by
the chiefs of a ruling party, which is planning the
extermination of the Jews, and a world war. All this is
revealed to the pumper.

It has been argued so far that we must either say that
there can be only one true description of what the pumper is
doing, and that this description may then be unpacked into
descriptions of non-acts; or that there can be no one true
act-description, as any act-description may be unpacked into
subsidiary act-descriptions, which may then themselves, in certain
circumstances, serve as descriptions of the same act. The
question now is: Can we speak about one true act-description,
which can be unpacked into subsidiary act-descriptions?

It can be argued that if we wish to determine the descrip-
tion of the pumper's behaviour, we must narrow the range of
possible descriptions, by eliding the description of the goal
of any act into the first act-description. This elision will
result in a new act-description, connected with a new goal-
description. This goal-description could then be elided into
this new act-description.

The point at which such an elision will no longer be
possible, will give us the description of The Act. Other
act-descriptions which have successively arisen through this
elision of goal-descriptions into act-descriptions, can be thought
of as the subsidiary descriptions, into which the act-description
unpacks. These subsidiary act-descriptions will be "involved"
in the act-description, in this sense of being elisions of
successive goal-descriptions.

We may undertake this process of narrowing down the
range of possible act-descriptions, by asking the question
"Why?", of any single description of, e.g., the pumper's
behaviour.[C] For example, we may ask the following question,
and may receive the following replies:
(1) "Why are you moving your arm up and down?"

/"To work the ....

8. cf. Anscombe, loc. cit.

"To work the pump."

(2)   "Why are you working the pump?"
      "To fill the cistern with water."

(3)   "Why are you filling the cistern with water?"
      "To poison the party chiefs."

(4)   "Why are you poisoning the party chiefs?"
      "To save the Jews."

(5)   "Why do you want to save the Jews?"
      "To institute the Kingdom of Heaven on earth."

The answer to each question gives the goal-description to which each act-description is linked. But in each successive question the goal-description is treated as a possible description of The Act. In this way, each goal-description is elided into an act-description. But it is evident that question (5) indicates a break in the series of questions and answers. The answer given is an answer, not to a question of the form, "Why are you doing that?", but rather one of the form, "For what reason are you doing that?" The answer to this question, "Instituting the Kingdom of Heaven on earth" will not give a further putative description of The Act, but rather the reason for, or the point of The Act, which in this case is saving the Jews.

In general, it can be said that if such a series of questions and answers is continued long enough, a break, such as the one in the above example, _must_ occur.[9] The point at which the break occurs _must_ indicate both _the_ description of The Act, and _the_ reason for The Act. Any other questions and answers must contain subsidiary act-descriptions, which are _involved in the_ description of The Act in the sense indicated above.

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This answer seems to depend upon the assumption that the process of elision of goal-descriptions into act-descriptions will be "topic neutral". That is, it appears that if we are to avoid the consequence that _any_ act-description will do as a description of an act, we must assume that circumstances, in the sense used earlier, do not determine what goal-description can be linked with what act-description. Therefore, given any act-description, we should be able to indicate what act-descriptions are subsidiary to this act-description, in such a way that the same

/goal-description ...

9. cf Anscombe, _loc. cit._, p. 38-9.

goal-description must be/linked with act-descriptions of this sort.
[above "linked": invariably]

It is not evident, however, that an act-description must invariably be linked with the same goal-description. We may say, e.g., that a man crossed the road in order to buy cigarettes, or to catch a bus. Here the act-description obviously cannot always be linked with the same goal-description. We will have to argue that the goal-description, which may be linked with a particular act-description, must be dependent on <u>circumstances</u>, including in this the intentions, notions, desires, etc. of both the agent and describers. Once this is admitted, the old objections can once more be raised. For if the link between an act-description and a goal-description is dependent on circumstances, and if an act-description may be elided into the goal-description, then once again it can be claimed that act-descriptions are dependent on circumstances. This may, then, once again, imply that there can be no one true description of an act, and that any act-description may do as a description of an act.

V

Our preliminary discussion has led to the following dilemma:

If we define an act-description as the terminating point of a list of movements and/or collateral acts, then act-descriptions (i) will be descriptions of goals beyond all doing, (ii) must be constituted by descriptions of non-acts, (iii) will allow of only one true act-description.

If we define an act-description as the description of <u>any</u> doing which is purposive, then act-descriptions (a) will be descriptions of doings <u>in certain circumstances</u>, (b) must then be defined in terms of "circumstance", which already includes the notion of "purpose", (c) are such that there can be no one true act-description of an act.

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The main problems, therefore, that have emerged from this preliminary discussion of some questions in the logic of act-descriptions are:

(1) Must there be only one true description of an act? Can there be alternative descriptions of acts? Does the notion of "alternative descriptions" presuppose that there are "basic non-purposive descriptions", or "basic act-descriptions", which may be included in different act-descriptions?

(2) /What is involved ...

(2)   What is involved in describing behaviour as
an act? ·   How can we distinguish between acts and other ·
behaviour?

(3)   Under what circumstances can human behaviour be
described as non-purposive?   Can all human behaviour be
characterised as non-purposive?

The discussion of these three points will constitute the
subject matter of the next three chapters of this thesis.   But
they will be discussed in such a way that the main bearing will always
be on the question: Is a reductive analysis of the concept
"act" possible?

CHAPTER 2.

DESCRIPTION AND EXPLANATION.

I

The notion of purposiveness has been used to distinguish
between acts and other kinds of human behaviour. This distinc-
tion was disputed by the reductive analysis mentioned earlier.
If an act-description can be "unpacked" into a "list" of descriptions,
which do not differ from the descriptions of the reactions, or
behaviour of physical objects, then act-descriptions will, in
principle, be descriptions of physical occurrences, and the
concept "act" merely a linguistic device for the description of
some physical occurrences. From this it follows that either
all human behaviour can be characterised as non-purposive, or
that all descriptions of human behaviour can be reduced to
descriptions that are logically the same as descriptions of
natural occurrences.

In this chapter I shall, using examples of descriptions
of behaviour, determine whether this is a feasible supposition.

II.

Imagine that a scientist observes the behaviour of
zeds.[1] He later gives the following reports:

(D1) A number of zeds approached a clearing at the
foot of a cliff. One of the zeds detached itself from the others
and seated itself on a high rock. Other zeds began scratching
in the clearing. When a leopard stalked the group in the
clearing, the zed on the rock uttered a cry (α). All the
zeds then climbed hurriedly back up the cliff.

(D2) The zeds perspired frequently while they
were in the clearing. They also salivated often.
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Let us assume that D1 and D2 are descriptions, and not
explanations of zed behaviour. Are D1 and D2 different in
/any way?

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1. A zed is an x whose behaviour leaves it an open question
whether D1 is metaphorical, D2 metaphorical, or neither. That
is, a zed could be animal, or human, or simply a machine.

any way?[2]

One way of determining the differences between, or the logic of a description is by asking: In what pattern of explanation does this description fit? Two examples of descriptions of zed behaviour have been given. Can these two forms of description be fitted into logically similar, or logically different, patterns of explanation?

The description of the perspiring zeds can be fitted into a pattern of explanation which makes reference to a general law such as

In conditions of heat and/or physical exertion, zeds perspire.

This general law can be symbolised by

$C_1...C_n \supset$ perspiration. ($C_1... C_n$ being environmental and physiological and/or chemical conditions.)[3]

/A particular

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2. D1 and D2 could be both descriptions and explanations of zed behaviour. If I simply report what I saw, then D1 and D2 could be called descriptions of what I saw. But I may be asked "What are the zeds doing?", and may reply to this, "They are scratching in the clearing", or, "They are salivating". These replies will be explanations of the series of movements that the zeds are making, and of the fact that moisture may be seen in their mouths.

There may also be explanations implicit in D1 and D2. That is, it may be evident from the way in which the report is given that a certain mode of explanation has been employed. That this is the case will become evident later in this chapter. For the purposes of the argument that I intend developing, I will assume that D1 and D2 are reports, which are not explicitly explanations, but which may have definite modes of explanation implicit in them.

3. This law would obviously hold even if the zeds were mechanical toys. So we could presuppose that zeds are either machines or human. That they must be one rather than the other is not evident solely from this general law.

It would defeat the purposes of this discussion simply to assume that zeds must be human, or simply to assume that they are, say, mechanical toys. The question to be asked must be Under what conditions would we say that the descriptions in D1 are not metaphorical? This question does not presume to answer the metaphysical question asked in the opening paragraph.

A particular instance of perspiring could be explained in this way:

$$Cl \ldots Cn \supset Perspiration$$
$$\& \quad \underline{Cl \ldots Cn \quad are\ the\ case}$$

Therefore, perspiration. 4.

A similar type of explanation is applicable to the salivating of zeds.

Is it possible to explain the behaviour of zeds typified in D2 in the same way? Can a general law be formulated, which would enable us to explain the behaviour of e.g., the zed climbing on a rock, solely in terms of antecedents? Can the climbing on the rock be explained by an explanation of the form:

$$Cx. \quad Cy. \quad Cz. \supset \quad climbing\ on\ the\ rock$$
$$and \quad \underline{Cx. \quad Cy. \quad Cz \quad are\ the\ case}$$

Therefore, Climbing on the rock ?

Now if zeds are mechanical toys, such a law could be formulated, and we would be inclined to say that the climbing ascribed to zeds is merely an imaginative, playful description. It may, however, be argued that this description is not metaphorical. If this description is not metaphorical, or simply imaginative, then the logic of explanation applicable to D1 and D2, would in no way differ. This means that if zeds are human, all descriptions of human behaviour would fit into the same pattern of explanation.

It is, however, not yet clear whether or not the behaviour of zeds, as described in D1, must be explained in a Covering-Law way, even if zeds happen to be human. Let us therefore, ask whether the logic of explanation, involved in D1 and D2, shows prima facie differences when applied to humans. We assume, then, that zeds are human.

++++++++++++++++++++++.+++++++++   /It is clear

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4. This explanation has the pattern of a "Covering-Law" -explanation Cf. Hempel, C.G., "The Function of General Laws in History", P. Gardiner (ed), Theories of History, Glencoe, Illinois   The Free Press, 1960 (second printing).

The implications of this mode of explanation will be the subject of much of the discussion that follows.

It is clear that there is at least one common pattern of explanation in which the descriptions of D1 and D2 can be fitted. In answer to the question, "Why are the zeds x-ing?", it is possible to say: "They are x-ing in order to G" (G being the goal, or end, or purpose, or function of the behaviour that is being explained).[5]

If asked, "Why do zeds perspire?", a scientist may reply, "Perspiration serves to keep their body temperature constant". This explanation indicates the _function_ of perspiring, and will not be an explanation in terms of antecedent conditions.

In a similar way, if a scientist were asked the question, "Why do zeds climb on rocks?", he might say, "They climb on rocks in order to keep watch for enemies." Here again the explaining is done in terms of the _function_ of behaviour, and not in terms of antecedent conditions.

If we assume, then, that zeds are human, both D1 and D2 may fit into a pattern of teleological explanation. In this case, as in the previous, the logic of D1 and D2 will not differ. Yet the logic of D1 and D2 in the first example, where it was hinted that zeds could plausibly be mechanical toys, does seem to differ from the logic of D1 and D2 in the second example, where it was assumed that zeds are human.

Does it now follow that the assumption - that zeds are human - which is extraneous to the observational basis for D1 and D2, will determine the logic of explanation into which D1 and D2 may fit?

III

A provisional answer to this may be outlined in the following way:

In a teleological physical or physiological system, as applicable to zeds (where zeds are assumed to be human), an event can only be said to have a function, if at least some non-teleological laws hold true of the whole system. So the teleological explanation,

/ "Zeds ...

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5.   Cf. C. Taylor, The Explanation of Behaviour, London: Routledge & Kegan Paul, 1964.   Behaviour
     R.B. Braithwaite, Teleological Explanation", Proceedings of the Aristotelian Society, 1946-47.
     This particular explanation will be a teleological explanation. A teleological explanation is an explanation, in which the event to be explained is explained in terms of the end, or goal, or purpose, for which the event is said to occur. Now while the concepts, "goal", "end", "purpose" are not necessarily equivalent, they express a common denominator. This is the notion of an event having a function, (i.e. of it having some part to play, or some utility) which is the important notion in teleological explanations. An event is said to have a _function,_ an appeal to which will be a sufficient explanation of the occurrence of that event.

"Zeds perspire in order to keep their body temperature constant,"
will only be valid if the following non-teleological laws are true:

(i)   "High external temperature and/or bodily exertion $\supset$
      rise in body temperature".

(ii) "Unchecked rises in body temperature $\supset$
      heat stroke".

(iii) "Evaporation of bodily fluid secreted through the pores
      of the skin $\supset$ lowering of the temperature of the body". [6.]

It is because these non-teleological laws are valid that the
perspiring of zeds, in this case, can be explained in terms of
a function. If these laws are not valid, then the teleological
explanation will not be valid. It follows that if this is true of
all teleological explanation, all human behaviour can be explained
solely in terms of antecedent conditions.

We must now argue that, on this assumption as to the nature
of zeds, it cannot be said that _every_ teleological explanation of its
behaviour can, or must be, justified with reference to some non-
teleological laws. Teleological explanations cannot be justified
with reference to non-teleological laws, in those cases where it is
not sufficient for an event merely to have a function. It must
be _seen_ to have that function by zeds behaving in that way.

In an ordinary physical or physiological teleological system,
it will be true to say that:

L.C $\supset$ E in order to G (L & C being statements of laws
and actual conditions, respectively, and E a _type_ of event).

This means that in a particular situation, if L is true,
and C obtains, an event of type E will occur, and will have the function
expressed by G. If E is of the sort described by, "Zeds perspire",
then it can be said that because the necessary conditions obtain, an
event of type E will occur in order to lower the temperature of zeds.

If E is the type of event described by, "Zeds utter a cry $\propto$",
a similar explanation will not be satisfactory. That zeds utter a
cry $\propto$ cannot be explained _merely_ in terms of non-teleological laws
and antecedent conditions. In certain conditions, the uttering of $\propto$
by a zed will fulfil the function of warning of the approach of
enemies. A sufficient explanation of this behaviour will not, however,
if zeds are human, be simply a statement that this behaviour has a
certain function, and a statement that certain antecedent conditions
obtain.

6.   These examples that I have chosen are obviously not technical
physiological laws. I have chosen these examples simply as instances
of laws that state a connection, or relation, between an event and
antecedent conditions.

A further vital factor must be presupposed: it must be presupposed that zeds take the uttering of x , in these conditions, to be sufficient for fulfilling the function of keeping watch for enemies.

In this, therefore, non-teleological general laws cannot explain the fact that an event of type B has occurred for the stated function.

In this case, the pattern of explanation into which D1 fits, differs logically from those in which D2 fits. But, if this is so, the type of explanation applicable to D1 and D2 will vary with regard to the assumption of the nature of zeds, and in such a way that the same pattern is not always applicable to both D1 and D2. An extraneous assumption does, therefore, determine the logic of explanation into which D1 and D2 may fit.

IV

In order to answer the question, "Can all explanations of behaviour be reduced to one type of explanation, i.e. non-purposive (causal) explanation?", we have, in the provisional argument outlined above, distinguished three types of logic of explanation:

    (a) Covering Law Explanation.

    (b) Teleological explanation that is logically secondary to Covering Law Explanation.

    (c) Teleological explanation that is not logically secondary to Covering Law Explanation.

This attempt to distinguish three types of logic of explanation, meant that we had to postulate that there must be three kinds of zed:

    (i) Machines.

    (ii) Organisms which are self-correcting systems.

    (iii) Agents.

This shows that it was conceivable that more than one logic of explanation of behaviour could apply.

It may, however, be objected that this attempt to distinguish conceivable types of explanation, hinges on assuming that there are different kinds of zed, which is precisely the point at issue. It was simply assumed that not all human behaviour can be reduced to a single causal type of explanation. This assumption must now itself be subjected to investigation by considering, in more detail, the hypothetical distinction between "logics" of explanation.

V

Before discussing the above assumption, let us draw together the threads of the problems that have so far arisen. The main problem with which we are concerned in this chapter is: Can all human behaviour be characterised as non-purposive?

To answer this question, we set up an example of two sets of descriptions of behaviour of zeds, whose nature was left undetermined. The question then arose, Are these two sets of descriptions. (D1 and D2) logically different, or logically the same?

If zeds are mechanical toys, then D1 and D2 could be fitted into a pattern of Covering Law Explanation. But the problem would be: Does the logic of explanation involved in D1 and D2 show _prima facie_ differences when zeds are _human_?

To answer this, it was assumed that zeds are human.

It was seen that both D1 and D2 could be fitted into a teleological pattern of explanation. The question then arose: Does an extraneous assumption – that the zeds are human – determine the logic of explanation into which D1 and D2 can be fitted?

A provisional answer to this question was outlined. But this led to further difficulties. It could be said that in this provisional argument, the attempt to distinguish different _types_ of explanation, hinges on the _assumption_ that there are different kinds of zeds, which is precisely the point at issue.

This assumption will now have to be investigated, by considering further the problem of distinguishing different "logics" of explanation.

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If the argument outlined in section III is wrong, it would follow that either these supposedly conceivable types of behaviour cannot be conceived, or, if they can, that they must still be reducable to one single type of explanation, namely, a Covering Law type of explanation. In both cases it would follow that the behaviour of zeds can always be explained solely with reference to causal antecedents, and Covering Laws, and that the behaviour of zeds can _always_ be explained in a non-teleological way.

The main question in this chapter can, therefore, be reduced to this problem: are all types of explanation of behaviour such that either (1) they can be reduced to, or (2) are wholly dependent on, Covering Law type explanation.

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Suppose that a zed on a rock utters a cry, α , and suppose that uttering the cry α in that situation, has until now been described as, "Warning other zeds of the approach of a leopard, or an enemy". Now if the behaviour of zeds can always be explained non-teleologically, then this cry must be explicable in terms of antecedent causal conditions. Also, if we mean by "purpose", the purpose or function as seen by zeds, then such a putative purpose or function cannot have a place in this type of explanation. But, as we saw, it is possible to have a purposive explanation, which would be an explanation in terms of causal antecedents and Covering Laws. If the sight or smell of a leopard causes certain chemical or physiological reaction in zeds, such that these reactions lead to the uttering of the cry, α , then such a sight or smell might be called a causal condition or antecedent. Nevertheless, the sight of, or smell of a leopard, cannot, in themselves, be antecedent conditions, in the sense demanded by the assumption that a zed's behaviour can be explained with reference to non-teleological laws. [7]

Suppose that zed behaviour can be explained sufficiently by a non-teleological explanation which is dependent upon the general laws, such as:
$r1.r2 \supset r3.r4 . \ldots \alpha$ (r1 and r2 being chemical and/or physical reactions resulting from the presence of a leopard; r3 and r4 being physiological reactions in zeds.)

/The explanation ...

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7. It is possible to say in teleological explanation, that it was because of, e.g., the sight or smell of a leopard that the zed on the rock uttered α : It will be possible to predict that whenever the zed on the rock utters α , it has either seen or smelt a leopard. On the basis of this, I can formulate a general law:

Smelling or seeing a leopard $\supset \alpha$

But this is different from a causal explanation, as it is still possible to say that zed behaviour is purposive, and that even if they did happen to see or smell a leopard, it does not follow that they must utter α :

The explanation of a particular occurrence of α will, therefore, take the form:

$$r1.r2 \supset r3.r4 \qquad . \quad r3.r4 \supset \alpha$$
$$\& \quad r1.r2 \text{ are the case}$$
_____

Therefore, $\qquad \alpha$

On this supposition, zed behaviour (still assuming that they are human) will be logically no different from the reactions or "behaviour" of machines. Let us imagine, therefore, that it is possible to construct a machine, which reacts in all respects and circumstances, in the way that zeds are supposed to behave.[8] Whenever leopards pass near the machine, or are simply near the machine, r1 and r2 cause reactions in the machine, which in turn cause α to be emitted by the machine.[9] This explanation of α will be dependent on the complex general law:

$$r1.r2 \supset ra.rb. \qquad ra.rb \supset \alpha$$

So the explanation of a particular occurrence of α, will have the same form as the explanation given above.

_____

8. We cannot frame this presupposition as the question, "Can a mechanical zed be constructed, which could _imitate_ all aspects of a zed's behaviour?" This question implies that the machine's reactions could be purposive, and our present presupposition is that zed behaviour cannot be described purposively.

A.M. Turing ("Computing Machines and Intelligence", _Mind_, 1950) asserts that it is conceivable that a machine, imitating all aspects of human behaviour could be constructed. Although the machine may not look like a human being, its behaviour would be indistinguishable from human behaviour.

If we accepted a thesis such as this, we would be able to say that a machine could "take the place of" a zed in any circumstances. For it could be constructed in such a way that its behaviour is indistinguishable from zed behaviour.

If the machine's behaviour were indistinguishable from zeds, in all conditions, then we would not know whether or not to call zeds machines, or the machines a new type of organism. W. Mays ("Can Machines Think?" , _Philosophy_, 1952) says, "If a machine could perform this or that human function it would not be what we now mean by a 'machine'. Its meaning has been stretched to such an extent that we might seriously contemplate calling it a 'new kind of organism'."

Cf also F.H. George, "Could Machines be made to think?", _Philosophy_, 1956.

9. Purely causal descriptions of, "Whenever a leopard passes ..." have to be given. We cannot, e.g., say, "Whenever a leopard passes within _range_ of the machine, it utters α ", for this implies that the machine has picked _out_ a leopard. This use of "pick out" imputes intentionality to the machine.

Imagine now that machines which react to α can be constructed. Then, and only when, α is uttered either by the first machine, or by zeds, this machine moves out of the clearing, and up the cliff with the remaining zeds. This reaction of the second machine can be explained in the following way:

$$\frac{\alpha \supset rc.rd \quad . \quad rc.ra. \supset re}{\therefore \quad rc}$$ α

(rc and rd being chemical and/or physical reactions. re being the physical reaction of moving out of the clearing and up the cliff.[10]

Now as all zed behaviour is to be explained in non-teleological terms, the behaviour of other zeds after the cry α, must be explained in the same way as the reaction of the second machine. That is, we must have an explanation such as:

and $$\frac{\alpha \supset r5.r6 \quad . \quad r5.r6 \supset re}{\alpha}$$

Therefore,   re

(r5.r6 being chemical and/or physiological reactions caused by cries of wavelength.)

There are, however, difficulties involved in assuming that a Covering Law model of explanation is always applicable to the behaviour of zeds.[11] These difficulties appear if we try to reduce the type of explanation given in (2) to the type of explanation given in (1):

(1) α because r1.r2
(2) α in order to 'U'

Explanations of type (1) will generally be of the Covering Law sort. Now if any explanation of this type is to be valid, it must be such that it can be symbolised in terms of the syllogism Barbara in Figure I, or by a hypothetical argument in which the antecedent is affirmed. The form of a Covering Law explanation, that is, is:

$$\frac{Ma\ P}{Sa\ M}$$ OR   & $$\frac{p \supset q}{p}$$

Therefore, Sa P   Therefore,   q

What is to be explained appears as the conclusion of a valid deductive argument.[12] So if we are explaining α,

/we would ....

10. re is an odd reaction. It must be described as a "physical reaction ---", as if we say that re can be described by "The machine moving out ---", we could still be implying that this reaction is intentional. We could be implying, e.g., that the machines want to ---

11. I do not propose to discuss the normal criticisms of a Covering Law model of explanation, such as those given by W. Dray, Laws and Explanations in History, Oxford University Press, 1957. Dray's argument that an historical event is unique and so could not be an instance of a law reveals the implicit weaknesses in

/this mode of ...

12. SEE OVERLEAF.

we would, say, following the Covering Law model.

> All cries having rl and r2 as antecedents are α-like cries
> This particular cry has rl and r2 as antecedents

Therefore, This particular cry is an α-like cry.

<div align="center">OR</div>

> If rl and r2, then an α-like cry
> &   rl and r2 are the case

Therefore, an α-like cry.

    The question now is whether (2) — α in order to G — can be reformulated in the form of a deductive argument. It may be argued that we may say:

    (3) α in order to G , because rl and r2, [13]

and that the validity of this explanation depends on the general statement:

> rl.r2 ⊃ α in order to G

    A deductive argument having this as major premiss can be formulated in the following way:

> If rl.r2 are the case, then α-like cries in order to G
> &   rl.r2 are the case.

Therefore,   an α-like cry in order to G

<div align="right">/Although (2)....</div>

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11 contd.   this mode of explanation. A full discussion of these issues will not be relevant to the problems that I am discussing.

12.   The explanation is, therefore, its own justification, as by showing that Sa P is the conclusion of a valid syllogistic argument, we are explaining Sa P. That Sa P appears as the conclusion of a _valid_ syllogism is a sufficient justification of the explanation.

13.   In a general statement we generally want to establish an entailment relation between (say) the various events referred to in the statement. Now, " α in order to G ", is not equivalent to either " $\alpha \supset G$ ", or, " $G \supset \alpha$ ". The reasons for this are the following:
    (1) G, on the one hand, need not refer to an event separate from α. It cannot, therefore, be said that there is an entailment relation (in the sense of a causal relation) between α and G.
    (2) If, on the other hand, G does refer to an event separate from α, there will still be no need to express the relation between α and G, as an entailment, e.g., the statement, "He crossed the road to buy cigarettes", will not necessarily be falsified if he did not buy cigarettes. It can, therefore, be said that in this explanation, we are not asserting that an entailment relation holds between the descriptions, "He crossed the road", and, "He is buying (or bought) cigarettes".

    But any attempt to express an entailment between α and G in fact assumes that, " α in order to G ", is a _proposition_ and not an explanation.

Although (2) - ∝ in order to G - does, in the above
argument, appear as <u>part of</u> a Covering Law explanation, it has not
been <u>reduced</u> to this sort of explanation.   On closer examination
we will find that in (3) - " ∝ in order to G , because r1
and r2", there are two different types of explanation, and not
one, as a Covering Law theorist would want to suppose.

Implicit in (3) are two answers to two different
questions, each answer being itself an explanation.   The question
and answer implicit in (3) are "Why ∝ ?, the answer being the
explanation, " ∝ in order to G ".   (3) itself is an answer to
the question, "Why does ∝ have the function G ?", the answer
being "Because of r1 and r2."

It follows, therefore, that teleological explanation
cannot be reduced to Covering Law explanation.[14]   Does it
further follow that teleological explanation is not dependent on
Covering Law explanation?

·++++++++++++++++++++

Let us now reframe the question, Is teleological
explanation wholly dependent on non-teleological explanation or
general laws?, as the further problem: Does the valid application
of teleological explanation to zeds indicate that zeds must be of
a <u>sui generis</u> nature in relation, say, to physical occurrences
and machines?

It may be objected that this is not the case.   As was
seen earlier, it is possible to argue that an explanation of the
form, " ∝ in order to G ", is applicable to the reaction of
machines.   A mechanical system may be set up in such a way that
the <u>function</u> of the first machine is to set the second in motion.
A zed machine may be so designed, e.g., that it moves off with the
other zeds, whenever the cry ∝ is uttered.   A system of two
machines is therefore an example of a <u>teleological</u> physical
system. So, that teleological explanations can be validly
applied to zed behaviour does not indicate that zeds' nature is
<u>sui generis</u>, with respect to machines etc.[15]

/All, therefore,...

14.   It can be claimed, as Taylor (<u>op. cit.</u> p 13 ff) has pointed
out, that a teleological explanation can be "translated-out-of-
existence" into a non-teleological account.   E. Nagel (Teleological
Explanations and Teleological Systems", Feigh, H., and Brodbeck, M.,
(eds), <u>Readings in the Philosophy of Science</u>, New York: Appleton-
century- Crofts, 1953) and Braithwaite (<u>op. cit.</u>) argue that this
reduction is possible.   But Braithwaite's argument, especially, is
made more plausible by his assumption that intentions are causes.
Without this assumption, his argument is not so plausible.

15.   cf Taylor, <u>loc. cit.</u>, p. 54-5.

All, therefore, that has really been decided so far
is that there are two types of explanation, logically different,
which are applicable to both machines and zeds. Questions
about the dependence of one type of explanation on any other cannot
therefore, be solved in this way.

It is important to remind ourselves what is involved in
this. Since the nature of zeds has not yet been determined,
the main problem under discussion is this: Can all forms of
"behaviour" be reduced to that form of "behaviour" which is
appropriate in the case of machines? We have seen that two types
of explanation are applicable to the behaviour of both zeds and
machines, i.e. to all forms of behaviour. Now if all forms of
behaviour can be reduced to machine behaviour, then presumably,
these two types of explanation will be sufficient in all cases,
and also equally appropriate in all cases, but always in such a way
that teleological explanation is dependent on non-teleological
explanation. If we say that the behaviour of zeds can, logically,
be no different from the reactions of machines, then we will have to
say that in all explanations of behaviour, non-teleological expla-
nation is logically prior to teleological explanation.

Consider what is involved in this last statement,.
If I say that the function of α is to set the second machine in
motion, I am saying that α is the means to an end. But the
truth of this explanation will depend upon the general statements:

(1) $\alpha \supset rc . rd$
(2) $rc . rd \supset \alpha$

If these two statements were not true, then the teleological
explanation could not be true.

Although the relation between α and rc is causal, the
relation between the general statements (1) and (2) above is
"contingent", in a sense other than that in which all causal
relations are not logically necessary. It is contingent in the
sense that there need not be any purposive connection between
(1) and (2). This means that it could simply be a matter of
chance that the first machine sets the second in motion. No
one may have intended that α should cause this reaction in
the second machine.

We must, therefore, distinguish between two senses of
"function" which are related to this sense of "contingent".

(i) A machine may have a function in that sense in
which it is said that the reaction of a second machine to a

/first is ....

first is simply a "matter of chance", or "contingent". It
cannot, then, be said, e.g., that the function of α is
to set the second machine in motion.

(ii)   A machine may also have a function in the sense
in which it is said that it so happens that, unintentionally, the
machine "functions" in this or that way.

That the two general laws (1) and (2) must be valid,
is not, therefore, a sufficient condition for the validity of
the explanation " α in order to re", in those cases where the
relation of a machine to its function is non-contingent, in the
sense outlined. Although these two general laws are necessary
conditions for a machine intentionally to have a function, this
kind of function can only be explained by introducing the notion,
not covered by general laws, of someone intending the second machine
to be set in motion by α .

When, therefore, I say in future that the function of
a first machine is to set a second in motion, I shall imply that
this machine has been so designed or constructed that, given
certain antecedent conditions, it will set a second machine in motion.
In the specific example I have been using, I, therefore, imply
that the second machine has been so designed or constructed, that it
reacts to a particular sound being emitted by the first machine.

It should be clear now that, strictly speaking, the
notion of a "teleological system" will enter our description of
reactions of machines/ only if we say that it was the purpose or
intention of some designer that they should have that function.[16]
It should be clear, that is to say, that the applicability of a
teleological explanation to the reactions of the machines, depends
on two conditions:

(a)   Some non-teleological general statements must be true.

(b)   It must have been the intention or purpose of some
operator or designer that they should have this
function.

/We can, therefore ...

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16.   It is possible to imagine a situation in which an outsider
could, after observing the reactions of some machines, say that
the machines have such-and-such a function. If, however, this
outsider later learns that the machines were randomly placed, and
so were not intended to constitute a system, he could either:
(a)   say that they could have that function, or
(b)   claim that for his purposes they do now have a function.

But again, it will only be because of his desires, or
intentions, etc., that the machines can be said to have a
function.

We can, therefore, say that non-teleological explanation of machine reaction is logically prior to teleological explanation, in that the notion of a "machine" presupposes that certain reactions will follow, given certain conditions. Invention is based upon an application of established Covering Laws to a specific situation.

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Now while it has been established that both types of explanation, teleological and non-teleological, are applicable to that behaviour of zeds which has been described as, "Uttering the cry α in order to G ", the question is now whether these two types of explanation must in principle be applicable in the same way to the uttering of such cries by zeds, as to machine behaviour. If these two types of explanation are in principle applicable in the same way, then teleological explanation must always be dependent on non-teleological explanation.

A first question to be answered may be put in this way: Must the conditions which are to be satisfied, if teleological explanation is to apply, be the same for zeds as for machines? In short, is it possible for a zed to have a nature, which is such that (a) both non-teleological and teleological explanation apply to its behaviour, but where (b) the conditions for the applicability of teleological explanation to its behaviour differ significantly from those established in the case of machines?

One way of attempting to answer this question is to assume once again that all zed behaviour can always be reduced to "machine behaviour". If no difficulties arise from this hypothesis, i.e. if this hypothesis leads to appropriate and sufficient explanations of behaviour in all cases, the hypothesis might be regarded as established. If this cannot be done, however, then we may assume that zeds may conceivably differ in principle from machines.

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VI

Let us once again draw together the threads of the argument.

The main question of this chapter has at this stage been reduced to this one: Are all types of explanation of behaviour such that they either (a) can be reduced to, or (b) must be logically secondary to Covering Law explanation? It has been argued that teleological explanation cannot be

/reduced to ...

reduced to Covering Law explanation; Alternative (b) was then
seen to be the important possibility.

If zeds are assumed to be mechanical toys, or machines,
any teleological explanation of any item of their "behaviour"
must depend in part on the condition that certain non-teleological
general laws must be true. This is, however, not a sufficient
condition. We must assume that it was the intention of the
designer or operator of mechanical zeds that that behaviour should
have the stated function.

These two conditions are such that in the case of
the mechanical zeds non-teleological explanation of their behaviour
will be logically prior to any teleological explanation; and
teleological explanation will be dependent on non-teleological
explanation. The question then becomes this: Is it possible
to conceive of zeds having such a nature that (a) both teleological
and non-teleological explanation are applicable to their behaviour,
but where (b) the conditions for the applicability of teleological
explanation of their behaviour differ from those established in the
case of machines?

We can now say that if all human behaviour is to be
characterised as non-purposive, then the conditions for the
applicability of teleological explanation to all zed behaviour (i.e.
including those cases where zeds are not machines) must be the same
as the conditions established in the case of teleological explanation
of reactions of machines. If it is found that the conditions
governing the applicability of teleological explanation to at least
some zed behaviour cannot be the same as those operative in teleo-
logical explanation of machine "behaviour", then we can conclude
that all human behaviour cannot be characterised as non-purposive.
For it will follow from this that non-teleological explanation need
not be logically prior to some teleological explanation, and this
teleological explanation need not be dependent on non-teleological
explanation.

To discuss this, we assume again that all zed behaviour
can be reduced to machine behaviour. This means that we are assuming
once more that all zed behaviour can be explained by reference to
causal antecedents.

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To say/ ...

To say that the behaviour of zeds can always be explained with reference to causal antecedents, implies that if we, e.g. are to explain α teleologically, we must further imply that zeds have been so designed or constructed that:

(a) $(r1.\ r2.\ \supset\ r3.\ r4\ )\ .\ (r3.\ r4.\ \supset\alpha\ )\ .\ (\alpha\ \supset\ r5.\ r6)\ .\ (r5.\ r6\ \supset\ re)$

(b) α has been given this function by some operator or designer.

The teleological explanation, "α in order to re", is, on this hypothesis, dependent on these two implications, which will become conditions for the applicability of teleological explanation This hypothesis, however, leads to absurdities.

If we suppose, as we here do, that some outside agent (other than this zed) is "guiding" or "controlling" the behaviour of these zeds, the question will be shifted to those other zeds, who presumably are not of the nature of machines. But if these other zeds are different from machine zeds, then it must be in the sense that they themselves do not presuppose the agency of another kind of zed. We will, therefore, be implying that there are different kinds of zed behaviour, which is contrary to our present assumption. It will, therefore, be obvious that condition (b) cannot apply to at least some teleological explanation of zed behaviour.

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The question now arises as to what the relation is between causal laws and teleological regularities, where zeds are not machines. Consider the following case:

Regularity between environmental conditions, bodily exertion, and/or perspiration, taken in conjunction with an established correlation between heat stroke and perspiration, may intimate that the function of the perspiring of zeds is to prevent heat stroke. It may be noted that 'function' here does not presuppose the notion of an operator or designer. Nevertheless, it may be said that such 'behaviour' of zeds is analogous to reactions of machines in at least one sense - i.e. the sense in which teleological explanation here depends for its validity on certain non-teleological laws.

Consider the following statements:

An unchecked rise in body temperature is a necessary and sufficient cause of heat stroke. Free secretion of fluid through the pores lowers body temperature. Therefore, if any animal perspires freely, it will not suffer from heat stroke.

We have here a conjunction of laws, which, if treated as an argument, will be a tautology.[17] It is partly because this argument is a tautology, that we can argue that the "function" of zeds' perspiring is to prevent heat stroke. The justification of the teleological explanation will, therefore, lie in the relation between these non-teleological laws. If these laws are not valid, then the teleological explanation will not be valid.

Could we now argue that the same conditions for the application of explanation – the same relation between teleological and non-teleological laws – hold in the case of the perspiring of zeds, as in the case of uttering a cry α ? Is it not possible that even though α can be explained teleologically without reference to an operator or designer, that nevertheless the behaviour of a zed uttering α is not, in principle, different from the perspiring of zeds, and, in that sense, of the reactions of machines? Could the teleological explanation of α be justified in the same way as the teleological explanation of the perspiring of zeds?

To answer these questions it is necessary, first of all, to pay some attention to the sense in which the conjunction of causal laws, on which a teleological explanation of the perspiring of zeds is dependent, is a tautology. These laws, by themselves, are necessary and not sufficient conditions for the truth of the teleological explanation. To assert that α occurs "for the sake of" ι, i.e. presupposes more than simply a series of causal statements formulated as the tautological truth function:

$$\left[\ (r \equiv q) \cdot (r \supset \sim q) \ \right] \supset (r \supset \sim p)$$

It presupposes the conditional statement that heat stroke is something that can be <u>avoided</u>. Given certain causal conditions, which would lead to p , other causal conditions come into operation, such that $\sim p$. This happens <u>normally</u>, but not invariably. The conjunction of laws is therefore, tautologous, <u>if</u> it is accepted that heat stroke can be avoided, or can fail to be avoided. The tautologous statement in effect postulates that if such-and-such conditions, defining heat stroke, are avoided, then heat stroke will not occur. The important point is, however,

/that the conjunction ...

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that the conjunction of causal laws, justifies a <u>teleological</u>
explanation, which is not deduced from this conjunction.

It is necessary now to state more clearly what further
condition is involved, if the above statement is to count as
a tautologous justification of teleological explanation on
this level. This condition is indicated by the notion of
"avoiding". Consider the following: That r causes ~p may
simply be contingent, in the sense outlined earlier. If,
however, it was said that p, q and r could occur in <u>one</u> person
or machine, then the possibility of contingency is excluded.
If the relation between p, q, and r is consistent, then, because
they could occur in any one person or machine, we can say
that there is more than just a contingent causal link between
p, q and r. But if this additional information, that p, q, and
r, could occur in any one person or machine, is not given, then
we cannot conclude that the function of r is to prevent p.

This proviso that p, q, and r can occur in <u>one</u> person,
and the conditional that p can be <u>avoided</u>, indicates that the
notion of a "system", is a necessary condition for the
applicability of the teleological explanation. The applicability
of the teleological explanation, "Zeds perspire in order to
prevent heat stroke" depends, therefore, on the conditions:

    (i)   Certain non-teleological general laws must be valid.
   (ii)   These laws must apply to a self-correcting system.

Once again it may be argued that a self-correcting system
could be either a machine, or an organic system, and that apart
from the fact that machines presuppose designers, or inventors,
no serious difference in logic exists between organic systems
and machines, with regard to the explanation of particular self-
correcting activities, i.e. activities maintaining the "balance"
of the system.' For at least one condition in both cases is
that there should be a tautologous relation between the non-
teleological laws in the system. Therefore, although the
conditions for applicability of teleological explanation to
some zed behaviour are not the same as those applying to
teleological explanation of <u>all</u> machine "behaviour", teleological
explanation in this case must still be logically secondary to
non-teleological explanation. So once again our question must
be altered. Instead of asking whether the conditions for the
applicability of teleological explanation to <u>all</u> zed behaviour
are the same as those operative in teleological explanation of
machine "behaviour", we now must determine whether the conditions
are the same as those for the teleological explanation of a self-
correcting system.

/If these conditions ...

If these conditions are the same, then it can be said that all teleological explanation of behaviour is secondary to Covering Law explanation, and hence that all human behaviour can be characterised as non-purposive.

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It has been supposed that the causal conditions which must be valid in a correct teleological explanation of α are:[18]

$$\left[(r_1 . r_2 \supset r_3 . r_4) . (r_3 . r_4 \supset \alpha) . (\alpha \supset r_5 . r_6) . (r_5 . r_6 \supset r_c) \right] \supset (\alpha \supset r_c)$$

If this is the same as the truth-function mentioned earlier, we would have to say that the function of $r1 . r2$ is rc. This, however, is unsatisfactory as we wish to give some account of the function of α, and not of $r1$ and $r2$.

Suppose, then, that we shorten this to the argument:

$$\left[(\alpha \supset r_5 . r_6) . (r_5 . r_6 \supset r_c) \right] \supset (\alpha \supset r_c)$$

Before this can count as a valid argument, showing that the function of α is to bring about rc, some further proposition will be necessary – the notion of a system. What sort of system could this be?

We have seen that, if we are to carry through the argument that all teleological explanation is dependent on non-teleological general laws, and hence secondary to Covering Law explanation, the system presupposed in the teleological explanation, " α in order to warn ...", must be the same as that presupposed in a teleological explanation of the perspiring of zeds (where zeds are assumed to be human). Now if the system to be presupposed is the same as that presupposed in the teleological explanation of the perspiring of zeds, we cannot speak of α having a function in relation to other zeds.

α could, then, only serve some physiological function in zeds uttering the cry.

But doesn't this misconceive the situation? α is not obviously a reaction which restores the balance of a self-correcting system. Perspiring, we said, restores the balance of an organic self-correcting system. But the function of α is supposed to be to warn the other zeds of the approach of an enemy. It has a function only in relation to other zeds, and therefore does not have a relation to other events, or possible events, in a self-correcting system.

++++++++++++++++++++ /It is clear ...

18. If this were treated as an argument, it would be a tautologous truth function of the form:

$$\left[(p \supset q) . (q \supset r) . (r \supset s) . (s \supset t) \right] \supset (p \supset t)$$

It is clear, therefore, that <u>in this instance of zed behaviour</u>, neither of the two conditions so far established for teleological explanation is applicable. As neither of these two conditions is applicable, important consequences for our argument will follow.

It is evident from our description of zed behaviour (D1) that α has a function in relation to other zeds, both when we assume that zeds are machines, and when we assume that zeds are human. But it will not be sufficient, on either assumption, to simply state that α has a function. In the case of machines, we must presuppose a designer or operator. Because we cannot presuppose this, or the notion of a self-correcting system, in the teleological explanation of α , where zeds are human, the only reason that can be given, is that α has a function because <u>zeds take</u> the uttering of α , in certain conditions, to be sufficient for fulfilling the function of keeping watch for enemies.

Once it is said that <u>zeds take</u> α to have a function (e.g. warning them of the approach of enemies), then the presupposition that all zed behaviour can be explained with reference to causal antecedents, breaks down. For it is now claimed that α plays a part in a <u>linguistic</u> system. If α has a function only because zeds take α to have that function, it follows that the uttering of α must have certain contextual requirements. There will be definite situations in which α will be appropriate, and the uttering of α will carry a certain meaning to zeds. So α must be a <u>sign</u> that is <u>used by zeds</u> to indicate to, or to warn, other zeds of the approach of an enemy. Because α is used by zeds, and is seen by them to be a warning sign, it must be a linguistic device, the <u>meaning</u> of which is something like, "There is danger". This means that the system to be presupposed in this particular instance of explanation is not logically isomorphic with the two systems mentioned earlier.

Consider one important feature of the two systems, which were found to be necessary conditions for teleological explanation of machine behaviour, and of perspiring. These two systems were introduced to bridge the gap between a mere conjunction of causal laws and the claim that these laws have some point or purpose and hence are tautologous. But the basis or "hard-core" of these two systems must still be

/this conjunction ...

this conjunction of causal laws.

From this, an important point follows:

Any reaction, or "behaviour" in these systems must occur at a constant speed. If this reaction does not occur at this constant speed in any particular machine, it may be said that there is a malfunction in the machine.

If α is to serve a function in a linguistic system, then neither of the above implications can apply. It was said that if α has a function, because zeds take α to have a function, then α must have certain contextual requirements - i.e. there must be certain rules which prescribe the correct use of α. This implies that α could be <u>mistakenly</u> used, i.e. it could, e.g. be used when there is no danger. This means that the uttering of α, may <u>imply a break in the cause-effect relation</u>.

Once it is conceded that there could be a break in the cause-effect relation, neither of the two previously established sets of conditions for teleological explanation can apply to <u>this</u> zed behaviour. In this teleological explanation we are not presupposing a system, which can bridge the gap between a conjunction of causal laws and the claim that this conjunction of laws has some point or purpose.

As can be seen, the nature of this linguistic system is such that it is a mistake to presuppose that the uttering of α in order to G can be exhaustively explained solely with reference to causal antecedents. Because of the break in cause-effect relation <u>in this instance</u>, some zed behaviour can only adequately be explained teleologically. The conditions for the applicability of teleological explanation of zed be- haviour cannot, therefore, be constant, or logically isomorphic. As the kind of system presupposed in different kinds of teleological explanation of zed behaviour cannot be reduced to a <u>single</u> kind of system, some teleological explanation of zed behaviour must be "<u>basic</u>" or "<u>primitive</u>" with respect to Covering Law explanation.

VII

The general conclusion of this chapter must be that one important implication of reductive analyses of the concept "act" is wrong. <u>All</u> human behaviour cannot be characterised

/as non-purposive ....

as non-purposive. An extraneous assumption - that the zeds are human - does, therefore, determine the logic of behaviour into which D1 and D2 can be fitted. So the explanation of some zed behaviour, if zeds are assumed to be human, presupposes a set of conditions, which do not apply in the case of the behaviour of self-correcting machines or organisms.

Descriptions of such behaviour, which demands this kind of explanation, I now call "act-descriptions", as descriptions of this sort of behaviour will be logically different from descriptions of reactions of machines, and of organic self-correcting systems.

CHAPTER 3

PURPOSES AND RULES

I

In at least one sense of "behaviour", descriptions of
behaviour presuppose a purposive/teleological pattern of explanation.
This sense of description of behaviour includes what I call "act-
descriptions". The question now arises: In what way or ways can
act-descriptions be distinguished from descriptions in a non-
purposive sense, and from those descriptions which do presuppose
a purposive pattern of explanation, but which nevertheless are not
act-descriptions?

II

Let us use the word "natural event" in a somewhat extended
sense to indicate a state of affairs, or process, or end of a
process, which either changes or remains constant from one temporal
occasion, t1, to another temporal occasion, t2. Let p, q, r,
etc., be propositions describing such events.

Logically, there will, therefore, be four possible types
description of natural events:[1]

(1) A description of an event such that any proposition, p, is
    true at t1 and also true at t2. (p remains true)

(2) A description of an event such that any proposition, p, is true
    at t1, and ~p true at t2. (~p becomes true)

(3) A description of an event such that ~p is true at t1, and p
    becomes true at t2. (p becomes true)

(4) A description of an event such that ~p is true at t1, and
    ~p is true at t2. (~p remains true)

These types of description of events can be symbolised in
this way:

(1) pTp
(2) pT~p
(3) ~pTp
(4) ~pT~p

Now if/ ...

(1) For the analysis that follows 1 am indebted to G.H. von Wright
Norm and Action, London: Routledge and Kegan Paul, 1963, Chapters
II and III.

Now if descriptions of purposive behaviour, and especially act-descriptions, are logically different from descriptions of natural events, the logical difference should appear if we try to apply these symbolisations of descriptions of events to forms of description of purposive behaviour. Compare, e.g., descriptions of the boiling of a kettle to descriptions of murder. A kettle boiling may be described in terms of a change in state, such that it is true to say that the kettle is not boiling at t1, but false to say that it is not boiling at t2. The form of the description of this event will be: ~pTp. Similarly an act of murder can be described in terms of a change in state, such that John is alive, to one such that it is a fact that John is not alive. Or it may be described in terms of a change in state, such that it is a fact that Peter did not kill John, to a state such that Peter did kill John. The form of the description of this event will also be : ~pTp.

A complication now arises. Consider the two descriptions: "He boiled the kettle", and "After some time the kettle boiled". Both these descriptions have the form, ~pTp. In both cases the boiling of the kettle was brought about through the agency of electric power. In explaining T, therefore, use may be made of typical empiricist methods for determining constant or differing factors in the description of preceding and subsequent states of affairs. In the case of the description, "He boiled the kettle", however, such explanation can only be regarded as partial. The form of the description does not, e.g., T, cover the question, "Why did he boil the kettle?" In this case, an additional type of factor must be introduced into the form of the explanation for T in ~pTp. Let us symbolise this factor by the constant, d. The form of description d(~pTp) will indicate that events described by descriptions of this form are not to be explained merely in terms of non-human agencies. d, therefore, indicates that types of question applicable in one case are not applicable in the other.

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Let us now concentrate on descriptions of purposive behaviour, which are also descriptions of acts. Corresponding to the four elementary types of description of events there will be four types of act-description.

(i) d(pTp)

Since in this type of description the feature of the world described by any proposition, p, remains constant over a stretch of

/ time - - -

time, this will be the form of the description of the act of preserving, or maintaining, whatever is referred to by p. It may be presupposed that without this act the situation described by p would otherwise have changed.

(ii) $d(pT \sim p)$

This form of description applies to those cases where it is stated that, through some act, whatever is referred to by p is no longer the case.

(iii) $d(\sim pTp)$

This form of description applies to those cases where it is stated that, through some act, whatever is referred to by p is now the case.

(iv) $d (\sim pT \sim p)$

This form of description applies to those cases where it is stated that, through some act, the state of affairs referred to by p did not hold over a stretch of time.

If d is to be of any logical significance, it must be   more than a mere symbol indicating a particular class of natural event. The main question of this chapter can, therefore, be reformulated as this question: How is the d-expression in an act-description to be analysed?

III

Consider first a reductive analysis of d: On a reductive theory, an act-description of the form, e.g., $d(pTp)$, should unpack into at least two descriptions, which must be contingently related, and whose referents must be contingently (externally) related. Such an analysis seems to be suggested by the symbolism that has been used. By symbolising the difference between descriptions of natural events and act-descriptions by the addition of a factor, d, it is apparently   suggested that d has a referent, which is externally, or loosely, related to the type of event described by, e.g., $\sim pTp$. It further seems to follow that, in order that a description of an event of the form, $\sim pTp_2$ may be regarded as also possibly an act-description, or part of an act-description, an additional factor, d, must be conjoined to the first description. Loosely speaking, i.e., a description of a muscle-movement may be said to be part of an act-description. If a suitable description containing the factor, d, (a d-expression, or d-description) can be added to the first description, while, nevertheless, these two descriptions are not analytically related. Similarly, a des-

cription of an act of murder can be analysed into two further descrip-
tions:

(i) A description of the form, $pT\sim p$, which is the form of a description
of an event analogous to the form of description used for describing
a kettle brought to the boil. These descriptions fit into non-
purposive patterns of explanation.

(ii) d, which is the description of some additional factor or event,
which, when joined to a description of the form, $pT\sim p$, "converts"
this description of an event into an act-description.

On this analysis, then, d-expressions cannot by themselves
symbolise act-descriptions. They can only symbolise the description of
some event or factor, which is externally related to a description
of the form, $pT\sim p$. We will have an act-description only when a d-ex-
pression is conjoined to a description of an event.

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Is this an adequate analysis of d-expressions? Is it not at
least conceivable that, in contrast to reductive assertions,
$d(\sim pTp)$ symbolises a type of description which is unified, i.e.,
which cannot logically be unpacked into two separate descriptions —
the form, d, and $\sim pTp$? Let us, however, consider first some of the
implications of a reductive analysis.

As was said, d-expressions must symbolise descriptions of
events that are externally related to events described by, $\sim pTp$.
On this type of theory, obviously, an act is constituted by a bodily
movement plus some other concurrent event, generally, but not necessarily
construed as a mental, or other interior, event or state of affairs.
Thus d-descriptions may symbolise descriptions of desires.[2]

The question now arises as to what the relation is between

d and/ ...

2. Cf. A.I. Melden, Free Action, London: Routledge and Kogan
Paul, 1963.

R.S. Peters, The Concept of Motivation, London : Routledge
and Kogan Paul, 1958.

d-expressions could equally be descriptions of "motives",
"drives", "intentions", "volitions", "reasons", etc. The actual
content given to a d-expression will not effect the validity of the
argument that follows. All that need be supposed is that d-expressions
refer to some event, mental or physical, which is the cause or
constituent of an act.

d and ∿pTp, i.e., between the description of a desire and the descrip-
tion of a bodily movement; as well as between the desire and the bodily
movement, in those cases where these two constitute an act-description
and an act, respectively. One way of interpreting the formula, "Act =
Movement + Desire", is to say that an item of behaviour cannot be
called an act if it is not _caused_ by an internal event called a "desire".

Important consequences follow from this interpretation and
definition of an act. Since desires on this interpretation are said
to be private, or internal, states of mind, or mental events, overt
public behaviour cannot be regarded as an act. Overt behaviour can at
most be only part of an act. If, therefore, acts are constituted by
movements and desires, we can identify some behaviour as an act of a
certain kind only insofar as we can recognise that this sort of act is
constituted by characteristic desires, and characteristic movements.
To describe other behaviour as acts of a different sort, we must recog-
nise that these other acts are constituted by either different
characteristic movements, or by different characteristic desires, or
by both. The same overt behaviour, e.g., an arm extended at right angles
to the body, could be regarded as part of the act of signalling a right
hand turn, or as part of the act of pointing at an object. This same
overt behaviour could, therefore, be a constituent of two different
acts. In this case, then, to distinguish between these two acts, we
must distinguish between at least two different desires or kinds of
desire.

The description, "John is pointing at an object", must, then,
unpack into the subsidiary descriptions:
(a) "M1"   –   a description of the movement of John's arm.
(b) "D1"   –   a description of John's desire.

The description, "John is signalling a right-hand turn", must also
unpack into two subsidiary descriptions:
(c) "M1"   –   a description of the _same_ arm movement.
(d) "D2"   –   a description of a _different_ desire.
The distinction between these two kinds of act will, therefore, lie

in the different d-constituents of the acts; the d-constituents in
this case being desires.

Some complications may arise in those cases where we
distinguish between two kinds of act merely on the grounds of

/ d-constituents - - -

d-constituents.Thus, if we assume that the acts of signalling a right-hand turn, and pointing at an object are constituted in part by the same (qualitatively) bodily movements, we may symbolise the conditions which must obtain for a successful application of the corresponding act-descriptions in the following way:

1(a) The act of pointing at an object must be constituted by events of the type D1 and M1.

(b) Events of type D1 are the causes of events of type M1.

2(a) The act of signalling a turn   must be constituted by y events of type D2 and M1.

(b) D2-type events are causes of M1 -type events.

Now the statement that a d-type event causes an M-type event(i.e., a type of bodily movement) is a law-like statement, and hence it may be supposed that in these conditions for the applicability of the act-descriptions in question,a common type of effect is stated to be caused by different types of events. This is not, of course, a fatal objection. Conditions 1(b) and 2(b) need not contain contradictory statements. But, if events of type M1 can be caused by events two dissimilar types, D1 and D2, some specification of the circumstances in which events of each type cause the common type of effect must be given. We may,therefore, say:

(i) D1-type events, in conditions x, cause M1-type events.

(ii) D2-type events, in conditions y, cause M1-type events.

What content should, however, be given to x and y? Are they further desires, which in conjunction with D1 and D2, are the causes of M1-type events? Or are they the causes of D1 and D2? In both these two cases , the criterion for distinguishing acts with the same or similar constitutive bodily movements , is no longer a d-constituent, in the sense so far assumed, but a further factor. It follows, therefore, that acts of different kinds may have the same, or similar, M-, and d-constituents. Since a similar analysis may be applied to x-, and y-factors in determining the type of act which is constituted by, e.g., D1 and M1, it is clear that on this type of theory , it is hard to account for our recognition of acts as being of a certain sort.

These objections are, of course, not fatal. A theory is not wrong because it is complicated. But, quite apart from these difficulties this analysis seems subject to a fatal general objection. It can be shown that that an M-factor cannot be caused by a d-factor, i.e., that

/ it makes ----

it makes no sense to say that bodily movements are effects of mental events, such as desires.

In general, if we say that x causes y, then, if this is to be a significant statement, x and y must be identifiable apart from the causal relation, which supposedly holds between them. We must, in principle, be able to specify criteria other than, " x is the cause of y", for the identification of x and y. So, if 1(b) and 2(b) are to be significant causal statements, the referents of the descriptions, "D1", and, "D2", must be identifiable apart from the supposed causal relation between these events and M-type events. The referents of these descriptions must be separately identifiable, without reference to the referents of M-type descriptions, i.e., without reference to any bodily movement with which they may be connected. We cannot, therefore, merely say that the referent of any D1-type description is that mental event which causes my arm movement when I point at an object; and we cannot merely say that the referent of a D2-type description is that mental event which causes my arm movement when I signal a right-hand turn. We must say more.

But can we ever say that the referent of D1-type descriptions is this thing, and the referent of D2-type descriptions that thing, in the sense in which it is necessary to separately identify them? The referents of D1-type, and D2-type descriptions are supposedly "interior" or mental events, which must be identified apart from overt behaviour. It will, therefore, in principle, be impossible to ascribe public, or ostensive defining characteristics to them. The point of saying that an event is is wholly private, i.e., private in principle, is that such events are supposed to be non-spatial. Private events are not merely opposed to overt bodily movements, but to all bodily movements, because any covert bodily movement may, in principle, become public. For this reason, d-description referents, when these are taken to be desires, cannot be spatially identified. Such temporal identification as these events may have, however, depends on their connection with some events which can be spatially identified - in this case bodily movements. But since on our hypothesis, d-descripion referents must be identified without reference to any M-description referents, it is hard to see how such d-description referents can be temporally located, i.e., located at all. It seems, therefore, that, in principle, we cannot give any defining characteristics for the identification of d-description referents of the type, e.g., D1 and D2. Consequently, law-like statements

/statements - - -

statements such as 1(b) and 2(b) will, on this analysis, be vacuous.
On this analysis it does not make sense to say that desires (or any
other mental events) cause bodily movements.

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It may, however, be argued that the formula, "Act = Movement
+ Desire", does not necessarily presuppose that a desire is a cause of
a bodily movement. It may be said that it presupposes no more than that
an act-description can be unpacked into at least two subsidiary des-
criptions, which would in conjunction be equivalent to the act-descrip-
tion. Th act-descripiton, "He raises his arm", should, e.g., be analysed
into the subsidiary descriptions:

(i) "He has a desire".

(ii) "His arm is rising".

That those two descriptions are equivalent to the complex description,
"He is raising his arm", and not some causal connection, may be what
is expressed by the above formula.

This too is a reductive analysis, and its distinctive feature.
are that in it (a) a description of a desire is linked with a descrip-
tion of a (non-purposive) bodily movement, and (b) a conjunction of two
descriptions of this sort are claimed to be equivalent to an act-
description. Since, however, a description of a desire may be, on this
analysis, logically independent of a description of any movement,
the relation between these two kinds of descripiton, when conjoined in
an act-descripiton, is puzzling. What may be said at the moment is this:
On this analysis the conjunction between d- and M-descriptions is
indicates a loose logical link, such that the truth values of these
two descriptions, when conjoined in an act-description, must be
independently determined. On this analysis, therefore, it is again
claimed that d-values are externally related to possible values of
descripions of movements.

Such an analysis, it may be objected, implies an odd use of
the concept "desire". In ordinary discourse, a condition for the use
of the concept "desir "is that some behaviour has been identified as
an act, and the concept "desire" is linked to the descripition of
that act. The use of "desire", "desiring", is only intelligible in
the context of descriptions of acts and doings.

If, however, a description of a desire makes sense only in

the context of an act-description, the truth values of d-descrip-
tions obviously cannot be determined indepedently of any act-descrip-
tion - as it must be if, as on this analysis, it is claimed that
the truth value of d-descriptions is independent of the truth value
of M-descripitons. For this reason alone, the claim that a description
of a desire + the descripiton of a non-purposive movement is
equivalent to an act-descripiton , must be suspect.

Let us test the above claim by examining some of the logical
features of the concept "desire", and by determining whether it can
be conjoined to descriptions of non-purposive events in a way accept-
able to this particular reductive theory.

An intelligible use of the concept "desire" presupposes a
desire for something. That is, any desire must have an object or
accusative. If, e.g., I am asked, "What do you desire?", and I reply,
"Nothing", I am not saying that I have a desire which is not yet fixed
on a desideratum. In saying this, I deny that I have a desire at all.
It follows, therefore, that if I legitimately claim to have a desire,
'then I must be able to indicate what it is that I am desiring. A
claim that x has a desire must entail the claim that x has a desire
for an identifiable something. [3.]

Now if an act-description must unpack into two independent
subsidiary descriptions, one of which asserts simply that an agent has
a desire, it is hard see how these inner impressions referred to by
the one description can exhibit the logical requirement of being directed
at something or other. It may be argued against this objection that a
desire for, e.g., food no longer operates when food is obtained. So
a claim that Peter desires food will be equivalent to a claim (a)
that Peter is experiencing some internal impression, and (b) that this
internal impression will be dissipated by acquiring the object of
desire, i.e. food. This means that the statement, "I desire x", will
be a mixture of (i) a categorical statement, "There is such-and-such
an internal impression, e.g., D; and (ii) a hypothetical statement,
"If x, then not-D". It further follows that the statement, "If D, then
not-x", will be true. Hence it seems to follow that in at least one
sense of "desire", this concept does not take an accusative. The
grammatical object, it may be argued, must not be confused with what

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in a logical sense, is to be regarded as an object of the concept
"desire".

This objection, however, will not do. Even if it is granted
that, in the way pointed out, desires do not have objects, it is still
true to say that we can distinguish between desires-for-this and
desires-for-that, and that it is meaningless to speak about desires-
for-nothing, and desires as such. But on the analysis we are now
considering, it is implied that, conceivably, Peter may have a desire
for he knows not what.

Consider the following argument: On this present analysis
I cannot determine what I desire by examining D alone. The claim that
I desire x, it was said, depends both on the occurrence of D and the
knowledge that, given x, D will be dissipated. This knowledge can only
be based upon the experience of past instances of D disappearing on
the procurement of x. This implies that to know that I desire caviar,
I must already have discovered that caviar satisfies one of my desires.
But since the desire for caviar must be my desire-for-owing, the desire
-for-caviar must have existed, presumably by virtue of some Platonic
pre-existence of the soul, before I knew what caviar was, or that it
existed. Alternatively it follows that the _first_ time that I notice
that I desire caviar, I cannot be sure that it is caviar that I desire.
This new internal occurrence or impression could as easily be dissipated
by raw kidneys. In that case, my desire would not be a desire-for-
caviar, but a desire-for-raw kidneys. My claim to desire caviar would,
therefore, be mistaken. It would equally be impossible for a child to
say that it desired the moon. For until it actually discovered that
its internal twitch would be dissipated by the obtaining of the moon,
it cannot truly say that it desires the moon.

The difficulty with this solution, in short, is that the
connection between the feeling of desire and the object desired is
said to be causal — the desired object is said to dissipate the "inner
feeling"; the desire or inner twitch. Hence this feeling or inner state
has no _logical_ relation to any object. Consider the familiar Humean
argument : The relation between a particular effect and a particular
cause is always contingent. That, e.g., A causes B cannot be "read off"
from the description of A. But it was said that any description of a
desire must indicate that this desire is directed towards a particular
object. As the events linked in a causal relation do not exhibit this
feature, it is misleading to write, "I desire x", as a causal statement.

/ This logical ——

This logical feature of the concept "desire" - i.e.,
that it must always be connected with the object of desire -
does not, without further argument, exclude the possibility of
there being desires, which are not connected in fact with any bodily
movement. It does, however, exclude the possibility of there being a
desire which is logically unconnected with any or all bodily movements.
The nature of this logical connection is not, however, entailment.
It is rather one of a conceptual nature. That is, in the description
and hence recognition, of any desire as being a desire-for-x, some
indication must be given of the kind of bodily movement which would
lead, under normal circumstances, to the satisfaction of that desire.
What is excluded is that a desire is "merely" an internal impression
that is loosely connected with a non-purposive movement. The argument,
which we are now considering, at least suggests that the concept
"desire" is more closely connected with the concept "act", than is
claimed by the reductive theories that we have so far considered.

Consider what is meant by, "a more intimate conceptual con-
nection between the concepts 'desire' and 'act' ". The meaning of this
can be illustrated by a consideration of questions such as this:
Can I claim to desire anything without thereby implying that I want to
get it? I may, e.g., say that I am hungry, i.e., that I desire food,
and still do nothing in fact to get it. For this there may be many
reasons. I may be dieting , or I may be tied and gagged, or the food
may be in a shop, while the only way I have of obtaining it , may be
by stealing. If I do not, e.g., want to steal food, will it be true
to say that I do not really want to get food, and hence that I do not
(really) desire food?

Some reasons for claiming that this is the case may be
found by transcribing this argument into the third person. Thus, if
a person said to me, "I want (or desire) a new car", I can ask,
"how do you propose getting it?" A possible answer to this question
could be, "Oh, I don't really want to get it", which suggests that
he does not also want to / get it. But if I did receive an answer such as
this, I can dismiss the original statement as no more than the
expression of an idle or fanciful wish. The person concerned, I may
argue, is suggesting what he might desire had circumstances been dif-
ferent, and not what he is in fact desiring. Because he does not want
to get the car, he cannot be said to desire the car at all. If he
really desired the car , he must want to get it, even though he may
at present see no way of doing so.

Similarly, it would be odd to say that I desire food, but that I do not want to get any at all. By saying that I don't want to get the desired food, I am at most excluding specific means of getting it, e.g., stealing. I will in these circumstances be implying that I desire the food but that I do not want to get it that way; and hence my statement excludes one way of getting food. It does not, however, exclude entirely the fact that I do want to get food if only I could see my way clear to getting it.

The use of the concept "desire" is, therefore, closely tied with the concept "doing". We cannot say that we have a desire unless it is a desire for x; and we cannot say that we have a desire for x, unless we want to get x. The conceptual links between these concepts are, therefore, such that "Desiring" entails "Desiring x", and "Desiring x" entails "Wanting to get x".

A further, and conclusive argument against the reductive theory under consideration is, therefore, this:

Desiring to get x conceptually involves certain doings.[4] These doings can be described as acts. Now if we analyse an act-description into two loosely connected subsidiary descriptions, we find that both the d- and M-descriptions again involve act-descriptions. Either M, that is to say, must be construed as the doing, which is part of the definition of the d-description, or the d-description apart from the M-description, conceptually involves some doing. Now presumably the doing involved in the d- or M-descriptions could itself be subjected to the reductive analysis in question; i.e., can be analysed into two descriptions of the form "d" and "M", and so ad infinitum. Thus, e.g., by asking the question, "How do you propose to get the car you desire?", I am asking what courses of action are being contemplated. Similarly, when I say that I desire food, but that at the moment I can see no way of getting it, I am also considering and rejecting possible courses of action - things I might do in order to obtain food.

Any attempt to say that acts or act-descripitons, in fact or logically , are respectively constituted by a desire or a descrip-
/ tion of ——

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4. Part of these conceptual liaisons can be seen in the use of "desire" or "desiring", in descriptions in the past tense as explanations of acts.

Cf M. Scriven, "Truisms as the basis of Historical Explanation", P. Gardiner (ed) op. cit.

tion of a desire, plus a non-purposive movement or a description of
a non-purposive movement, therefore, begs the question. Because of
the close liaisons between "desiring" and "doing", we cannot
speak about a description of a desire being linked with the des-
cription of a non-purposive movement as logical parts of an act-
description. Similarly, it is a mistake in principle to claim that
an act-description can be analysed into a description of a desire
plus a description of a non-purposive movement. It is, thus wrong
to speak of d in ,e.g., d(pTp) as if it were a description of any
factor external to movements; and it is wrong to speak about
d as a description at all separate from pTp.

A reductive analysis cannot, therefore, give an adequate
answer to the question, How are d-expressions to be analysed?;
and hence cannot satisfactorily account for the distinction
between' act-descripitons and other descriptions of behaviour.

IV

§ 1

The above argument suggests that d(pTp) must be the
form of a single or unitary description - a description, i.e.,
which cannot be analysed into descriptions which are not themselves
act-descriptions. This, however, does not solve our problem. For it
does not indicate what the function is of d-expressions. We must,
therefore, consider the implications of this suggestion.

It could conceivably be argued that descriptions of
behaviour, such as descriptions of e.g. the form, d (pTp), which
contain, explicitly or implicitly, some d-type expression or
description, are, for that reason, descriptic... of rule-following
behaviour.[5] On the other hand, descriptions of behaviour which
in no way contain d-type expressions or descriptions are, for that
reason, descriptive of behaviour, which is not rule-following.
On such an argument, then, rule-following behaviour will be either
equivalent to acts, or will be the general species, under which acts
resort. In either case, the distinguishing feature between acts
and / ...

5. This notion of "rule-following" is left deliberately vague
at the moment. The ambiguities in this will be discussed later in
this chapter.

and other, non-purposive forms of behaviour must be found in the
presence or absence of a factor, which could be brought under a
d-type expression. But on such an analysis d-type expressions no
longer refer to internal, psychological states or impressions.

The general points suggested will be these:

(i) A form of behaviour may legitimately be described as
a form of act, if and only if, an adequate description of that
behaviour explicitly or implicitly involves the notion that the agent
to whom the behaviour is ascribed "followed a rule".

(ii) A form of behaviour cannot legitimately be described
as a form of act if an adequate description of that behaviour does
not explicitly, or at least implicitly, involve the notion that the
agent to which the behaviour is ascribed "followed a rule".

It is not, however, clear what is involved in interpreting
the qualifying variable, d, in this way. What is so involved I
now wish to examine.

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§ 2.

A first approach, suggested by recent philosophical
discussion, is to analyse the notion of "rules" by considering the
notion of "games".[6] The question is whether the choice of games
as the paradigm-case of rule-following is always equally helpful,
whenever notions of rules or rule-following are imported. What
is at issue, is the implied assertion that we have in description
of games, a useful analogy for an analysis of act-descriptions, and
thus that the main logical features of descriptions of games are
co-extensive with the main logical features of act-descriptions.

Whether, and in what sense, "rule-following" is a feature
of games, may be made clear by considering first games of the kind
exemplified by chess, football, or rugby. Rugby, e.g. typifies
the type of game, which has codified and conventional rules. These
rules prescribe what sorts of behaviour are permissible or non-

permissible/ ...

6.   Cf. Wittgenstein's notion of language-games.   Wittgenstein, L.,
Philosophical Investigations, (tr) G.E.M. Anscombe, Oxford:
Blackwells, 1953.

permissible, and what ought to be done, or ought not to be done,
if one may be said to be playing that particular game. The set of
rules are thus constitutive of a particular game, in much the same
way as an official constitution, accepted by a group of people,
constitutes an organisation. It is in this sense that a man may
be said to play the game only in so far as he abides by the rules,
and accepts the penalties laid down for infringements of one kind
or another. For this reason, too, the validity of descriptions
such as, "He is playing chess", or "They are playing rugby", will
depend on the conformity of the participants' behaviour to the
codified, prescriptive rules of chess or rugby. If the rules of
these games are not followed, whatever is being done, cannot be
described as that kind of game which is constituted by the rules
in question.

The notions of "rules" and "rule-following", which are
embodied in this kind of game, may also be exhibited by considering
the notion of "cheating". If, e.g., a chess-player cheats by
surreptiously removing an opponent's piece that has not been won
according to the rules, then we would say, usually in a metaphorical
sense, that he is "not playing the game". There is also a strong
literal sense in which it could be said that a person who is
cheating is not really playing the game, as he is not following all
the rules of that game. Naturally, there is always the possibility
that specific forms of cheating may, in time, become acceptable.
What is now regarded as cheating, may either become accepted as
new rules in the old, conventional set, or may constitute rules of
a new game, similar to its parent. In both cases, descriptions of
"cheating" behaviour, will become proscriptive in the revised, or
new, game.

The important features of games such as chess and rugby
are, therefore:
  (a) They are constituted by codified rules, which are
generally accepted, or agreed upon, by participants in a game of that
sort.
  (b) Any behaviour can validly be described as, e.g.
"Playing chess", or "Playing rugby", only if it is presupposed
that these rules are being followed by the participants.

"Rule-following", in this sense, therefore, means an
implicit agreement that participants in a game will regulate their
behaviour according to a set of codified and conventional rules,

which/ ...

which are taken as <u>known</u>, and also that the participants will abide by prescribed penalties if they do not abide by these rules.

What now of those sorts of games which are not constituted by codified rules?   In what sense, or senses, can we here speak of rule-following being an important logical feature of games?

Imagine that a father's behaviour is described as "Playing bears".   There are no fixed rules which determine how any one must behave if he is to "play bears."   We may assume that in a particular society one general rule seems to be operative in this play-behaviour: when I play bears, I must at least pretend to be a bear.   Now in rugby or chess, the point of the set of codified rules constitutive of that game, was not that any participant should pretend to be what he is obviously not.   If, therefore, we are to discover important differences between the senses of "rule-following" in these two cases, it may be as well to consider more carefully what is involved in this notion of "pretending".

There are a number of senses in which I can be said to be pretending to x, or be pretending to be x.[7]   E.g., in some form of pretending to be a bear, there must be clear evidence that I am not a bear. This, too, is the case even if my behaviour should extensively imitate that of a bear.   I may, e.g., be dressed in a fancy-dress costume. Some one not aware of the pretence would be completely deceived, and would regard me as a bear. If I myself am completely taken in by my play-acting, I would regard myself as a bear.   But what cannot be said is that I both pretend to be a bear and that I am a bear. If some one were to say that this is a form of pretence, they must <u>know</u> that what is pretended is not actually the case. In this sense, therefore, pretending may be said to have a strong counterfactual element.[8]

For/ ...

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7. Cf. Austin, J.L. "Pretending", <u>Philosophical Papers</u>, Oxford: Clarendon Press, 1961.

8. There are examples (Cf Austin, <u>loc.cit</u>), in which in pretending to x, I may actually x.   E.g. in order to obtain a good view of a room, a burglar may pretend to wash windows.   Although he may <u>actually</u> be washing the windows, because he is not a genuine window-washer, and because he is using window-washing as a "cover", we say that he is pretending to wash windows. There is still, therefore, in this example, a strong counterfactual element.

For any pretence to be at least partly convincing, however, there must be some coincidence between pretence-behaviour, and the genuine behaviour being simulated. If, e.g., I am surprised in the act of stealing chickens, and want to avoid arrest by pretending to be a leopard, I must at least make suitable growling noises. I cannot successfully pretend to be a leopard by flapping my arms, and making clucking noises. My pretence would, then, be more properly described as, "Pretending to be a hen". In the same way, although pretending to be a bear does have this counterfactual element, in order for my pretence to be successful, I must imitate some of the forms of the behaviour of bears. My behaviour must be suggestive of what I am not.

Pretending to x, and pretending to be x, although they do contain counterfactual elements, presuppose, therefore, a prior knowledge of x, or what is to be x. At the minimum, this knowledge must consist in a familiarity with the concept "x", its correct uses and applications. The rules operative in pretending are, thus, the known liaisons, marks, etc., of the concept "x". Behaviour described by, "Pretending to be x", must be governed by these rules for the use of "x".

It may conceivably be asserted, then, that pretending to be x and pretending to x, entails following at least some of these conceptual rules for the use of "x". Such behaviour can, then, be characterised as "rule-following" behaviour, and a description such as, e.g., "He is playing bears," will be based on the assumption that an agent is "following" certain conceptual rules.

Nevertheless "rule-following" in this type of case, cannot be identified with "rule-following" in the case of rugby or chess. The difference between rule-following in those two cases may be gauged by asking the question: What determines whether a rule is "appropriate" in play-acting, and whether a response by other participants in this play-acting is "appropriate"? The answer cannot lie in sets of codified rules, as it would when we deal with games such as chess and rugby. In the case of play-acting the answer must be sought in terms of enacting, imaginatively, answers to questions such as these: What would I have done, had I really been x? What would suggest to some one else that my behaviour should not be taken for what it appears to be, but as typifying something, which it obviously cannot be? "Rule-following" in this case, then means to symbolise, through typical acts:

    (a) that one's behaviour must not be taken at face-value;

    (b) that it must be taken as, or interpreted in terms of a conceptual rule, which is ordinarily not applicable at all.

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We have, therefore, distinguished two ways in which the notion of "rule-following" may be said to be a logical feature of games. "Rule-following" can mean:

(1) an implied agreement that participants in a game will regulate their behaviour according to a set of codified rules, which are taken as known; and also that the participants will abide by the prescribed penalties if they do not abide by those rules;

(2) to symbolise, through typical acts:

    (a) that one's behaviour must not be taken at face value;

    (b) that it must be taken as, or interpreted in terms of a conceptual rule, which is ordinarily not applicable at all.

If games are to be considered _the_ paradigmatic model for the analysis of act-descriptions, and hence are to give the clue to _the_ analysis of d-expressions, one may expect that act-descriptions will display strong logical agreement with these two notions of "rule-following".

I shall now argue that a game-analogy for determining the logic of act-descriptions will have important, if unfortunate consequences.

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An important consequence of the two notions of "rule-following" in games, which we have been considering is this: Once it is presumed that certain rules are being followed by an agent in his behaviour, there can be one and only one true description of his behaviour.

This may seem open to immediate objection. Thus it may be argued that even if it is evident that the behaviour of 31 people on a rectangular field is such that they obviously are following the rules of rugby, it is still possible to describe their behaviour in many alternative forms. We may say of the same behaviour, e.g., "He rushed blindly into a defender's arms", "He tried in vain to evade a tackle." But this is not disputed. What is being asserted here is rather this: any description of the behaviour of these 31 people, must, in principle, fall within the overall constitutive rules of rugby. "Running with the ball",

"Kicking/ ...

"Kicking the ball", etc., must be known to be "Playing rugby."

These subsidiary descriptions are not, of course, necessarily only subsidiary descriptions of the description, "Playing rugby". But these descriptions are part of the description of the game, and may be said to refer to "the same behaviour", only if it is known that the general description , "They are playing rugby", applies. These (subsidiary) descriptions, it may be said, refer to the same behaviour only via the description of the game, which in turn is conditioned by a set of constitutive rules. It may be argued that all this applies _mutatis mutandis_ to act-descriptions, and that it may be asserted, therefore, that there could be only one true description of any act. In the same way, as the only true description of a form of behaviour might be, "They are playing rugby", it may be said that descriptions of The Act, are unambiguous, in contrast to descriptions of the same behaviour in terms of subsidiary acts.

It, therefore, follows also that descriptions of The Act can be analysed into subsidiary descriptions, such that these descriptions will refer to acts and doings, which are _involved in_, and _essential for_ a successful performance of The Act. In this case, too, subsidiary descriptions may be said to refer to the same behaviour only via a description of The Act, and will thus be descriptions of _collateral acts_.

Use of a game-analogy in attempting to determine the logic of act-descriptions, therefore, seems to lend weight to reductive analyses of acts and act-descriptions. The main logical features of game-descriptions are, or seem to be, coextensive with the main logical features of act-descriptions as these are construed in reductive analyses of 'The Act'.

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If the game-analogy for an analysis of act-descriptions is correct, the logical _kind_ of rule constitutive of, or operative in, games must also be constitutive of, or operative in, other acts. The _logical type_ of rule, which is said to be followed in games, must also be said to be followed in acts.

The notion of "rule" is, however, not unambiguous. We have already seen that the type of rule followed in rugby, is not the same logical type as that followed in playing bears, i.e. in

pretending. Yet the argument for applying a game-analogy has
been simply that in both cases the notion of "rule-following"
applies. This multiplicity of logical types of rule has been
ignored. Hence it is not obvious that all acts are logically
similar to those preferential acts called, "Playing games".
Closer attention must be given to various _types_ of rule if we are
to be clear about the sorts of rule which are referred to when we
speak about "rule-following behaviour".

It is possible to distinguish at least four basic types
of rule, which are such that any rule may resort under more than
one type of rule: 9.

(1)   _Restrictive rules_ channel, regularise, and confine;
and we may be said to conform to such rules by refraining from
prohibited behaviour.

(2)   _Enabling rules_ permit, or license, rather than
restrict; and we may be said to conform to these rules only in so
far as we take part in permissible activities.

(3) _Constitutive rules_ are definitive of some practices,
and as such, permit no alternatives. Rules p and q may be said to
constitute act A, if and only if, A cannot be said to have been per-
formed if the agent, or agents, did not conform to both p and q.

(4) Non-constitutive rules are not definitive of the
activities that they govern. Suppose that we have two alternative,
but not necessarily incompatible sets of rules. P and Q for the
interpretation of some behaviour, A. These rules will be , for this
reason, not definitive of the behaviour that they govern: P admits
of the alternative Q, and Q admits of the alternative P

We may, therefore, find examples of individual rules which
are:

(i)   Constitutive and Enabling.
(ii)   Constitutive and Restrictive.
(iii) Non-constitutive and Enabling.
(iv)   Non-constitutive and Restrictive.

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Another consequence of the game-analogy now becomes
evident. In maintaining that games must function as the para-
digm for an analysis of act-descriptions, we must assert that the

/only ---

9.   Cf Shwayder, _op. cit._, p. 261 ff.

only rules operative in acts must be constitutive and enabling, or constitutive and restrictive, In both senses of "rule-following" in games, the rules in question are definitive of the particular activity that they govern, and permit no alternatives. It is implicit in the sense of "rule-following" in games with codified conventional rules that one and only one set of rules constitute these games, and that this set of rules is definitive of the game. Some rules in the set, however, will be enabling and some restrictive. That is, some rules licence or permit some practices, and others restrict other practices. Now on the assumption in the game-analogy is that the notion of "rule-following" is logically isomorphic, i.e., is logically the same in all acts, we will have to say that in those games /in which participants are said to be pretending, the rules that are followed, i.e., the known liaisons, marks, etc, of the concept "x", must be as constitutive as the rules operative in games such as chess and rugby.

It can now be argued that this implication - that the rules operative in all acts must be constitutive and enabling, or constitutive and restrictive - gives a misleading and inadequate account of the logic of act-descriptions. That this is so appears from the following considerations:

(i) The set of rules in a game, as has been seen, must be constitutive even though individual members of this set may be enabling or restrictive. But the rules governing a specific movement of any player, while not incompatible with these permissive and restrictive rules, are nevertheless not equivalent to them. Thus, in describing movements of players on a rugby field, or of a man pretending to be a bear, we may say that such movements are constituted as moves in a game of playing rugby or playing bears, by a set of rules constitutive of the game. But the movements themselves are not constituted by this or any other set of rules. At the most we must say that the rules governing the movements in a particular move must not be incompatible with any of the enabling or restrictive rules found in the constitutive set. The rules governing the behaviour described as, e.g., "Taking a gap", must, then, be in part the constitutive set of rules of rugby. However, because there is no one actual set of movements definitive of taking a gap, or, say, of taking bear-like steps, if there are to be rules governing these movements, the rules must be non-con-

/stitutive ——

stitutive, but in such a way that they are not incompatible with the constitutive set. These particular non-constitutive rules are of obvious importance for an analysis of the logic of act-descriptions.

An important point now follows. As has been shown in Chapter 2, the list or series of descriptions into which an act-description supposedly unpacks cannot be merely a list of descriptions of non-purposive movements. If this were not the case, it would be possible to reduce all forms of behaviour to non-purposive behaviour. At least some of the subsidiary descriptions on the list , and the subsidiary behaviour described in this way, must, therefore be act-descriptions and acts, respectively. The Act, however, is not an act additional to its subsidiary acts, nor is a description of The Act a description of something over and above the description of its subsidiary acts. But these subsidiary acts are not necessarily involved in The Act in question. They could, presumably, also be involved in Acts of another type. At the most it can be said that if a subsidiary act-description, p, is part of the description of an overall Act, A, then the act described by p is, in this case,/as a move in A by a set of definitive rules, which determines that it is of the sort, A. Presumably on another occasion, the act described by p may be constituted as part of, or as a move in , an act A2, i.e., as part of an act of a different sort.

From this it follows that the series of movements involved in, e.g., taking a gap, must be acts. If this were not the case, then we would have to argue, contra our earlier conclusion, that the activities described as "Playing rugby", or "pretending to be a bear", are wholly constituted by non-purposive movements. So a game played on any particular occasion must consist of a plurality of acts, perhaps performed according to rules, but not exhaustively constituted by such rules. Thus, e.g., a particular move in , e.g., rugby, or pretending to be a bear, may be analysed into (i) that which makes it a a move in the game, i.e., conformability of a series of acts to the constitutive set of rules, and (2) the particular acts involved in that move.

An important consequence now follows. As was said, if there are rules governing the particular movements involved in

/ any ---

any move   such as taking a gap, these rules will be non-constitutive,
and if these movements must be acts, we will have some acts which
are governed by non-constitutive rules.

In maintaining that game-descriptions function as the
paradigm for the analysis of act-descriptions, it was claimed that
the rules governing all acts must be constitutive and enabling, or
constitutive and restrictive.   This we now see is not the case.
The kind of rule in use in at least some act-description is non-
constitutive, i.e., precisely that kind of rule   for which a game is
not paradigmatic.   The game-analogy cannot, then, be a paradigm for
all act-description.

(ii)   Suppose now that in order to overcome the above
objections we stress the second sense of "rule-following" in games -
i.e., the sense in which it is presupposed that an agent is
implicitly or explicitly following a conceptual rule to the ex -
clusion of the first sense just discussed. Consider then the fol-
lowing argument: There seems to be at least one important
difference between the rules of, e.g., rugby, and the conceptual
rules operative in, e.g., the game of pretending to be a bear.
Alternative rules for games such as rugby are conceivable; whereas
there can be no alternatives for conceptual rules. It may, therefore,
be said that the notion of a "non-constitutive" rule is a misnomer.
For if all the rules   operative in acts , and hence act-description
are conceptual, then there can be no non-constitutive rules - con-
ceptual rules by definition do not permit alternatives. All rules
must, therefore, be constitutive simply because there can be no
alternatives.   Therefore, the rules operative in the subsidiary
acts, which constitute Acts, must also be constitutive, and the
game-analogy must still be true.

This argument depends for its plausibility on a confusion
of two senses of 'following   conceptual rule':
        (a) The sense already determined is that of symbolising
through typical acts that one's behaviour must not be taken at
its face value ; and that it must be interpreted in terms of a
conceptual rule that is ordinarily not applicable at all.   In this
instance, the conceptual rule will be embodied in the known marks,
liaisons, etc, of a particular concept , or particular series of
concepts.
        (b)   The describing of an act must also be an act.

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This act of describing (which may be called a "speech act") cannot be governed merely by the rules implicit in particular concepts, but must also be governed by definitive logical and grammatical rules that apply to all describing. The particular act of describing will, then, be governed by these definitive rules (which may also be termed "conceptual rules"), and also by the known marks and liaisons, etc, of the particular concepts employed in the description. The definitive rules applicable in describing in general , cannot, however, be the same as those definitive rules governing the use of particular concepts. The definitive rules in particular can be said to govern the bringing of objects(in a logical sense) under that concept. The other definitive rules determines the general logical relations that different sorts of concept may have , and not simply the use in describing of one or more particular concepts. These rules may, therefore, be called the general definitive rules of description in any natural language; and the others the rules governing the use of particular concepts.

It follows, therefore, that to say that all rules involved in all acts/can only mean that in describing any act my description must be governed by the set of logical and grammatical rules which are constitutive of any WFF in any natural language. The consequence of this will now be that if we assume (as seems implicit in the above argument) that the rules operative in a game of pretending to be x are the same as the general rules of describing, then the game-analogy cannot offer a criterion for distinguishing act-descriptions from descriptions of other behaviour. For any WFF, thus even a description of non-purposive behaviour must conform to this definitive set of rules of describing. Thus, the game-analogy can, in the last resort mean no more than that any behaviour described must be brought under a concept, according to certain specific , and certain general, grammatical and logical rules. The introduction of this analogy will thus become pointless, for an adequate analysis of a , d-expressions has not been given.

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The conclusion which we are forced to reach is that game-descriptions cannot be paradigmatic of the logic of act-descriptions. We cannot, therefore, find in the game-analogy a satisfactory analysis of d-expressions.

/ At ——

At the moment it is not argued that "rule-following" can
in no circumstances be regarded as a feature distinguishing act-
descriptions from descriptions of other behaviour. I am merely
arguing that the notion of "rule-following" is ambiguous, and that a
popular interpretation in terms of games will not do the parti-
cular job assigned to it, i.e., giving a satisfactory analysis of
the function of d-expressions in act-descriptions of the form,
e.g., d(pTp).

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§ 3

We have so far seen that reductive theories cannot give
a satisfactory analysis of d-expressions. Our conclusion has been
that/be descriptions that are loosely conjoined to descriptions
_{d-expressions cannot}
of bodily movements. Nor can they be indications that T is the
result of human activity conforming to rules that are analogous to
rules in games. Our problem has, therefore, not been solved. We
must still give an analysis of d-expressions that will enable us
to distinguish between act-descriptions , and descriptions of other
behaviour.

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Such an analysis may be begun by reconsidering some of our
earlier discussion. As was seen in Chapter 2, acts are a form of
purposive behaviour, which means that acts may be explained
teleologically. But other forms of behaviour, which are not acts,
may also be explained teleologically. So we cannot identify a
putative act, or act-description, simply by determining whether the
behaviour referred to can be explained teleologically , or whether
the behaviour-description can be fitted into a teleological pattern
of explanation. This point may be further clarified in the fol-
lowing way: The form of a teleological explanation is, x in
order to G. Now "x in order to G" may be treated as a propo-
sitional function, and the symbols, x and G, as gap signs. The
two descriptions, i) "He is raising his arm"
           ii) . " His arm is rising"
which obviously seem to be an act-description and a description
of a non-purposive movement, respectively, may be treated as possible
arguments of this propositional function. Values of the function
for each of these arguments will be:

/ (a) " He ---

(a) " He is raising his arm in order to G".

(b) " His arm is rising in order to G."

The value (b) appears to be odd. This teleological explanation
can, however, be justified if the context in which it occurs is,
e.g., this : We may discover that while a man is being
treated in a therapeutic machine, his arm rises. If the physio-
therapist explains this by saying that the man's arm is rising
in order to expedite the flow of blood in that limb, the teleo-
logical explanation given above will not be odd or inappropriate.

We cannot, therefore identify the act-description
simply by saying that it fits into a teleological pattern of
explanation. On the otherhand, we cannot say that 1) and 2)
must necessarily be logically similar simply because both can
fit into a teleological pattern of explanation. The example
already given indicates that the teleological explanation of the
behaviour described by 2) must be dependent on the same conditions
as a teleological explanation of machine reactions. That is, the
teleological explanation depends upon a conjunction of causal laws
and a presupposition which "makes" this conjunction of laws
"tautologous". This presupposition will be that some one has
intended that this behaviour should have the stated function. This
means that the justification of any teleological explanation of
the behaviour described in 2) must at least make reference to an
act. This will be true even if a man should place his own arm
in a therapeutic machine. Suppose we ask again,"Why is his arm
rising?" An answer may be, "Because he wants it to". This could
as well be an answer to the question, " Why is his car reacting
in such-and-such a way?" This question implies that this
reaction of the car is the result of some act of commission or
ommission on the part of the man.

An important point now follows. The answer, " He wants
it to " must indicate that the reaction or behaviour referred to
is the direct result of some doing , and indicates this in such a
way that it is evident that the resultant behaviour or reaction
is not itself an act or doing. [10.] An important feature of this

/ description ----

10. This will not,of course,be true in an example such as, " The
animal is behaving in such-and-such a way, because its trainer

/ wants ----

description is, then, the point that the justification of a teleo-
logical explanation of the behaviour referred to must at least
presuppose an act, but in such a way that it is implied that the
original behaviour cannot be an act. The same cannot be said of
the teleological explanation of the behaviour referred to by the
description 1). The question, " Why is he raising his arm?",
obviously cannot be appropriately answered by, "Because he wants it
to ". For this must imply that the behaviour described by 1)
cannot be an act, and that this behaviour is the result of some
act or doing. This would in turn imply that the justification
of a teleological explanation of the behaviour described by 1)
must be the same as that for the behaviour described by 2). This
will result in an obvious contradiction of our earlier conclusions.
The implication of the conclusions of Chapter 2 was that human
behaviour can be characterised as non-acts only if it is clear
that a teleological explanation of such behaviour must be dependent
on a conjunction of causal laws, that are "made" tautologous as a
result of the presupposition that these are either reactions in a
self-correcting system, or are causal reactions , which some outsider
decided should have a specific function. Because neither of the
above conditions are obviously operative in the instance of the
behaviour described by 1), this will have to be called a description
of a doing, and hence an act-description.

This may be further substantiated in the this way: Now
while "He wants it to"" is not an appropriate answer to the question,
" Why is he raising his arm?", the statement, "Because he wants to",
would be appropriate, if perhaps a bit abrupt. Our discussion
earlier in this chapter has shown that concepts such as "desire"
and "want" are only intelligible in the context of "acting" and

/ "doing" ---

10. (contd)

wants it to". The animal may be performing a particular trick, that
may be called an act. This, however, is similar to saying,
"That soldier is behaving in such-and-such a way, because his
sargeant wants him to." Here we are stating that the soldier is
acting on orders. It is clear, therefore, that "it" is used in
the animal example, as a personal pronoun, which does not refer to
the same person as the pronoun "he". This is not true in the example
of the rising arm. The sense of "wants it to" must, as a
consequence, differ in these examples.

"doing". This means that any use of the concept "want" conceptually involves certain doings. So the use of "want" in the explanation, "He is raising his arm, because he wants to", must presuppose that some behaviour has been identified as an act. This behaviour can only be the behaviour that is being explained, as the want referred to is that of the agent of that behaviour. This implies that in these circumstances, the behaviour described must be an act. The act identified cannot, therefore, be some behaviour other than the behaviour described by 1).

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The discussion so far has indicated some general points in the analysis of d-expressions. We have seen that one important condition that must be satisfied before a d-expression may be used in the form of the description of any behaviour is this : The description must fit into a teleological pattern of explanation but subject to the condition that the teleological explanation of the behaviour referred to must not necessarily presuppose either the performance of an act of a kind other than the behaviour to which reference is being made, or the existence of a self-correcting system.

This condition may be summed up in the following specific test: If a behaviour-description, p, can be an argument of the propositional function, "x in order to G", without presupposing either an act of kind other than the putative act described by p, or the existence of a self-correcting system, then p will be an act-description. Conversely, if a behaviour-description, q, cannot be an argument of the propositional function, "x in order to G", without presupposing either an act of a kind other than the putative act described by q, or the existence of a self-correcting system, then q cannot be an act-description.

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From this certain specific points concerning d-expressions will follow. We have seen that the description 1) " He is raising his arm", satisfies the above condition, and so may be symbolised by, e.g., $d(pT \sim p)$. That the above condition has been satisfied indicates that this description may fit into a teleological pattern of explanation simply because the agent of the behaviour takes the

/ behaviour ----

behaviour described to be sufficient for fulfilling a certain
goal or function. This description may also fit into a teleo-
logical pattern of explanation if a describer assumes, because
of the circumstances of the act, that the agent takes it to be
sufficient for fulfilling a certain goal or function. Suppose
that the point of his raising his arm is to salute his superior
officer. The teleological explanation will, thus, be: "He is
raising his arm in order to salute a superior officer". The
justification of this explanation will depend on either the
agent taking this act to be sufficient for the goal of saluting
a superior officer, or a describer assuming that the agent
takes it to be sufficient for fulfilling a certain goal or
function. The result of this will be that the goal description may
be elided into the original act-description. We may, therefore,
say that the act-description may be, "He is saluting a superior
officer."

Therefore, if we are to say that any behaviour-description
is also an act-description, then we must at least assume , or be
able to assume, that the person referred to by the subject of
that behaviour-description could in that behaviour have been
following a rule. That is, we must assume that the person
referred to by the subject of that behaviour-description is
performing a characteristic act, described by the given description
which would be appropraite (physically and, perhaps, conventionally)
for the fulfilling of a certain charactersitic goal or function.
The agent, however, need not actually be conforming to a rule,
as is demanded by the game-analogy.

This will give us a further important criterion which
may be used for identifying act-descriptions, and thus for dis-
tinguishing act-descriptions from descriptions of other behaviour.
Consider the application of this criterion to descriptions such as,
2) "His arm is rising". If this is to be an act-description, then
we must be able to say, at least, that he could, in this
behaviour described , have been following a rule. A teleological
explanation into which this description may fit is, "His arm is
rising in order to expedite the flow of blood in his arm". If we
are to assume that the person referred to by the subject of the
description could, in this behaviour be following a rule, we must
further assume that he takes this behaviour to be sufficient for
the stated goal. But if we are to say this, then obviously the
behaviour referred to will be the act of making his arm rise.

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The appropriate description and explanation would, thus, be, "He is making his arm rise(in some sort of machine), in order to expedite the flow of blood in his arm". This, however, would be unsatisfactory and misleading, as the description, "His arm is rising", without further information being given, cannot imply that this behaviour is the result of an act on the part of the person referred to by the subject of the description. In this example we cannot assume that the person referred to by the subject of the description could be following a rule. This description cannot, therefore, be an act-description, and hence must be of the form, pT ∼P, and not d(pT ∼ p)

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This discussion has indicated once more that d-expressions cannot refer to factors such as interior events or sets of rules, which are separate from "mere" bodily movements. The use of d in the form of a description indicates, as has been seen, that a given description fits into a "conceptual framework", which differs from the "conceptual framework" into which descriptions of other forms of behaviour may fit. So when d is used in the form of a description of behaviour, we are explicitly implying that certain logical types of question and answer will be appropriate, and others inappropriate. The way of distinguishing between act-descriptions and descriptions of other forms of behaviour will thus be to determine whether the description can fit into the conceptual framework of the concept "act", which has been determined , and illustrated, by our discussion in Chapter 2 and in this present chapter.

However, it can be said that an important part of this conceptual framework of acts , and hence d-expressions, is displayed by the general points involved in the "rule-following" criterion, if they are altered to exclude the game-analogy interpretation. The end result of such an alteration will be:

(i) A form of behaviour may legitimately be described as a form of act, if and only if, an adequate description of that behaviour explicitly or implicitly involves the notion that the agent to whom the behaviour is ascribed could have been following a rule.

(ii) A form of behaviour cannot be legitimately be described as as a form of act if an adequate description of that behaviour does not explicitly , or at least implicitly, involve the notion that the agent , to whom the behaviour is ascribed could have followed a rule.

CHAPTER 4

ALTERNATIVE DESCRIPTIONS

I

An important reductive assertion is that there can be
one and only one true description of any act. The only true
description will be the description of The Act, and this will
either be incompatible with, or will be constituted by any other
act-description supposedly referring to the same behaviour. An
immediate consequence of this will be that we cannot speak
about alternative descriptions of any act. A discussion of
this reductive claim and its implications will constitute the
main burden of this chapter.

II

Questions about alternative descriptions of acts arise
when we deal with examples such as the following: Imagine that a
motorist, M, is involved in a serious accident, and, for a time,
because of his injuries, is unable to help in the investigation
of the crash. The police officer, P, has the evidence of only
three independent witnesses.

When asked to describe what M did immediately prior to
the crash, they report as follows:

A — "M was signalling a right-hand turn".

B — "M was feeling the strength of the wind".

C — "M was admiring a new signet ring."

Let us imagine that under close examination none of the
witnesses is prepared to admit that could be mistaken. P would,
therefore, be faced with a considerable puzzle. It cannot be
said that these three descriptions refer to different acts,
occurring at different times. For these descriptions are sup-
posed to be descriptions of an act, which was performed at a
definite time and definite place. Is it possible, therefore, to
say that these three descriptions offer three interpretations of
one act that occurred at a definite time and definite place? This
interpretation is more plausible than the first one offered, but it
still contains some ambiguities. The reports of A, B, and C are
act-descriptions. If these three act-descriptions are exhaustive,
how can they be descriptions of an act without any one of them being

the description of the act?   If there is not one description, how
can we speak about the description of an act at all?

If it is not possible to speak about an act being inter-
preted differently by A, B, and C, will we have to say that there is
implicit in their descriptions the description of a non-purposive
movement, which has been differently interpreted by by the three
witnesses?   This, however, cannot be said.   Suppose that the form
of the description of this movement is, $\sim pTp$.   The form of the des-
criptions of the three witnesses can then only be:

A   — $d^1(\sim pTp)$

B   — $d^2(\sim pTp)$

C   — $D^3(\sim pTp)$

Now d-expressions were introduced as a way of indicating that T in
some examples is the result of human agency.   d-expressions cannot
give any indication of the kind of act performed.   In other words,
d-expressions can only indicate that a description of a certain item
of behaviour is of the species "act-description".   The use of the
symbols d^1, d^2, d^3, is, therefore, not compatible with our earlier
conclusions concerning the nature of d-expressions.   These new symbols
are clearly intended to indicate that the form of description, pTp,
is in each case part of a different act-description.   If these
symbols can do this job, then, they must themselves be particular
descriptions of, e.g., desires or intentions.   We have, therefore,
an instance of the reductive/theory that asserts that an act-description
can be analysed into at least two descriptions, which refer to a
desire or intention, and a non-purposive bodily movement.   As we
have already seen that this theory is wrong, it follows that we
cannot speak of a non-purposive movement being interpreted differ-
ently by A, B, and C.

^{A}ll these possibilities show one important thing.   If the
problem of alternative descriptions is to make sense at all, we will
have to say that the important question is this: Is there implicit
in incompatible descriptions of the same behaviour the description
of some other act; or can only one/of these descriptions be true, and
hence the description of The Act?   Let us, therefore, assume that
there is, in this example a "basic act-description" (Let this
description be E), but without prejudging either that this E is a
description involved in the description of The Act, or that it simply
is the description of The Act.

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Let us attempt now to determine what content can be given to E. Can E be a description of something seen by all three witnesses?

P could, e.g., ask them if they all saw M, e.g., extend his arm out of the car window. It is possible, however, to imagine that one of the three, e.g., A, could object to this. A could claim that that he did not see M extend his arm out of the car window — he saw M signal a right-hand turn. There is an obvious difference between signalling and extending one's arm, and what he (A) saw was nothing other than this signal.

Another objection to E being a description of something seen by all three witnesses could be given by, e.g., C. C could argue that there was only one unanalysable act that he saw. M was admiring a ring. M did not first extend his arm, and then admire the ring. The extension of the arm is such an **integral** part of the act that he saw, that all that he could truly say that he saw was the act of admiring a ring. E must, therefore, be a description of what he (C) saw.

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Let us now change the emphasis of the question and ask if E could be a description of <u>the least</u> that all three witnesses saw. P's question may, therefore, be rephrased in the following way: Wouldn't A, B, and C all agree that they at least saw an arm being extended through a window?

Now, in the light of his previous objection, if A is a tough-minded individual, he may refuse to answer this question. He could use two arguments. (i) B and C may simply be obstinate in not admitting that they saw just what he had seen. Any normal person would have been able to see that it is true to say that M signalled a right-hand turn.

(ii) It is evident that the intention involved in simply extending an arm through a car window is not the same as that involved in signalling a turn. If the intention is different, then the descriptions given must indicate that there are these two <u>different</u> acts. It will thus not make sense to say that implicit in the description of any witness there is the

<div align="right">/assertion ----</div>

assertion that they at least saw an arm being extended.

Suppose that P now argues that the "least seen" must not be interpreted as, "Did you see M just extending his arm, i.e., not as "What did you actually see?" It must be interpreted as, "Did you see this part at least, apart from what you thought that it meant? The point of this question will be to discover some factor in the various descriptions on which all the witnesses will agree. This basic element of agreement will be called, E.

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Imagine that M can now be questioned. Being an honest man he says that immediately prior to the accident he had pushed his hand out of the window of the car in order to remove sugar grains from his fingers.

Can P now announce that the enquiry is closed? Can E be what M says that he intended doing? If this interpretation of E is accepted, then the descriptions of A, B, and C must all be false.

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The difficulty with all the questions that have arisen is that no fixed criterion has been given for E. So far it has been said that E could be:

(1) A description of the least seen by the witnesses in the sense of a point on which all three would be agreed;

(2) The one and only true description of the act, being either the description of one of the witnesses; or a description of what M said that he intended doing. [1]

If E is the one and only one true description of M's act, then we cannot speak about alternative descriptions of this act. The one true description, e.g., the report of what M says that he intended doing may be represented as, $d(q_1 T \wedge q_1)$. Any other descriptions will be incompatible with this and, therefore, simply false.

/ If ——

1. Cf Taylor, op.cit., p. 58 ff, for a point of view supporting this interpretation.

If it is said that E is a basis of agreement between the witnesses and M, then E must still be an act-description. Suppose that all agree that M at least extended his arm. E will, therefore, be the act-description, "M extended his arm". This can be symbolised as, $d(\sim p_1 T p_1)$. This description must somehow be involved in the three act-descriptions:

(i)   "He signalled a right-hand turn".   — $d(\sim q_1 T q_1)$

(ii) "He was feeling the strength of the wind"   — $d(\sim r_1 T r_1)$

(iii) " He was admiring a new signet ring".   — $d(\sim s_1 T s_1)$

The problem with this interpretation will be to show just how $d(\sim p_1 T p_1)$ can be unpacked from $d(\sim q_1 T q_1)$, $d(\sim r_1 T r_1)$, and $d(\sim s_1 T s_1)$. The objection that because the intention involved in the extending of an arm is different from that of signalling, the descriptions must be incompatible, may also count against a claim that E can be an act-description which is not _the_ description of The Act.

We have, therefore, two definite criteria for E, and hence two accounts of the possibility of alternative descriptions of acts.

(a)   There is one and only one true description of an act which is either constituted by, or incompatible with any other act-description. We cannot, therefore, speak about "alternative descriptions" of any act. Any true description which is not _the_ description of The Act, must refer to The Act, but only via _the_ description of The Act.

(b) There is a basic act-description upon which all the witnesses would agree. This act-description will be implicit in, e.g., the descriptions of A, B, and C. In one sense these act-descriptions could be alternative descriptions of, or interpretations of the basic act that is involved in the descriptions.

III

The reductive notion that there can be one and only one true description of any act, could be based upon the assumption that a Correspondence Theory of Truth offers the only suitable criterion for the verification of _all_ observation statements, and hence of that class of observation statement which we have called "act-descriptions". The implications of this will be that if p is an act-description, or any other observation statement, then

then p can be true or false if and only if it corresponds to
some fact in the world. Reference to this fact will be the only
means of verifying p. If e.g., it is a fact that Grahamstown
Cathedral has only one tower, then one and only one statement can
correspond to this fact.[2] Any other statement will not corres-
pond to this fact, as it will assert that the things in the fact
are related in a way or ways in which they are actually not
related. [3]

If it is asserted that, e.g., only M's account of what
happened is a true description, then the problem will be to
determine to what M's account corresponds. Will it be the
extension of an arm and the resultant removal of sugar from the
fingers? The removal of sugar grains from M's fingers may,
however, be fortuitous, i.e. they may have been blown off, so to
speak, by accident. We cannot tell simply by observation that
this was part of the point or purpose of the act. Therefore,
as we are dealing with facts and the referring of propositions to
those facts, we will have to say that the fact that sugar was
blown off M's fingers must simply be described as a natural event
of the form, $\neg u \mathrm{T} u$. The fact that an arm was extended could
conceivably also be a non-act. The extension of M's arm could,
e.g., be the result of a muscular spasm. If this is the case,
then it should be described by a description of the form, $\neg v \mathrm{T} v$.

This will mean that the act-description of the form,
$d(q_1 \mathrm{T} \neg q_1)$ (P's description, for example) must correspond to a
fact described by two propositions of the form, $\neg v \mathrm{T} v$. $\neg u \mathrm{T} u$.

/ As ----

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2. There may, however, be more than one sentence which could be
used to make this statement. For example,
   (a) "The Cathedral in Grahamstown has only one tower."
   (b) "Grahamstown's Cathedral has only one tower."
   (c) "Only one tower can be seen on Grahamstown's
        Cathedral."
Although these sentences are grammatically/ similar, they can be said to
be identical "statement-making sentences". This means that only
one statement can be said to correspond to this fact. (Cf P.F.
Strawson, Introduction to Logical Theory, London: Methuen, 1952)

3. Cf M. Schlick, "Facts and Propositions", M. MacDonald(ed.);
   Philosophy and Analysis, Oxford: Basil Blackwell, 1954.

As $d(q_1 T \sim q_1)$ and $\sim vTv$. $\sim uTu$ correspond to the same fact, they must, by our earlier criterion, be making the same statement. This will mean that a description of the form $d(q_1 T \sim q_1)$ will be logically equivalent to a conjunction of descriptions of the form, $\sim vTv$. $\sim uTu$. This result will obviously contradict our earlier conclusions that there are logical differences between descriptions of acts and descriptions of natural events. The assertion that $d(q_1 T \sim q_1)$. $\equiv$ $\sim vTv$. $\sim uTu$, blurs completely the distinction between act-descriptions and descriptions of other forms of behaviour.

It can, however, be argued that we must take cognisance of another earlier conclusion , and hence must claim that the description of the extension of M's arm must fit into a teleological pattern of explanation. This means that unless we have good reason for supposing otherwise, the extension of M's arm must be taken to be an act. This behaviour must, therefore, always be described by an act-description. The removal of sugar grains from M's fingers is not an event which <u>must</u> always be explained teleologically. So the fact to which a description of the form, $d(q_1 T \sim q_1)$ could correspond , may also be described by a description of the form, $d(\sim vTv)$. $\sim uTu$. This seems to imply that $d(q_1 T \sim q_1)$ $\equiv$ $d(\sim vTv)$. $\sim uTu$. This clearly does not follow. The sense of the content of $d(q_1 T \sim q_1)$, i.e., "He was removing sugar grains from his fingers", is clearly different from the sense of the content of $d(\sim vTv)$. $\sim uTu$, i.e., " He extended his arm through the window, and sugar grains were or happened to be) blown off his fingers." This latter description cannot imply that the removal of sugar grains is the intention, or <u>the</u> reason for M's act. It cannot, therefore, be said that $d(q_1 T \sim q_1)$ $\equiv$ $d(\sim vTv)$. $\sim uTu$.

What then is the fact to which $d(q_1 T \sim q_1)$ must correspond, if a reductive theory is to hold ? Let us suppose that in general a proposition of the form aRb will only be true if it corresponds to a fact in the world in such a way that:

    (i)   It has the same number of constituents as the fact <u>that aRb</u>.

    (ii)   a and b are names of objects configured in the fact.

    (iii)   The fact is configured in the way "shown" by

the proposition, aRb. [4]

If these conditions are satisfied, then it can be said that aRb "mirrors" or "pictures" a fact in the world. aRb can, thus, be the only true description of this fact.

Difficulties arise as soon as $d(q_1 T \sim q_1)$ is thought of as a "picture" of an act in the same way that aRb is a "picture" of a fact. $d(q_1 T \sim q_1)$ contains a negation sign, and in a Logical Atomist theory a negative proposition is a truth-function, and hence not an elementary proposition. It cannot, therefore, be said to "picture" - only elementary propositions "picture" facts. [5]

Not even a proposition of the form $d(pTp)$ can be said to picture a fact. If it could picture a fact, then the symbols, d and T, must either be names or indications of the way in which objects in the fact are configured. T, however, indicates in part a change from one temporal occasion to another, and so cannot be an indication of the way that objects are related. [6] But p itself is an elementary proposition , and that it occurs twice in $d(pTp)$ is an indication that this is a complex proposition, which should, therefore, "picture" via the elementary propositions of which it is a truth function.

This will lead into the difficulties faced earlier. For the notion that $d(pTp)$ is a complex proposition implies that p and p are externally linked by symbols analogous to logical

/constants ----

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4. I am presupposing in this account of a "strong" Correspondence Theory of Truth Wittgenstein's type of Logical Atomism rather than Russell's. (Cf L. Wittgenstein, Tractatus Logico-Philosophicus, translated by D.F. Pears and B.F. McGuiness, London: Routledge & Kegan Paul, 1961; and B.Russell, "The Philosophy of Logical Atomism", R.C. Marsh (ed.), Logic and Knowledge, London: George Allen & Unwin, 1956.) So although aRb consists of three symbols, a, R, and b, only a and b are names. R will not be a name, but rather a symbolic way of indicating that objects referred to are related in a specific way.

5. Except in Russell's theory, op. cit. He does speak about negative facts. But cf R. Demos' rejection of this, (Mind, 1917)

6. Cf Wittgenstein, Tractatus, 2.03 : "In a state of affairs objects fit into one another like the links of a chain".

constants. This in turn implies that there is not a fact to which a description of the form d(pTp) corresponds, and that we cannot speak about the act being a fact in the world. But, more important, this type of theory forces on the logic of act-description an extreme kind of reductive theory, which does not necessarily arise from an analysis of the logic of act-descriptions.

An extreme form of correspondence theory does not appear, therefore, to be applicable to the verification of act-descriptions. However, even a "weaker" version of this theory will still have the same implications, when applied to the verification of act-descriptions. The difficulty will in general, i.e. when applied to any observation statement, still be one of determining or identifying the fact to which a description must correspond.[7] Even if we do not speak about a proposition "picturing" a fact, and say rather that a proposition is true if it can be used to assert that things are related in the way that they are in fact related, then we are still implying that there is some "topic / neutral" fact, which is described by one and only one proposition, and to which false propositions still make (false) reference. The consequence of this will be that incompatible descriptions are again presumed to be descriptions of the same event, i.e. an event that can be identified indepedently of the general attitude of mind, or particular notions, etc, of any describer.[8]

It can now be seen that the claim that there must be one and only one true description of any act has important philosophical implications. The main implication is that a Correspondence Theory of Truth offers the only suitable criterion for verifying . of act-descriptions. This in turn implies that

/ supposedly ----

7. Cf Schlick, op. cit.

8. By claiming that there can be one and only one true description of a fact, this sort of theory is presupposing that it is possible to distinguish between a fact and any description of that fact; this means that,on a general level, it is possible to argue that a claim is being made that there is a metaphysical distinction between "Language " and "Reality". The metaphors used by, e.g., a Logical Atomist, indicate this quite clearly. Language is spoken of as a ruler, which is laid up against the object to be measured (i.e., the world, or a particular fact.) The individual gradation marks on the ruler will be analogous to names which "reach out" to "reality".

Cf Wittgenttein, op. cit., 2.15 - 2.151

incompatible descriptions, such as those given in our example of
the motor accident, must refer to the same fact (or event), which
can be identified apart from these conflicting descriptions. A
discussion of these implications will obviously have an important
bearing on the viability of the reductive analysis being examined
in this chapter.

IV

Let us consider an extreme example in order to examine
the difficulties involved in attempting to identify, in the way
demanded by the Correspondence Theory of Truth, the event ...
referred to by two seemingly incompatible observation statements
or descriptions.

Primitive men in a certain tribe always claimed that
they saw , during thunder storms, a snake-in-the-sky. [9.] The
implication of the notion that there can be one and only one true
description of an event will obviously be that the assertion,
"There is a snake-in-the-sky" is false . On this level, such a
claim could be rebutted by the counter-claim that snakes do not
inhabit the sky, and that the event in question must be described
by, "There was a flash of lightning". The success of such a re-
buttal lies in the assumption that we and primitive man see the
same thing when reporting respectively, "There was a flash of
lightning", and, "There was a snake-in-the-sky". But what are
we to make of "same" in this context? Primitive man may assume
that it is obvious that there is such a thing as a snake-in-the-
sky, for he asserts that he sees it. In this society and

/ culture ----

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9. Cf E. Cassirer, Language and Myth, New York: Dover Publica-
tions, 1946.

   Now presumably primitive man can distinguish between
an ordinary snake, e.g. a mamba, and the extraordinary snake-in-
the-sky. It is not as if he sees an ordinary snake located in
the sky. He sees a sort of divine snake. But for him a mamba
and a snake-in-the-sky will be of the same species.

culture, the description, "There was a snake-in-the-sky", would only
be rebutted by a consensus of opinion that the snake-in-the-sky was
not present at that time. A rebuttal could not be, "There was
only a flash of lightning".

There would in this example be the same measure of dis-
agreement as there was in our example of the reports of the witnesses
of the motor accident. The notion of the _same_ event or happening
being witnessed, will be as ambiguous as it was in our earlier
example of the motor accident. The alternatives in this new
example will be the same as the different criteria offered for E.
There must either be one true description of the event, or fact,
or there must be a single event interpreted differently,
or a basis of agreement discoverable by a means as yet undetermined.

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Let us first discuss the claim that we and primitive
man are describing, or interpreting differently _one event_.
This claim will have several immediate consequences. Consider
first this question : Can it be said that primitive man bases
his claim to see snakes-in-the-sky on the assertion, "This is what
a snake would look like if it were in the sky", or more simply,
"This x looks like a snake". That this does not follow can be
shown by an examination of the use of the concept "looks like". 10.

We often say, "It looks like x", when we have reason to
believe that the object may not in fact be what it looks like. A
good reason for saying that an object looks like x, rather than
saying that it is x, may be the circumstances in which it appears.
For example, if no one was at war, we would in all probability say
of a track of torpedo-like bubbles in the water, "That looks like
a torpedo". The fact that no one is at war would constitute a
good reason for supposing that it is not a torpedo.

The assertion, "It looks like x", depends, then, on a
certain degree of similarity between the object and x But such an
assertion also contains the counterfactual element, "But not-x".

/ There is ---

10. Cf G.N.A. Vesey, "Seeing and Seeing As", _Proceedings of the
Aristotelian Society_, 1955-56
        N. Fleming, "Recognising ans Seeing As", _Philosophical
Review_, 1957.

There is, therefore, no contradiction involved in asserting, " It looks like x, but it is not in fact x".[11] Because of this counterfactual element in "It looks like x", it follows that statements of this/form can never constitute conclusive evidence for an assertion of the form, "It is x"; for this is obviously incompatible with the further statement, "But it is not x". Even if every one in the world could validly say of an object, "It looks like x", we would still not have sufficient grounds for claiming that it is x. When we assert, " This is x", we imply that we can see no reason for supposing that it is not x.

It follows, therefore, that if primitive man can see no reason for supposing that he does not see a snake-in-the-sky, we cannot say that his claim to see such a snake is based upon assertions such as, "There is an x which looks like a snake", or, more importantly, is based upon one of the form, " I am interpreting, or I see this x as a snake-in-the-sky". For these assertions either must imply the counterfactual, "It is not a snake-in-the sky", or must be an expression of, e.g., non-committalness or uncertainty. This further implies that primitive man must have good reason for supposing that what he sees is not a snake-in-the-sky.

Now primitive man's statement,,"I see a snake-in-the-sky", can be reduced by us to the statement, "Primitive man sees lightning as a snake-in-the-sky", because: (a) We have good reason for supposing that the event in question is not a snake appearing in the sky.

(b) Lightning in some ways

/ looks ---

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11. There are at least two other senses of "It looks ---", which appear different from the sense elicited above.
(1) We often say, "It looks as it it is going to rain". This expresses a judgement that, in our opinion, it will probably rain. There is no counterfactual element in this. This, however, corresponds in part to the sort of assertion such as, "It looks like cancer". But this latter assertion is more an expression of reserve, or one of a non-committal sort, than an expression of opinion, or of a judgement.
(2) Sometimes we say of a formation of clouds, "It looks like a cathedral". In this context, there is no prospect of people being deceived into believing that it is a cathedral. There may be features common to that formation of clouds, and a typical cathedral, but the circumstances are such as to make it obvious that there is no possibility of any ambiguity.

Cf Vesey, op. cit., p. 110-112.

looks like a snake.

The result of this will be that the notion of having a
reason
for asserting the counterfactual will be brought from a first to
a third person level. This will mean that we cannot argue that
primitive man himself can say that he is interpreting an event
as a snake, when he reports that he sees a snake-in-the-sky. For
this must imply that what he claims to see is not what he really
sees. A further implication will be that the report, "I see a
snake", may be equivalent to the statement, "I see an x which
looks like a snake". This contradicts the conclusions already
reached. We have seen that a "looks like"-like statement can
never be equivalent to a statement of the form, "I see x". If
primitive man has no reason for supposing otherwise, he cannot
change his assertion, "I see a snake-in-the-sky", to "I see an x
(i.e., some event other than the snake-in-the-sky) as a snake-in-
the-sky".

The ambiguity of the notion of the same event being
witnessed by primitive man and by us, must now be evident. If I
say, "x looks like y", and you say , "x looks like z", then we are
simply asserting that an object which we both can identify, i.e., x,
has features in common with both y and z. Here we are both
obviously referring to, or imaginatively describing the same object.
This analysis will not, however, work with assertions such as
those in our example. If it is to work, both we and primitive man
must admit that we see some event, which is like both a snake and
a flash of lightning. However, neither we nor primitive man,
may have reason for supposing that what we actually see is not a
flash of lightning, or a snake-in-the-sky.

A consequence of this will be that one of our original
alternatives will fall away. We cannot say without further
qualification that we and primitive man are describing or
interpreting differently the same, or one, event, using ,- "There is
a flash of lightning", and, "There is a snake-in-the-sky",
respectively. Another important consequence will follow from this.
The claim that one and only one description of an observational
sort can be true depends, as was seen, upon the assumption that
these are unambiguously descriptions of the same event. But we
have seen that "same" in this context is misleading and ambiguous.

This . . .

This ambiguity results from the fact that the event to which some observation descriptions refer may not be independent of the "circumstances" of the event; including in this notion of "circumstances" physical factors, as well as the general attitude of mind, and particular interests and notions, etc, of an observer or describer. That is, what is taken to be the event described may be dependent on the general attitude of mind, etc, of a describer. Hence, what is taken to be the event described may differ from describer to describer. As this is precisely what is denied by a Correspondence Theory of Truth, it can be argued that such a theory cannot give a satisfactory account of the verification of all observation-statements.

<center>V</center>

An important conclusion seems to follow from the above argument. If some observation statements can refer to events whose identification is dependent on "circumstances", then the identification of an act may also depend upon such "circumstances", and the act identified may vary from describer to describer. The reductive theory which implies that there can be one and only one true description of any act, may, therefore, be false. Further argument is, however, needed to substantiate this

Consider first an implication of th argument in the previous section. If it is true to say that primitive man sees a snake-in-the-sky and that we see a flash of lightning, can it not be said that we are dealing with the perception of two different things? If we are dealing with the perception of two different things, then the implications of the Correspondence Theory must still hold.

This objection clearly presupposes that there is no incompatibility at all between the two descriptions, "There was a flash of lightning", and "There was a snake-in-the-sky". If the descriptions refer to the perception of two different events, then there will be no sense in which they could be incompatible. But it is possible to suppose that the two descriptions could be broadened to:

(1) "At time t1, in place p1, there was a flash of lightning".

/ (2) "At —

(2)   "At time t1, in place p1, there was a snake-in-the-sky".

Therefore, there must be a degree of incompatibility between the two descriptions. This implies that in this example we cannot be dealing with simply the description of two separate things. Our argument so far has shown there must be some compatibility between these descriptions. As a result the degree of incompatibility cannot be that envisaged by a Correspondence Theory of Truth.

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The degree of compatibility and incompatibility in this context between the statements, "There was a flash of lightning", and "There was a snake-in-the-sky", may be illustrated by considering a new notion - "rule of interpretation". This is introduced as a technical term to mean much the same as the concept "circumstances". The use of this new term may be more precisely illustrated by the following example: [1][2]

We may be asked to complete the series, 3 6 11 18 27 ——, by adding the next three numbers of the series. Normally we will, as a matter of course, be able to complete the series by adding, 38 51 66. By "normally" I mean that it is assumed that the author of the first five numbers of the series followed the rules of arithmetic. But we must add that if the numbers were randomly placed by the author, without any reference to any order, this would not prohibit me from completing the series. In completing the series, I need only presuppose that the first five numbers have been written down according to a determinate rule : "Each number in the series must increase by the previous increase + 2, thus by: 3 5 7 9 11 ——" This rule fulfills two functions : it makes the series intelligible, i.e. makes the row of numbers more that a list; and it enables us to complete the series. The rule, for the construction of that series I now call, "The rule of interpretation of that series. If the list of numbers is to become intelligible to us as a series, we must see this list in terms of this rule, i.e. the rule for the interpretation of that series.

/ In ——

1   Cf P. Winch, The Idea of a Social Science, London: Routledge & Kegan Paul, 1958, p. 29-37.

     L. Wittgenstein, Philosophical Investigations, I : 214-238.

In addition to this, we often or normally equate this rule of interpretation with the rule used by the author - but we need not do this.

Suppose now that this particular list of numbers was not intended to be an illustration of a mathematical series, but is in fact a message in code. In this instance the rule of interpretation will be embodied in the rules or key of that code. If, therefore, the list of numbers is to be intelligible to us as a message, we must interpret it according to this new rule of interpretation, and must presuppose that the author of the list followed the rule or rules implicit in the key of the code.

Two descriptions may now be given:
(i) "This is a mathematical series written down according to such-and-such a rule".
(ii) "This is a coded message written down according to such-and-such a rule."

If we once more suppose that a Correspondence Theory must apply to the verification of all observation statements, we will have to say that the above two descriptions are incompatible in the sense that one and only one of them can be true. Once, however, it is granted that the above two descriptions result from interpreting a particular list of numbers according to two different rules of interpretation, the incompatibility between them cannot be that envisaged by the Correspondence Theory. But there is still a sense in which these two assertions are incompatible. We are presupposing that the author of the list of numbers wrote the numbers down according to the rules of arithmetic, i.e. we are presupposing that he intended it to be a mathematical series; and we are presupposing that he wrote them down according to the rules of a certain code, i.e. we are presupposing that he intended it to be a coded message. Nevertheless, there is a degree of compatibility between the two descriptions, i.e. both could be true at the same time. Given this particular series of numbers, and a knowledge of the code and of the rules of arithmetic, we can say that no matter what the author intended this list to be, it could be both a mathematical series and a coded message. So, e.g. if the author of the list had actually intended that this should be a coded message, it can be said that at the same time it is a mathematical series.

An important point now seems to follow. Once it can be

shown that it makes sense to say that a rule of interpretation
has been used to render intelligible a seemingly disordered series
of events, or things, etc., then it can be argued that we can no
longer say that there must be one and only one true description of
the event(s) or thing(s). But, if our earlier example is to be
paradigmatic, we will have to say that, in such circumstances as
described above, there must be some basis of agreement, i.e.,
there must, in the different descriptions, be some common element.
In the above example, the common element will simply be the list
of numbers which is construed as a series and a coded message,
respectively. That is, if there should be controversy over this, it
will have to be agreed that there is, or was a list of numbers
which is, or was, taken to be either a series or a message.

Consider now an application of this argument to our
example of primitive man. It was argued earlier that the two
descriptions, "There was a snake-in-the-sky", and "There was a
flash of lightning", are not as mutually incompatible as is
demanded by the theory that there can be one and only one true
description of any event. It was said then that we can say that
primitive man is taking a flash of lightning to be a snake-in-the-
sky because we have good reason for arguing that there cannot be
such a snake, and because lightning does, in some ways, resemble a
snake. By saying that primitive man interprets lightning as a
snake-in-the-sky, we are implicitly imputing to primitive man the
use of a specific kind of "rule of interpretation". That is,
we are implying that primitive man renders certain natural events
intelligible through the use of a rule or rules, of interpretation,
which will be evident in his general attitude of mind or notions,
prejudices, etc. It is, as was said, these general beliefs,
prejudices, notions, etc, which lead primitive man to believe that
he sees a snake-in-the-sky. But these general beliefs are such,
that primitive man himself may have no reason for supposing that
what he sees is not a snake-in-the-sky. Although primitive man
himself may be unaware of his prejudices, etc. and hence of his
particular rules of interpretation, he must at least be able to say
that he identifies, or classifies such-and-such events (i.e.
the appearance of a momentary object of such-and-such a hue and
shape) as snakes-in-the-sky. He can only render such events
intelligible by classifying them as appearances of snakes-in-the-sky.
In the same way, we, too, must be able to say that we classify the
same sort of events as flashes of lightning. In our statement
that we see a flash of lightning there may be evident attitudes of
mind and   hence   , rules of interpretation, which are

different/ ...

different from those of primitive man. It is, however, evident
that there is implicit in our description, and primitive man's, a
basis of agreement, which may be said to be a description of the
particular event or events which we are rendering intelligible, or
in other words, are bringing under general concepts, according to
different rules of interpretation.

The compatibility between the two descriptions, "That is
a snake-in-the-sky", and "That is a flash of lightning" must lie,
therefore, in the assumption that given two different general
attitudes of mind, or in our new sense, two different rules of inter-
pretation, a particular event or series of events, could be
rendered intelligible in two different ways. We can, thus, once
more conclude that both descriptions may be true at the same time.

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The general points so far considered in this Chapter are
these:

The reductive claim that there can be one and only one
true description of an act, seems to depend upon the assumption
that only a Correspondence Theory can give a satisfactory
account of the verification of all observation statements, and hence
all act-descriptions.

The Correspondence Theory implies that supposedly
incompatible descriptions must refer to the same event (in the sense
already established), and hence that an event can be separately
identified apart from conflicting descriptions. Our discussion has
shown that the notion of the "same event" is ambiguous, and that
what is/described is often dependent upon the general attitude of
mind of a describer. As this is denied by a Correspondence
Theory, it immediately follows that this sort of theory of truth
cannot give a satisfactory account of the verification of all
observation statements. This appears to imply that the reductive
theory under consideration is mistaken. But it was then argued that
we cannot simply assume that some act-descriptions will fall into
the class of observation statements, to which verification a
Correspondence Theory cannot apply. It was then seen that if the
notion of "rule of interpretation" could apply in any context in
which observation statements are used then at least some of these
observation statements will be of the species to which a Correspondence
Theory cannot apply. We can, therefore, say that if we can speak of
rules of interpretation being implicit in at least some act-descriptions,
then a Correspondence Theory cannot apply to these act-descriptions.
It will follow from this that the reductive notion that there

must/...

must be one and only one true description of <u>any</u> act will be wrong.

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Our conclusion in Chapter 3 will have an important bearing on the problem now under discussion. We said that if a behaviour-description p is to be an act-description, <u>we</u> must be able to <u>presuppose</u> that the agent of that behaviour could have been following a rule, meaning by this that we must <u>presuppose</u> that the agent <u>takes</u> the behaviour described by p to be sufficient for fulfilling a certain goal or function. If we say that any behaviour description, q, <u>is</u> an act-description, then we must have presupposed that the agent took this to be sufficient for fulfilling a certain goal or function, and we may elide this goal-description into the original act-description. This clearly implies that the goal-description that is linked in this way to an act description may be dependent on what a <u>describer</u> takes the behaviour to be sufficient for. As the goal-description linked in this way with an act-description, may be elided into the original act-description, the description of the act, and consequently the verification of the act itself, may be dependent on the general attitude of mind, notions, etc. of a describer.

The rule that is presupposed in this way may be called the "<u>rule of interpretation</u>" of that act. For this rule that is presupposed in any act-description fulfils precisely the functions, and has the same implications as those rules which were earlier called "rules of interpretation". In ascribing a certain goal or function to any act we are interpreting that act in the light of the physical circumstances in which it occurs, and in terms of the goal for which it physically or <u>conventionally</u> is taken to be sufficient. And as was said above, this rule presupposed need not be the rule that the agent is actually following.

This has immediate important consequences for the reductive claim that there can be one and only one true description of any act. It has been argued that if the notion of "rule of interpretation" can apply to any sub-class of the class of observation statements, then the verification of at least some members of that sub-class cannot be satisfactorily explained by a Correspondence Theory of Truth. This in turn implies, that as a Correspondence Theory is essential for the reductive theory being considered, this reductive theory is untenable. This may be further substantiated by reconsidering our earlier discussion in this Chapter.

We said that there are two conflicting criteria that may
be given for M. E could either (a) be the one and only true
description, e.g., the description of one of the witnesses, or
the report of M, or (b) be a description of some basis of
agreement between the conflicting descriptions. Now if we are to
say that the descriptions of A, B, C, and M, are descriptive
of <u>one</u> act occurring at a definite time and place, then these
conflicting descriptions <u>must</u> be treated as <u>elided goal-descriptions</u>.
In other words, these descriptions must be the end result of attempts
to <u>render intelligible a particular act</u>. If this cannot be said,
then there would be no sense in which we could speak about these
being <u>conflicting</u> descriptions. These descriptions <u>are</u> conflicting,
and conflicting in the sense that implicit in them (i.e. at least
in the descriptions of A, B, and C) there are conflicting pre-
suppositions - these presuppositions being that <u>the agent</u> takes a
<u>particular act</u> to be sufficient for a <u>different</u> goal or function.

It follows, therefore, that we <u>must</u> speak about a basis
of agreement involved in these conflicting descriptions - this
basis of agreement being the act-description into which the various
goal-descriptions have been elided. A, B, and C must, therefore,
admit that they <u>at least</u> saw the act of an arm being extended, and
that their descriptions are attempts to give <u>the</u> reason for <u>this</u>
act. They <u>take</u> the point of this act to be signalling a right-
hand turn, feeling the strength of the wind, and admiring a ring,
respectively. M must, therefore, be a description of this basis
of agreement.

Now M must also admit that he at least extended his arm
through the window of the car. Their various descriptions may, thus,
be rewritten as teleological explanations:

A: "M extended his arm in order to signal a right-hand turn."
B: "M extended his arm in order to feel the strength of the wind."
C: "M extended his arm in order to admire a new signet ring".
M: "I extended my arm in order to remove sugar grains from my --
    fingers."

Because the goal-description to which this <u>one</u> act-descrip-
tion is linked, is dependent on rules of interpretation, and
because rules of interpretation may differ in the sense stated
earlier, and because these goal-descriptions may be elided into the
original act-description, it follows that <u>there may be more than</u>

<u>one true description of the act.</u>   For example, as M was driving his car, A would be justified in taking M's act of extending his arm through the car window to be a signal.   For in the circumstances in which this act was performed, i.e. in traffic, we may justifiably presuppose that the agent is following the rules of the road, <u>no matter what he actually may have intended doing.</u>   So even though M extended his arm intending merely to remove sugar grains from his fingers, A could validly interpret this as a signal.

There are, therefore, <u>at least</u> three valid descriptions of M's act: "He was signalling a right-hand turn"
"He was removing sugar grains from his fingers"
"He extended his arm out of the car window".

It does, therefore, make sense to speak about "alternative descriptions" of an act.   Thus, the reductive assertion that there can be one and only one true description of any act must be false.

CHAPTER 5.   CONCLUSION.

It was said at the outset of this thesis that there are
two important related problems in the logic of act-descriptions.
These problems arise from an obvious feature of act-descriptions -
some act-descriptions may be unpacked into a complex list or series
of descriptions of the same grammatical structure as the original act-
description.. This gave rise to the following queries:

(i) Will we arrive at a point at which further analysing
or unpacking of the original description into descriptions of the
"act-agent-object" form will be impossible?

(ii) Must we say that the first act-description consists
of more than one other act-description? Or must we say that the
original act-description is single, in the sense that it cannot
consist of a multitude of act-descriptions?

Attempted answers to these two sets of questions had to
be governed by the following considerations:

(a) As the subsidiary descriptions are derived from one
act description, an attempted answer must show how the subsidiary
descriptions are related to the original act-description.

(b) Even though the subsidiary descriptions are derived
from one act-description, they must, if the list is to be a proper
"unpacking", refer/separately identifiable items of behaviour.

As the main object of this thesis was to determine the
viability of reductive analyses of the concept "act", the two
solutions to (i) and (ii) outlined were, firstly, a reductive theory;
and secondly a denial of this reductive theory. In the reductive
theory it was argued:

(1) That in describing any behaviour as an act of a
certain kind, our description must always be of a single act, of a
single kind.

(2) That, therefore, the original act-description cannot
be said to consist of a multitude of act-descriptions.

(3) The subsidiary descriptions into which an act-
description may unpack must be descriptions of essential parts or
constituents of The Act.

(4) These descriptions must, thus, be descriptions either
of non-purposive movements, or of collateral acts, which are not items
of behaviour identifiable apart from The Act.

(5) The relation of the subsidiary descriptions   to/ ...

to the description of The Act, and of the subsidiary behaviour
to The Act must, therefore, be that of parts to the whole.

The denial of this reductive theory was basically an
argument that:

(i) if an act-description could be unpacked into
subsidiary descriptions, these must be descriptions of acts that are
involved in the successful performance of The Act.

(ii) A single act-description could, therefore, consist
of a multitude of act-descriptions.

(iii) An act-description cannot consist of parts that are
not act-descriptions - a point must, therefore, be reached at which
further unpacking of the original act-description into descriptions
of the "agent-act-form" will be impossible.

Three important problems arose from this preliminary
discussion:

(a) Must there be one and only one true description of
any act? Can there be alternative descriptions of any act?

(b) What is involved in describing behaviour as an act?
How can we distinguish between acts and other behaviour?

(c) Can all human behaviour be characterised as non-
purposive? Under what circumstances could human behaviour be
characterised as non-purposive?

From our preliminary discussion it was evident that
reductive theories must either state or imply:

(a) There can be one and only one true description of
any act

(b) In describing behaviour as an act, we must either
imply that some (non-purposive) bodily movement is caused by some
other characteristic "internal" or "mental" event; or that an
act-description can be analysed into a loose connection of at least
two descriptions referring to a bodily movement, and an internal event
or state, such as a "desire".

(c) All human behaviour can be characterised as non-
purposive.

The main chapters of this thesis showed successively that

each/ :::

each of these reductive implications is mistaken _in principle_. In
Chapter 2 it was argued that _at least some_ descriptions of human
behaviour _qua_ descriptions of human behaviour must be of kind other
than descriptions of mechanical behaviour. The logical differences
between this kind of description (i.e. act-description) and descriptions
of mechanical behaviour were brought out by a consideration of the
conditions that must apply before descriptions of each kind could
fit into a teleological pattern of explanation. It was seen that
these conditions are not logically isomorphic -- the teleological
explanation of some human behaviour must be "basic" or "primitive"
with respect to Covering Law Explanation. The reductive implication
that _all_ human behaviour can be characterised as non-purposive _must_
therefore, be wrong.

In Chapter 3 we argued that it is a mistake in principle
to define an act in terms of a non-purposive movement and any other
concurrent event, mental or physical. This was shown by
arguing (i) that we cannot speak of bodily movements being caused
by private "mental" events, such as desires, etc; (ii) that the
notion that an act-description can be analysed into a loose connection
of a description of a desire + a description of a movement begs the
question. The concept "desire" is only intelligible in the context
of "acting" and "doing", so either the description of the desire
or of the bodily movement must / imply a description of a _doing_ or _act_
This new description must then be subjected to the same analysis and
so _ad infinitum_.

In Chapter 4 it was shown that the reductive assertion
that there can be one and only one true description, depends upon
the assumption that only a Correspondence Theory of truth is applicable
to the verification of all observation statements. This in turn
implies that the identification of the event, to which conflicting
descriptions apply must be "topic neutral", i.e. independent of the
general attitude of mind, or particular notions, etc., of _any_ describer.
However, it was seen that in that class of observation statement
to which we could impute "rules of interpretation", the above
implication of the Correspondence Theory does _not hold_. The
discussion in Chapter 3 had already indicated that an important
criterion for the identification of any behaviour-description as an
act-description is the presupposition that the agent of _that_
behaviour could have been following a rule. This criterion carries
the same implications as the sense given to "rule of interpretation".
It follows, therefore, that rules of interpretation are applicable in

the sphere of act-descriptions. The identification of an act could, thus, be dependent on the general attitude of mind, etc., of a describer or observer. This act, however, will be an act referred to by an elided goal-description. There must still be a measure of agreement — a basic act-description, the referent of which is taken to be sufficient for _different_ goals. As these different goal-descriptions may be elided into the original act-description, to form _new_ act-descriptions, it will make sense to speak about alternative descriptions of an act.

All the important implications of reductive theories have thus been refuted by the discussions in the various Chapters of this thesis. The general conclusion of this thesis _must_, therefore, be that _any_ reductive analysis of the concept "act" is a mistake _in principle_.

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