BELIEFS, FEELINGS, AND ACTIONS

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In this paper it is claimed that beliefs, feelings, and actions are typically complex phenomena which have simpler components. In particular, beliefs often involve feelings and actions, while actions involve feelings and beliefs, and feelings involve beliefs and actions. It is then suggested that unconscious beliefs and commitments, both ontological and otherwise, may be discovered by the examination of actions and feelings. While these will vary from one individual to another, it is suggested that it may be possible to form certain generalizations which are of philosophical interest.
Beliefs, Feelings, and Actions

The object of this paper will be to illustrate certain relationships that usually hold between beliefs, feelings, and actions. To this end, an example of each will be described in some detail, and I will attempt to show how a particular action involves feelings and beliefs, how a feeling involves beliefs and actions, and how a belief involves feelings and actions. I will claim no universality for any of these descriptions, and, in fact, will suggest that another action of the same category (say, another gift to charity or another murder) may well involve different beliefs and feelings, particularly if it is performed by another person. In a similar way, different beliefs that the redcoats are coming may involve different feelings and actions, and different feelings of anger may involve different beliefs and actions. I will suggest, however, that feelings, beliefs, and actions are likely to involve each other in something like the way depicted, and I will also put forward a format for the description of these phenomena which will be applicable in all cases despite these variations. The reader will then be allowed to make his or her own generalizations about beliefs, feelings, and actions, and to decide which, if any, of these generalizations hold universally.

It is necessary at the outset to say what is meant when a particular process, A, is claimed to "involve" another, B. Much the same claim could be made by saying that B is part of A, but both modes of speaking are subject to ambiguity. For example, such an assertion might be construed in such a way that it would be inconsistent with what was implied above: that a process of the same category as A need not always have a part similar to B. Still less will I claim that a process commonly known by the same name as A need always have the same components as A. There will then be no necessary connection between A and B, nor any necessarily true generalizations linking events of the kinds to which A and B belong.

One might attempt to describe the relationship by making some contingent causal generalization about events of the type A and events of the type B, but I prefer instead to make a counterfactual claim about the particular events, A and B. Thus, A will involve B if and only if the following is true: If B had not occurred at the indicated time and place with respect to A, then A would,
as a matter of causal fact, have been significantly changed over and above the mere deletion of B from A (in the case where B can be said to be a part of A). Indeed, A would have been so different that, where A is a belief, feeling, or action, we would not have counted it as the same belief, feeling, or action. Of course, this claim presupposes a criterion of identity which allows us to say of two intentional phenomena, not only that they are both actions (beliefs, feelings), but that they are the same action (belief, feeling). I will not here attempt to provide such a criterion, but such an omission is not fatal. There are a great many cases in ordinary life and speech where we are called on to say of someone that he has the same belief that he used to have, or that he has the same belief that someone else has, and similarly in the case of feelings and actions. The criteria used do vary in strictness, depending on the context, but there is at least a family resemblance in the criteria used. If one uses a very strict criterion, the claims made in this paper will be reduced almost to triviality, but my suggestion is that these claims will hold true despite progressive and considerable weakening of the criterion of identity. The point is here that we do have intuitions of sameness concerning these phenomena, and we can appeal to them even if we do not go to the trouble, within the confines of this paper, of describing and analyzing those intuitions.

In the cases to be considered here, the component process will generally be only one of many which make up the whole, and the cash value of the present claim is then something like the following: A phenomenon such as a belief (feeling, action, intention) is generally a complex one such that the deletion of any component process (or the substitution of a markedly different component) would lead to changes in other component processes to such an extent that the whole would be virtually unrecognizable. That is, the components are connected, not only with the whole, but with each other in such a way that the deletion of one, or even a major change in it, would profoundly affect almost all the others. In this paper, I will be arguing that beliefs, feelings, and actions involve each other in this sense.

One of the points of this exercise particularly concerns belief. Many of our commitments, including our ontological commitments, are unconscious and are, in a certain sense, hidden from us. One method of uncovering them is, of course, the analysis of our ordinary speech. While I will not dispute the usefulness of this approach,
it also has certain limitations. For example, one can not only lie, but one can also speak, over a long period of time, in such a way as to give a misleading impression as to one's beliefs. If one enjoys irony and humor, one may consistently speak of demons and angels, without really believing in them, but still appear to quantify over them and treat them as potential counter-examples for the generalizations that one makes. In order to know when a speaker is sincere, or when he is not being ironical or humorous, we have to know something about his feelings, and the relationships between his feelings, beliefs, and actions. The present paper will not be concerned with that problem explicitly, but it might be used as a first step in that direction.

Secondly, a promising approach is to uncover commitments independently of speech by looking at those beliefs which are involved, often unconsciously, in feelings, and in the intentions which are bound up with actions. In the examples to be given, we will not cite any beliefs which are likely to be among the most basic commitments a person might have. But, again, the method could be extended. In any case, the relationship between beliefs, feelings, and actions is worth examining for its own sake.

We will begin with actions and take as an example an action which involves, among other things, a speech act. This speech act happens to be that of telling a lie. Thus, the speaker does not believe what he is saying, but this very fact does lead him to have certain feelings as well as a number of other beliefs.

Suppose that a man makes a date with a waitress at an all-night diner and tells her, falsely, that he is not married. He would then have certain fears that he would not have had if he were being sincere. In particular, he is probably afraid that she will investigate the matter further and do such things as call his home in order to see whether a woman answers. If, on the other hand, he believes that he is not married (and presumably is not married, although we allow for the remote possibility that he has forgotten that he is married), he would not fear that consequence, and might even hope that she would call his home if she has any doubts. But this in itself does not distinguish the two states. One can tell the truth, but not all the truth, and still be afraid that the other person will find out some further truth. For example, even the man who is not married may not want the waitress to find out where he lives, or discover other facts which might come to light if she checks on his unmarried state. In that case he still fears her collecting further data,
but he is not afraid of a certain kind of consequence that is characteristic of lying. This would involve, not only being afraid that the waitress will find out something, but also feeling that, if she does find out he is married, he will be vulnerable with respect to the statement that he made. That is, he can be attacked in a way in which he could not if he had never said whether or not he was married. The man may be inclined to feel guilt if he has said that he was not married, and may be afraid of that; but, even if he is not inclined to guilt under such circumstances, he can still be put on the spot in the sense that he may have to concoct further prevarications concerning his motivation for lying, and so on (for example, "I didn't tell you that I was married because I am getting a divorce soon, and it wouldn't make any difference").

Someone might, at this point, be tempted to give a definition of what it is to lie, or assert something to someone that does not believe oneself, in terms of these sorts of pressures that can be brought to bear on the speaker. That, however, would be a mistake, since one can almost always find counter-examples to such definitions and the generalizations on which they are based. In the present sort of context, there are circumstances in which the man could be put on the spot in much the same way for not telling the waitress something, even if he does not tell a lie. For example, he might be called on to explain why he did not tell her that he has any of a range of diseases, that he is running from the police, and so on. Of course, we were not looking for such a definition in the first place, but it turns out that we need a better framework for description before we can even describe a particular act of lying in an adequate way.

It will be here suggested that the man's action in lying, which he intends to be part of a more extensive act of seduction, will, like other actions, involve a whole pattern of actions, intentions, feelings, and beliefs. The speaker says something, intending and believing that it will produce a certain effect, in this case a belief, in the hearer. He then has certain feelings about his own action which may cause him to take certain further actions, again intending and believing that they will produce other desired effects, and so on. Most important, the particular set of feelings and beliefs that the man has depends not only on his own psychological make-up but on the reactions of the waitress (and perhaps on other events). If she reacts, or had reacted, in a different way, he would have had different feelings and beliefs, and we cannot say which beliefs and feelings are "presupposed by the situation" without taking into account alternative
possible events within that situation. Thus, in order to show the relationship between the situation in which the man initially finds himself and the various beliefs and feelings that might be involved, we must display the program which the man is following and which tells us which beliefs and which feelings will occur under various circumstances. The fact that we can describe such a program does not, of course, imply that it need be innate, or, alternatively, that the man is merely an automaton. It may be his intention to carry out such a program, and his actions may thus be voluntary despite the fact that the complexity of such a program generally keeps one from being fully conscious of all aspects of it.

We can describe the operations which the man is prepared to carry out at many different levels of generality, ranging from descriptions couched in physiological and neurological terms to relatively non-specific ones stated in ordinary English. Since we are interested in beliefs and feelings we choose a relatively high level of description in which we use terms such as "belief" as opposed to attempting to talk about the neurological correlates of belief, to the extent that that is possible.

There are various formats for describing programs, and we will here use flow charts, such as the ones given below. These include a flow chart for the main program, and two other flow charts which describe sub-programs.
Is waitress pretty? no → EXIT

She is asked for a date

He is afraid that she will ask whether he is married

Does she ask? no → Feeling of anxiety

Feeling of relief

Enter S-R A at step 1

He says that he is not married

She is expected to show disbelief

Does she? no → Further anxiety

He believes that she believes that he is too old and jaded not to have been married, and that she is suspicious of him

He tells her that he is divorced

He asks her to go to cocktail lounge

Does she now accept? yes → He believes that she would cause trouble if taken straight to motel

Hopeful feeling

Enter S-R A at step 2

yes → He takes her to cocktail lounge

no → Does she now accept? yes → He believes that she would cause trouble if taken straight to motel

Hopeful feeling

Enter S-R A at step 2

no → Does she walk away? yes → He takes her to cocktail lounge

no → Does she walk away?
Sub-Routine A

1. Does she accept date?
   - yes
   - no

2. Feeling of embarrassment

3. He leaves restaurant

4. Feeling of pleasure

5. He believes that she is willing to make love

6. Waitress is taken to motel

7. Will she go in?
   - yes
   - no

8. She is seduced

9. Feeling of great anger

10. He beats her up

EXIT
Sub-Routine B

1. He believes that she wants to be persuaded

2. She is engaged in polite conversation

3. Will she now accept date? no

   4. Feeling of anger

5. Enter S-R A at step 2

6. She is expected to later check on married state

7. A false name is given

8. She is taken to cocktail lounge

9. Does she now seem at ease? no

10. Enter S-R A at step 6

11. Does he think that she is worth the trouble? yes

12. He asks her for another date

13. Does she accept? yes

14. Feeling of hope

15. Does she seem intelligent? yes

16. He believes that she wants more money spent on her

17. He takes her out again

18. Will she now go to motel? yes

20. Feeling of anger

21. Last

22. He beats her up

23. Enter S-R A at step 6

24. He expects her to find out that he is married

25. He prepares excuses

26. Does she believe them?

EXIT

B-14
In step 1 it is asked if the waitress is pretty because, if she is not, the man will make no attempt to date her, and the program exits. Wherever there is a question of this sort there is an implied belief, since the man will not proceed as far as step 2 unless he has acquired the belief that the waitress is pretty. This, however, is a fairly minimal sort of belief since it mostly involves the way that the waitress looks at the moment as opposed to a prediction about the future. This particular belief, such as it is, occurs prior to the act of lying, and is involved in a more extensive act of seduction, part of which may be constituted by the lie.

At step 2 the waitress is asked for a date. Obviously, the act of asking for a date is an intentional one, and, if we were writing the flow chart in greater detail, the step here would read "The man intends to ask the waitress for a date". Since we are not here considering programs that computers might follow, but human programs, it is legitimate to refer to mental events such as beliefs, intentions, and feelings. After the occurrence of the intention, we would then have a short series of steps which would determine whether or not the intention is carried out. Various events could block the execution of the intention - for example, a sudden attack of appendicitis or epilepsy on the part of either participant. However, intentions of this sort generally get carried out without hitches and, for the sake of simplicity, we omit mention of them. It should be remembered, however, that most of the steps in the flow chart do involve intentions of this sort.

Let us here suppose that the man does ask the waitress for a date, but that he immediately afterwards has a feeling of fear based on his belief, derived from experience, that she may ask him whether he is married. He is, nevertheless, by no means certain that she will do this, and in step 4 he waits to see if the question occurs. If it does not, he experiences a feeling of relief whether she accepts or rejects the date. At this point, we enter Sub-Routine A in order to see what happens next. This sub-program begins by asking whether she accepts the date. If she refuses it, he simply feels disappointment and exits from the program (and the restaurant). If she accepts the date, he then has a feeling of pleasure, and, since she has accepted the date without questions and without hesitation, he believes that she is willing to make love with him. Here, then, is another instance of a belief that occurs during the execution of the program, and we have a choice of stating it as part of the program.
(as is done here) or merely as something that is likely to occur during the execution of the program.

This question raises certain more general questions about the roles of the various sorts of steps in the flow chart and we here pause to elucidate them. The point of a flow chart such as this is generally to describe some sort of behavior, and it is divided into two sorts of steps. There are the "operation steps" which describe various processes which occur and the "question steps" from which there is a branch. The exit from a question step depends upon whether there is an affirmative or negative answer. Thus, the operation steps describe the events that take place under certain circumstances and the question steps pin down the circumstances under which various subsets of those events will take place. In the present flow chart we depart from the usual practice in that some of the operation steps do not describe external gross behavior but beliefs and feelings, whether or not these beliefs and feelings are reflected in easily observed behavior. There is nothing improper in this since a flow chart is just a rough description of a program of events which are causally interdependent, and some of the events in the causal chains will presumably be intentions and feelings. Even if a belief or feeling is only an effect of other events and has no causal efficacy itself, there is still no reason not to refer to it in a flow chart. One of our objects is to uncover commitments, and the events which constitute such commitments (beliefs) need not necessarily have any effect on anything else. Even if they did not, it would still be important for us to find out that they are involved in a given pattern of behavior (here seduction) which frequently occurs. But, in fact, there is every reason to think that beliefs and feelings are often essential links in causal chains and that they do have causal efficacy. On the common sense level we often suppose that people act in the ways that they do only because of certain beliefs and feelings, and if the identity theory is true, the neural events which comprise beliefs and feelings can play as large a role as other neural events. Even if that theory is not true, we would have to recognize neural correlates of beliefs and feelings which have causal efficacy, and we could amend our flow charts to say both that a feeling or belief occurs and that its neural correlates occur.

This brings us to the fact that many operation steps are included in our flow charts, not just because they refer to a process which will occur and which is of interest to us, but because the process referred to is a causal factor in bringing about the processes referred to
in later steps. In the present case step 5(S-R A) does play such a causal role. If we were dealing with a man who did not care what the waitress wanted and just intended to drag her into the motel (or into the woods), he would proceed with later steps in the same program (or a slightly different program) whatever he believed at this stage. However, the man, while a sexist, is not a rapist, and he will not take the waitress to a motel unless he believes that she will go to bed with him without much argument.

One might argue that in cases like this we should include step 5(S-R A) as a question asking whether the subject believes that the waitress is willing to make love. If the answer is affirmative the man would proceed to step 6, while, if it is negative, we would have to specify another exit. Instead, we have written the program in such a way that the man will assume that, because the waitress is willing to go out with him, she will also go to bed with him. This is not totally unreasonable on our part because men who find themselves in these situations often do jump to just this conclusion, however unreasonable it may be on their part. Further, while we have to ask some questions, the flow chart should also make some predictions, and the present one about the man's belief about the waitress is likely to be true. It could be improved if we further complicated the flow chart and asked questions about other factors which would be relevant in the formation of this belief on the part of the man. For example, the exact way in which the waitress speaks and the way she looks would probably be relevant, and we could write the flow chart in such a way that the man would have the belief in step 5 only if certain answers to these other questions were given. Still, we have to stop somewhere, and there is no reason to reject steps 4 through 6 as an approximate description of the program that is followed by the man in question. Indeed, however complete we try to make our flow charts, there will always be room for further qualifications, and the reader can supply these for himself if he feels the need to.

In whatever way the belief at step 5(S-R A) may have been arrived at, it may still turn out to be false. In that case the woman may refuse to go into the motel at step 7. We are assuming a sexist psychology on the part of the man, and this refusal would cause him to be very angry and to beat the woman up. If she does go into the motel, we assume that she will be seduced in step 8. This operation step describes a whole program in itself, but it is not here necessary to give a more detailed description of it.
Suppose now that the answer at step 4 of the main program is affirmative, and that the waitress does ask whether the man is married. The sort of man we are concerned with feels anxiety at step 7 just as he felt fear at step 3. A more polished seductionist might be able to get through this part of the program without feeling anything at all, but, again, the flow chart could be altered to represent his program. In the next step the man does actually tell her that he is not married.

Having lied, he now, in step 9, expects her to show disbelief or question his statement in some way or other. Again, she may not, and if the answer at step 10 is negative he has a feeling of relief and surprise. He must, of course, suppress this reaction of surprise before going back to sub-routine A and proceeding as before.

If the waitress does, as expected, appear dubious, this causes the man further anxiety, and, in this case at least, he believes that she believes that he is too old and experienced not to have been married; he also believes that she is generally suspicious of him. Here it is crucial for the agent to make some assumption or other concerning what is going on "in the head" of the waitress, and the strategy he adopts depends on the nature of that assumption. In the present case, a good strategy might be to admit that he has been married, but to claim that he is now divorced, and this strategy is applied in step 15. This is probably the part of the program that would vary the most with different agents because of the different assumptions they might make concerning what the waitress thinks of them, and also the different tactics they might employ even given the same assumptions.

Since he believes her to be suspicious of him, he now asks her to go, not to a motel, but to a cocktail lounge. If she accepts, he feels hope, but thinks that she would cause trouble if he "double-crossed" her and took her to a motel despite having promised to take her to a cocktail lounge. He thus takes her to the latter place in step 20. Having spent some money on her, and having limited patience, our man then takes her to the motel without first asking, something that may indeed cause trouble.

If the waitress refuses to accept the date in step 17 she may just walk away at step 22; in that case there is nothing the man can do and he feels disappointment before exiting. It is quite likely, however, that she will neither accept nor walk away, in which case we enter S-R B. This sub-routine begins with the man believing that she wants to be persuaded. He then engages her in
conversation in step 2 before again pressing her to go out with him in step 3. If she still refuses, he again exits, this time angrily.

Suppose now that the waitress does accept the date at step 3 (S-R B). Since she has done it only under persuasion, he expects her to later attempt to find out whether he is really married, and, as a precautionary measure, he gives a false name in step 7. Not daring to take her immediately to the motel, he takes her to a cocktail lounge, and in step 9 it is asked whether she now seems to feel at ease. If so, she is taken to the motel, but, if not, he must ask himself whether she is worth the trouble he is obviously going to have to take in order to seduce her. If she has few attractive qualities other than her looks, or if he is incapable of appreciating them, the agent gives up and the program exits.

If, however, he thinks it worth while continuing, he asks her for another date in step 12 (S-R B). If she refuses he will be angry since it is part of his sexist ideology that any woman he has spent money on ought to go to bed with him. But he is not angry enough to attack her, and the program again exits. If she accepts at this point, he is again hopeful and is ready to proceed. The man, at step 16, must now decide whether she is intelligent, since it affects the tactics that he will use. If she does not seem intelligent and has gone this far with him, he believes that she simply wants more money spent on her before going to bed with him and he takes her out again instead of standing her up (something he would do without any moral compunctions). Since she has been rather balky in the past, he asks her to go to the motel, as opposed to just taking her there. If she accepts he takes her there, and if she refuses the program goes back to step 11 where it is again asked if she is worth further trouble. The program is now in a loop in which it will continue as long as the answer at step 13 continues to be affirmative and the ones at steps 16 and 19 continue to be negative. However, even if these answers remain constant, there has to be some exit from the loop and there is a counter at step 20. This is set at some constant from which one is subtracted each time through the loop and, when it reaches zero, we go to step 21 instead of step 11. This simply represents that fact that our sexist's patience will be exhausted sooner or later and, after a certain number of dates with no results, he will simply get angry and beat up the waitress.

Suppose now that she does seem intelligent. In that case the program goes to step 24 where the man expects the
waitress to eventually find out that he is married. He
thus prepares excuses and/or a cover story (such as saying
that his wife is dying of cancer), and uses them when he
has to. If the waitress does not accept these excuses,
there will be an ugly scene in which she is beaten up, and
if she does accept then we go back to the loop just men­
tioned. This completes our rough sketch of the program
that would likely be involved in such a case.

This is obviously not a complete account of all the
processes that might occur in such a case. For example,
there might be circumstances, of which we have given no
account, under which the man might want to marry the
waitress. Similarly, there are a number of other unlikely
outcomes which we have not considered, but which are such
that the flow chart could be extended to cover them. It
might here be argued that, if the man should decide that
he wants to marry the waitress, such a decision might be
determined, not so much by the qualities of the waitress
and the external situation, but by certain thoughts and
feelings that the man has himself. For example, he might
suddenly, in the course of plying the waitress with
drinks, imagine a sequence in which he comes home every
day and finds her in the kitchen; he might find this set of
images so attractive that he radically alters his
immediate objectives.

In this flow chart we have referred, not only to
beliefs, but to the feelings of surprise, hope, and anger
which could be expected to occur at various places. In
fact, many more feelings than the ones we have mentioned
would be likely to occur in the course of a transaction
such as this, but it is more profitable to defer a
further discussion of feelings until we shortly suggest
an improved framework for their description.

The main claim embodied in the flow chart we have given
is that most of the steps could not be changed very much
without changing a great deal else, and, hence, the whole
character of the action. For example, if, in step 20
(Main program), we substituted the action of taking the
waitress to a motel instead of a cocktail lounge, we
would have to either attribute to the man a whole dif­
ferent attitude towards the beliefs and feelings of the
waitress, or we would have to make him into a rapist
rather than a seductionist. In the latter case, most of
the program, which is concerned with cajoling the woman,
would be dispensed with. In the former case, the man
would believe that the woman really wants to go to the
motel without any preliminaries, and that she would not
cause trouble even if taken there unexpectedly. In that
case, step 19 would have to be changed, but, more impor-
tant, the man would use a much more direct approach, and
most of the flow chart would also have to be altered.

Further, even a step like step 4(S-R B) cannot be
changed easily. If we were not dealing with a man who
was not disposed to feel anger when refused a date, we
would have to allow for a different personality on the
part of the man. He might no longer be inclined to beat
up women under the same, or any, circumstances, and he
might not even feel the need to seduce every attractive
woman he sees. Further, while a man who can be refused a
date without feeling anger might still try to seduce the
waitress, he might do it for different reasons and have
a different approach. It is for reasons like this that we
say that this particular action of seduction involves sub-
actions like that described in step 20 (Main program),
feelings like that described in step 4(S-R B) and beliefs
like that described in step 14 (Main program).

While we have shown that feelings are involved in an
action like this one, our treatment of feelings has not
been fully adequate. In this flow chart feelings were
represented as if they were things that happened to per-
sons under certain circumstances. For example, in steps
7, 9, and 10 of sub-routine A the events would appear to
be as follows: The waitress refuses to go into the
motel, a feeling of anger comes from somewhere, and,
having been overwhelmed by this feeling, the man beats
her as a causal result of having had the feeling. This
is misleading because feelings are often activities in
their own right. To feel anger is often to engage, or
intend to engage, in certain patterns of behavior in
addition to having certain conscious experiences mixed in
with these intentions and activities. Thus, in the
present case it might be more accurate to say that the
man beats up the woman, not as a result of being angry,
but as a part of being angry.

It now turns out that a flow chart for what would
ordinarily be called a "feeling" need not be very dif-
f erent from the flow chart we have just given for an
"action," the attempt to seduce the waitress. Of course,
the term "feeling" covers a great deal of ground, ranging
from momentary feelings of pain to much more complex
attitudes, such as hope that the gap in exports between
rich and poor countries will narrow. We will later dis-
cuss the so-called "simple" feelings, but a more complex
one, which has quasi-propositional content, will better
serve to illustrate the nature of the distinction between
feelings and actions.
Suppose that the owner of a store has a feeling of dislike for Jack, one of his clerks. However, even when one dislikes someone, one is not always in the same emotional state with respect to him and one can dislike him throughout a considerable period even if there are times within that period when one is not conscious of him at all. We thus need a flow chart to represent this feeling, and I suggest something like the following:
Is Jack within view?

- yes
  - Search for Jack is undertaken
    - One feels that Jack is making progress
      - yes
      - One looks back to see if he is still engaged in the useful task
        - no

- no
  - Delay

Is he doing anything useful?

- yes
  - One speaks encouraging words to him
    - One feels that Jack is making progress

- no

Is he leaning against a counter?

- yes
  - Irritation is felt

- no

Is he scratching himself in an unattractive way?

- yes
  - Irritation is felt

- no

Jack is given a job to do

He is expected to grumble about it

Irritation is felt with this expectation

Does he grumble?

- yes
  - Increased Irritation

- no
  - Surprise is felt

One speaks sharply to Jack

Irritation is somewhat reduced

One places an ad in newspaper

One arrives at affirmative answer

One asks oneself if someone else could be found to work for what one pays Jack

One arrives at negative answer
In step 1 it is asked whether Jack is within view, and, if he is not, a search for him is undertaken in step 2. This small loop of steps 1 and 2, which continues until Jack is found, reflects the fact that the store owner is uneasy about Jack and likes to keep track of him at all times. In step 3 it is asked whether Jack is doing anything useful. This step really refers to a whole program in itself, depending, as it does, on what the store owner considers useful. If the answer is affirmative, the employer speaks encouragingly to Jack, and goes to step 14 where he looks back to see if Jack is still engaged in the useful task at which he was observed before. If he is, we then go to step 15, where the store owner feels that Jack is making progress. We noted before that the whole flow chart represents something that could easily be called a feeling, that of disliking Jack, but in step 15 we have reference to another feeling which would be a component of the larger one. Indeed, the larger negative feeling here contains a positive feeling. However, even the feeling that Jack is making progress could probably be analysed as a program and represented by a flow chart in which still "smaller" feelings would be referred to. This raises the issue of whether there are "atomic feelings" which cannot be broken down into component feelings; this is a question which we cannot here attempt to answer. In any case, after leaving step 15 there is a delay before returning to step 1.

If the answer is negative at step 3 and Jack is not doing anything useful, or if it is negative at step 14 and Jack has given up the useful task, we go to step 5 where it is asked if he is leaning against a counter. This is something that particularly irritates the store owner, as indicated in step 6. In the next step it is asked whether he is scratching himself in a way which the customers might find offensive. This also irritates the store owner, as indicated in step 3, but in any case Jack is given a job to do in step 9. In step 10 Jack is expected to grumble about being given the job, and this is one of the things that most bothers the store owner about Jack. Thus, in step 11 he feels irritation at the expectation even before Jack has had a chance to grumble. In the next step it is asked whether he actually does grumble, and, if the answer is negative, the employer feels surprise before going back to an earlier loop at step 14. The store owner's feeling of antipathy of Jack is partly constituted by the fact that he gets irritated when Jack even when Jack does not grumble and has done nothing to "deserve" this irritation.

If Jack does grumble at step 12 the owner feels increased irritation at step 17, and is, so to speak,
irritated with Jack twice for one action: once before it occurs and once after it occurs. This also is part of what justifies us in saying that he dislikes Jack. This irritation is expressed in step 18 by speaking sharply to Jack, which has the result of somewhat reducing the irritation in the next step. In step 20 the store owner asks himself whether someone else could be found to work for the same very low wages that are paid to Jack. If he arrives at a negative answer, he simply has to return to the beginning of the program. If, however, he arrives at an affirmative answer, he places a "help wanted" ad in the newspaper, and sets about finding a replacement for Jack. We omit this material, since the details of finding a replacement for Jack do not throw further light on the store owner's dislike for him.

In looking back over the flow chart it is impossible to find a single locus for the dislike that the employer feels. It is expressed partly by the irritation that the employer feels or would feel at a number of places, and also by his willingness to replace Jack with someone else. It should be noticed that if the answers at steps 3 and 14 are affirmative, the employer can get through the whole program without feeling irritation with Jack and without making any hostile plans toward him. Still, even if Jack is industrious for some time and the program stays in this small loop, it will remain true the employer dislikes Jack because of the way that he would react to him if Jack were to revert to his old habits. That is, it would still be true that the employer is prepared to overlook nothing, to be irritated with Jack even before he does irritating things, and so on. Of course, if Jack continues to be industrious for months on end, the employer's feelings might change, and it would then be necessary to alter radically the flow chart in order to represent these feelings. The point is again that phenomena we generally think of as feelings are often composed of component feelings, such as those at steps 15 and 6, beliefs, such as that at step 10, and actions, such as that at step 23. Further, the larger feeling may remain in force at a time when some or all of these components are not conscious, and at a time when they are not even occurring unconsciously.

Moreover, it should be again noticed that intentions are also implicit at many stages in the flow chart. For example, in step 2 the search that is undertaken for Jack is certainly not undertaken accidentally, but as an expression of the intention, probably conscious, of the subject. In other cases these intentions may be unconscious, but a
great many of the operation steps do implicitly refer to intentions. These intentions may then have further beliefs implicit in them, and should not be ignored when we investigate commitments.

In connection with the earlier seduction flow chart, we pointed out ways in which individual techniques of seduction might differ, and we indicated ways in which the flow chart might be altered to describe these somewhat different programs. Here, too, the flow chart represents many idiosyncrasies of the store owner, such as his desire that Jack should not scratch himself publicly and unattractively. This is a case where, contrary to what we said earlier, a step in a flow chart can be changed without changing much else. It is not essential to the employer's feeling of dislike that he be irritated by Jack's scratching himself, provided that he is disposed to be irritated by other similar things. Hence, the action, say, of picking one's nose could be substituted for that of scratching oneself without changing much else. In cases like this, the component action must be described in more general terms before one gets something that is truly involved in the feeling of dislike.

On the other hand, the sequence of steps from 9 to 17 would be crucial to the particular feeling that is being described. Indeed, this sequence would be likely to be crucial to the feelings of dislike that many employers would feel for their employees.

A flow chart, such as the ones just given, can be expanded by adding branches which are entered under varying circumstances. In the case mentioned above, we might have one branch in which the employer is irritated when the employee scratches himself, another where he is irritated when he picks his nose, and so on. Certain conditions have to be fulfilled for each branch to be entered, and, depending on their nature, the flow chart can be made more specific or more general. It will be made more specific if these conditions, taken together, describe in greater detail the tendencies of a particular employer to be irritated with his employee. But we can also arrange the branches in such a way that the execution of the flow chart requires only that any one branch be executed. By allowing more and more options in this way, we can generalize the description constituted by the flow chart until it applies equally, not only to the feeling of dislike that we started with, but to many different employers. Indeed, by proceeding still further in this direction, one can form flow charts which are general enough so that they will apply to forms of dislike.
common to employers, parents, employees, children, and others. Moreover, one could, in theory combine different flow charts into a single one with many branches until any instance of a feeling or action would come under some branch or other. Flow charts such as these would be useful in the analysis of ordinary language. That is, one might, in this way, set out to produce the flow chart that a person, x, must follow if the description, "x attempts to seduce y" is to be true. The flow chart given earlier is not nearly general enough so that its applicability would be implied by that description, or even the more specific description, "x attempts to seduce a waitress, y, by telling her, falsely, that he is not married". But, at least in theory, there is nothing to prevent our generalizing and expanding our flow chart, in ways indicated above, so that such an implication would hold. There is also no reason to deny that this could be done for feelings like dislike, but we are not here interested in doing it.

Our object is, after all, to discover our own commitments, and for this we need, not a flow chart which is implied by a given linguistic description, but flow charts which represent our own behavior and internal processes. It is by analysing oneself that one can hope to discover one's own feelings, intentions, and beliefs. Indeed, by pushing this analysis far enough, one may hope to discover one's most basic commitments.

We will now complete the cycle by showing how a belief typically involves feelings and behavior. This has added significance because it will turn out that beliefs characteristically involve a certain special class of feelings. Since we are particularly interested in uncovering those unconscious beliefs which represent or constitute ontological commitments, a strategy is suggested. One could note the occurrence of those feelings, and, by examining the context and introspecting, re-construct the beliefs which leave these conscious traces.

As an example, we will consider a person sitting in a room who believes that his dog, a boxer named Rover, is in the next room. The flow chart on the following page might represent the principle processes involved in that belief.

It must be first asked whether one has been in the room for a certain period of time. It is known that this particular dog, Rover, seldom goes very long without barking. Hence, if he is in the next room and one has been in location for, say, fifteen minutes, one should
have a memory of barking sounds coming from the next room. In step 2 it is asked whether one does have such a memory. If so, one's belief does not call for one to do or feel anything, and, for the sake of simplicity, we assume that one will stay where one is for another fifteen minutes. In actual fact, one would not stay there indefinitely, and the belief that Rover is in the next room might affect one's future behavior and feelings in a great variety of ways. However, we can as usual give only a fragmentary sketch of the elements which would be in the actual program that is followed.

If the answer at step 2 is negative, and one realizes that there has been no barking, there might also be no immediate overt behavior. It is not, after all, very important to find out whether Rover is in the next room, and it is not worth getting out of one's chair at this stage. One does, nevertheless, have a feeling of surprise at this point, albeit a mild one. There is always some emotional investment that goes with any belief, even if the belief is a relatively unimportant one, and even if it is largely or entirely unconscious. But, even in the last case, these feelings become conscious and evident when things do not go as one expects them to go. Thus, while the expectation may be unconscious, the feeling of surprise that occurs when it is not fulfilled will be conscious. It is not here being claimed that belief can be analysed in terms of the feeling of surprise, although that possibility is an interesting one. Rather, it is being claimed only that, in a typical case, feeling of surprise are likely to figure in a program which constitutes the having of a given belief.

In step 3a one delays for another period (the duration of which would reflect the patience of the subject) before returning to step 1 via step 4. Since we are here in a loop, step 4 modifies step 3 so that, the next time the latter is executed, the feeling of surprise will be more intense. There is also a counter on this loop so that, after it has been executed an appropriate number of times, the program exits to step 5.

In this step it is asked whether one now feels a certain level of interest in whether or not Rover is in the next room. If so, one looks in there to check, and it is asked whether one has the sorts of sensations one would ordinarily have upon seeing and otherwise observing a boxer like Rover. If not, one's original belief is pretty well refuted and one feels more surprise. If the answer is affirmative, one's reaction depends on whether one believes it likely that there could be another boxer in
the area. If, for example, one owns two boxers, the present one would have to be examined more closely. If the answer at step 8 is negative, or the one at step 11 is affirmative, whatever anxiety one had over one's belief is relieved. This is the opposite reaction to the feeling of surprise which occurs when one's expectations are not met. It does not occur with the same consistency because one may often assume that a belief is true, never have reason to feel anxiety on behalf of it, and feel nothing (or almost nothing) when it is confirmed. But, in this case, Rover, by not barking, did give one cause for some slight anxiety, which is now relieved.

From steps 12 and 10 the flow chart exits to two other programs representing the behavior to be followed if the belief is disconfirmed or confirmed, respectively. We noted above that the original belief was connected in diverse ways with all kinds of behavior, which is also dependent on certain desires. There will then be a program, which we do not here attempt to sketch, in which the belief in question, other beliefs, desires, and actions are all involved; such a program could go in place of step 14. When the belief here in question is confirmed in step 10, the subject simply continues to follow this other program. However, if the belief is disconfirmed in step 12, this means that the whole behavioral program must be modified to take into account the belief that replaces the one here under consideration. Or, it might be that the behavioral program only asks whether a certain belief is present; in that case, the program could remain unchanged while the subject takes a different route through it (and follows a different branch in it).

It should now be clear, even from our simplistic example, that a typical belief will involve at least the feeling of surprise, and also, in conjunction with certain desires, a great range of actions. This completes our cycle. The significance of this cycle for one who wishes to uncover our unconscious beliefs and commitments is clear. A great many beliefs are involved implicitly in the feelings that we have and the behavior that we engage in. If we can correctly analyze the feelings and behavior that occur on any given occasion, we are then in a position to infer what beliefs were present on that same occasion, at least with a high degree of reliability. If we then choose our occasions wisely, we may come upon commitments of metaphysical and/or ontological importance.

Having examined some typical cases, we can now consider more general questions, even though the answers can
only be speculative. First, are all beliefs, feelings, and actions such that they must involve each other in the way illustrated? The most likely exceptions would appear to come from the realm of feeling. There may be "simple feelings" which are just relatively short-lived conscious states, and which are not constructed out of other feelings, much less beliefs and actions. For example, the feeling of surprise referred to in the last flow chart may be such a feeling. So may certain instances of such feelings as pain and pleasure. Of course, even if there are such simple feelings, a feeling that is simple for one person may not be for another. Further, even if two people both feel surprise, and the feeling is simple for both, they may not be the same. They may vary in intensity and in other respects, and still be called by the same name. To be referred to in the same way, they need only function in analogous ways for the persons concerned in programs such as the ones discussed above.

It is fairly clear that actions will never be simple in the way that certain feelings may. What we call an action always has some intentional aspect, even if it is unconscious, and intentions always seem to presuppose certain beliefs. One has to believe that the world is a certain way before one can intend to change it in some way, although the belief may again be unconscious.

The situation with regard to belief is more complex. If there are beliefs which do not involve actions, the most likely cases would be those where we only expect the occurrence of a particular sensation (or simple feeling) in the immediate future. For example, someone watching an experimental movie might expect to see the screen turn green in the next moment. Since all his visual attention is focused on the center of that screen, he expects to have a particular kind of visual sensation. It could be argued that, even in this case, there is the intention to continue to look at the screen, the more complex belief that the screen will still be there, certain desires, and so on. However, even if all these factors can be excluded, it also seems likely that the belief would involve, at least among other things, the disposition to be surprised if the expected sensation does not occur. In that case, we could not adequately represent the belief without referring to that part of the program constituting it which involves feeling. It is thus doubtful if there are any beliefs which do not involve feeling. It also seems likely that virtually all the beliefs which are of metaphysical interest will involve both feelings and actions.
This last assumption creates a problem when we come to talk about the identity of beliefs. In a typical case, such as the one illustrated, each belief will be constituted by a complex program (much more complex than our sketches of them), and such programs, operating in two different persons, will almost never be identical. Indeed, insofar as they involve actions, it is almost impossible that they should be; two persons, starting in different places and situations, will have to use slightly different means even to accomplish the same ends. This being the case, what then do we mean when we say that they have the same belief? It would seem that we must be making some sort of judgment of similarity concerning the two programs that are involved, and we will now see what such judgments might involve.

One might attempt to say which aspects of these programs have to do with belief. For example, one might say that two persons have the same belief if their programs imply that they will feel surprise in some of the same circumstances. Or we might say that they have the same belief if it is implied that they will react behaviorally (or neurally) in the same way in certain circumstances. Such abstractions as these are of limited usefulness. First, it may be difficult to say, for the purposes of definition, which behavioral reactions are to count, or even to say what intensity and quality of surprise is to count. And it will be much more difficult to state the circumstances under which such reactions and feelings are to count. The use of such a criterion will not, in practice tell us when two persons are having same beliefs, and there are theoretical difficulties as well. On the other hand, it is true that, when considering beliefs, different persons will attach importance to different aspects of the sorts of programs we have outlined. Some persons are more impressed with feelings, while others are more impressed with actions; moreover, within each of those areas, countless other distinctions are possible. It is thus quite possible that any two persons will differ in the way that they identify beliefs, in which case no two persons would ever share exactly the same concept of belief. This causes no practical problem because the differences are generally so slight that they do not become apparent in ordinary communication.

If our approach is correct, a great diversity in concepts of belief is not the only consequence. Even if we did choose a single concept and refined it, we would find that different beliefs differ from each other in as many ways. That is, even if we did find a single standard for the "measurement of belief," we would find that no two
beliefs are likely to measure the same. For example, if we made the feeling of surprise crucial to our concept of belief, we would soon find that there are an infinite number of circumstances in which one would be surprised to a greater or lesser degree. Thus, each belief would itself change as the dispositions to be surprised in these various circumstances grow stronger or weaker, and changes in the intensity of the feelings that would occur will also affect these beliefs. Thus, at any given time, it is unlikely that any two beliefs would involve the same dispositions. Further, if we took a behavioral analysis, analogous problems would occur. Consequently, a claim that two persons have the same belief at the same time could amount only to a very rough estimate of probable reactions and/or feelings under a set of varying circumstances of which one would have only a vague awareness.

All these considerations would also apply to actions and intentions, for which any criteria of identity would have to be equally complex. Similarly, most feelings, constituted as they are by programs, would be equally hard to identify. On the other hand, those feelings which may be "atomic," together with such phenomena as sensations, would presumably be exempt from the problems inherent in identifying programs, even though their identification may present different problems.

These problems account for the fact that there are many borderline cases involving the identification of beliefs, actions, and feelings, but they do not constitute difficulties on our approach. If we are just interested in discovering our commitments, it is enough to take typical cases and analyze them in the way indicated for as long as seems profitable. We can do this without ever asking whether the belief, action or feeling in question is the same as some other belief, action or feeling. One will never be certain that one has uncovered all of one's commitments, but that would be an unreasonable demand.

If, on the other hand, one is interested just in examining the concepts of belief, feeling, and action, and the processes which are instances of those concepts, one is not prevented from ever making generalizations. The examination of typical cases does suggest generalizations, and the fact that these may not hold universally does not keep them from being interesting. This methodology has the consequence of making philosophy into an empirical discipline, but it would still be a distinctive one. In particular, its function would be that of suggesting
hypotheses which could later be confirmed or disconfirmed by the special sciences. For example, in the present paper it is claimed that, if one examines a human action closely enough, one will find that various beliefs are involved, and also that a significant change in a component belief would, in most cases, have caused other components of the action to be different. Such a claim could be best confirmed by first isolating the neural correlates of the belief and the action, and then determining the connection between these neural correlates, either by statistical methods, or by controlled experiment. The main theses of this paper can then be seen as speculations which could only be confirmed after great advances have been made in the science of neurology. Other philosophical theses may turn out to be speculations about future developments in other sciences, both natural and social. It is here suggested that this sort of methodology for philosophy allows one to retain its speculative character, and also to uncover commitments of metaphysical interest. At the same time, it does not put the practitioner in the impossible position of attempting to provide an ultimate justification for those commitments.

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