Wittgenstein, Interpretation, and the Foundations of Psychoanalysis

Psychoanalytic hypotheses are tested -- and hence to be regarded as confirmed or disconfirmed -- via their ability to explain what people say and do, particularly in the context of analysis, but also more generally. In this they are continuous with those we frame in understanding the motives which prompt speak and action in everyday life. This is as it should be, for Freud built up psychoanalysis precisely by extending such commonsense understanding. Freud proceeded, that is, by finding explanations for phenomena like dreams, slips, and symptoms, whose relations to everyday motives had not previously been explicated; and he then discovered that these explanations also required the ascription of motives which had not previously been contemplated. To understand issues of interpretation and confirmation in psychoanalysis, therefore, we need to understand both the commonsense psychology in which psychoanalysis is rooted, and the way Freud and his successors have extended it.

In everyday life we find meaning and motive one another's utterances and actions, and hence interpret one another's linguistic and non-linguistic behaviour, with remarkable certainty, precision, and accuracy; and understanding of this kind seems basic to much else. Our interactions with others are mediated by our grasp of their motives; and much of what we regard ourselves as knowing is registered in language, or understood through our use of it. In taking ourselves to understand a scientific theory, for example, we also take ourselves to understand, and so to be able to interpret, the linguistic behaviour of those who propound it; and again in describing our thoughts and feelings, we assume that we understand the terms in which we do so, and in such a way as to be answerable to others' interpretation of them. In this epistemic perspective the reach of interpretive understanding seems to approach that of language itself; and there seems nothing we understand better than our own language, and in that sense ourselves. So the question arises, what makes it possible for us to understand one another so well?

We will be considering this shortly. For now let us notice that in granting a fundamental role to interpretation and language in this way we can be seen as following Wittgenstein, and breaking with an epistemic tradition which goes back at least to Descartes. According to this tradition knowledge in general rests upon knowledge of a special kind, that is, a person's knowledge of his or her own experiences and other mental states and events; and this knowledge is prior to any kind of understanding of others or communication with them. I may be wrong, Descartes holds, in thinking (for example) that I now see a tree, or another person: I may be suffering an illusion, or dreaming, or some power may have brought it about that I have such thoughts even though there are in fact no such things as trees or other persons. But there is something I cannot be wrong about, namely that I think that I now see a tree, that it now seems to me that there is a person before me. My thoughts or experiences may not be veridical, but at least I know what they are; and this knowledge is secure against doubt and scepticism, and so can serve as the basis for the rest. In this tradition all knowledge comes to be based upon a certain sort of self-knowledge, that which a person has of his or her experiences or states of mind; and this basic self-knowledge is itself not explained, but taken for granted.

As Wittgenstein pointed out, however, such self-knowledge presupposes that I can use language, or the concepts expressed in it, correctly. In holding that my conscious or subjective experience is described by a word 'S', or is of kind S, I presuppose that I can apply the word or concept S correctly. If this were not so, then I should not, properly speaking, be judging that it seemed to me that S; rather the situation would be one in which it only seemed to me that I was doing this -- in which I was only seemingly judging, only seemingly forming the belief, that something was S. The ascription of such competence, in turn, presupposes that there is a norm or standard of correctness, against which which my use of S can be assessed; and Wittgenstein asked, as Descartes did not, how in my own case such a norm was to be constituted or applied.

Wittgenstein attacked this question in a characteristic way, that is, by raising one which was still deeper and more general: what makes it the case that we can think or to use words in accord with rules or norms at all? He put this question by considering someone being taught the use of a simple arithmetic rule, such as that for adding two. The pupil is supposed, among other things, to learn to continue the series 2, 4, 6, 8...in which he adds two to each number in turn. As Wittgenstein pointed out, however, a learner might continue the series correctly (as we would say) up to 1000, but then go on to write 1004, 1008, and so on. This would not necessarily show lack of an understanding on his part. It might be that going on in this...
different way was natural to him, and we might find an interpretation which explained this, and according to which it was indeed the correct thing for him to do.

§185...We say to him: "Look what you've done!" -- He doesn't understand. We say: you were meant to add two: look how you began the series! -- He answers "Yes, isn't it right? I thought that was how I was meant to do it." Or suppose he pointed at the series and said: "But I went on in the same way." It would now be no use to say: "But can't you see...?" -- and repeat the old examples and explanations.-- In such a case we might say, perhaps: It comes natural to this person to understand our order and our explanations as we should understand the order "Add 2 up to 1000, 4 up to 2000, 6 up to 3000 and so on."

Such a case would present similarities with one in which a person naturally reacted to the gesture of pointing with the hand by looking in the direction of the line from finger-tip to wrist, not from wrist to finger-tip.¹

This, however, raises the question as to how we know that we are supposed to follow the rule for adding two in the particular way that we do -- how we know that our practice, as opposed to that of the person we treat as deviant, is the one which is actually correct. And as Wittgenstein makes clear, this question can seem exceedingly difficult to answer. We may be inclined to say that we know we are to do as we do because we are to write what follows from the rule. But this is no answer, because

§186...that is just what is in question: what, at any stage, does follow from that sentence. Or again, what, at any stage, we are to call "being in accord" with that sentence (and with the meaning you then put into that sentence -- whatever that may have consisted in). It would almost be more correct to say, not that a new intuition was needed at any stage, but that a new decision was needed at any stage.

So we seem faced with a deep and general problem about both language and thought, put in §198 as: '...how can a rule show me what I have to do at this point? Whatever I do is, on some interpretation, in accord with the rule.' Of course we do know how to add 2, and so how to act in accord with this rule. Wittgenstein's question is, how can we know this: what makes our claims of correctness true, and hence justifies us in them; and how can we tell that this justification is present in any particular case?

We can begin to appreciate both the scope and depth of this problem if we note that the question as to which action accords with the mathematical rule 'Add 2' is the same as the question as to which action accords with the intention or desire to add 2, or again with the belief that someone has added 2. So we have the parallel questions, as to how I know I have fulfilled my desire or intention to add 2, or what renders my belief that I have added 2 true. And these questions extend to other words and sentences and to other intentions, desires, and beliefs. We can bring this out by generalizing, and using terms like 'P', 'Q', and 'S' for arbitrary sentences. Thus consider any sentence 'S' which can be used to specify something a person can do. ('S' might be 'Turn left', 'Find something red', 'Create a diversion' or whatever.) For each such 'S' we have the same questions as Wittgenstein raises for 'Add 2': why is it correct to act in accord with 'S' in one way rather than another, and how do we know that this is so? And for each 'S' we have the corresponding questions about intention, belief, desire, and other states of mind. What makes it the case that one action rather than another fulfils the desire or intention to S, and how do we know this?

Wittgenstein's point, again, is not that we do not know what action counts as adding 2, or acting in accord with a sentence 'S' or an intention to S generally. Indeed, since knowing the contents of our intentions or sentences is knowing the actions or states of affairs which are supposed to accord with them in this sort of way, knowing these things is part of knowing what we intend or mean; and these are matters we take ourselves not only to know about, but to know more about that others characteristically do or can know -- matters in the sphere of our first-person authority. His point is that although such knowledge seems absolutely fundamental to us, we seem quite unable to give any account of it or justification for it. We acknowledge the normative requirements of thought and language spontaneously and without reflection, and we take them for granted in what we say, think, and do. But trying to answer Wittgenstein's explicit questions, we can seem quite unable to elucidate either the basis of these requirements or the knowledge of them which comes so readily to us. (We can, of course, repeat or rephrase what we take ourselves to know,
and we can affirm that we do indeed know it; but neither of these responses is to the point, and we seem scarcely able to go beyond them.)

Wittgenstein's questions concern our understanding of the very general and fundamental notion of **accord** -- of correct accord -- which we take to hold between language, thought, and the world. Such a notion of accord is ubiquitous, and we speak of it in many different ways. Thus we speak of a sentence, or again a thought, as being **true**, and this is an instance of the kind of accord with which we are concerned, for the question whether whether writing '1000, 1004' is the correct way to follow the rule for adding two is the question whether it is **true** that (correctly) adding 2 to 1000 gives 1004. Again, we speak of sentences or thoughts as logically connected if the truth of follows from another in accord with a rule of logic, and this is the notion in question. Also, as noted, we speak of an intention, desire, wish, hope, fear, expectation, etc., as being **fulfilled**, **satisfied**, or **realized**, and these, as we saw, involve the notion of accord again. In all of these cases we invoke a notion of accord as between a sentence or mental state and the world. In the remarks quoted above Wittgenstein is in effect asking both what constitutes such notions or relations of accord, and how we are able to detect them or know when they are present. So his questions can be formulated for any of the linguistic or mental items which we characterize in terms of accord in this way. For example:

437. A wish seems already to know what will or would satisfy it; a proposition, a thought, what makes it true -- even when that thing is not is not there at all. Whence this determining of what is not yet there? This despotic demand? ("The hardness of the logical must.")

We saw that Wittgenstein raises his questions by reference to interpretation -- by citing the possibility of an interpretation which represents an intuitively mistaken way of following a rule as correct in some different or unexpected sense. He also, I think, solves the problem by reference to interpretation, as emerges in the following remarks, which are, even for him, unusually difficult to understand.

206. Following a rule is analogous to obeying an order. We are trained to do so; we react to an order in a particular way. But what if one person reacts in one way and another in another to the order and the training. Which one is right?

Suppose you came as an explorer into an unknown country with a language quite strange to you. In what circumstances would you say that the people there gave orders, understood them, obeyed them, rebelled against them, and so on?

The common behaviour of mankind is the system of reference by means of which we interpret an unknown language.

207. Let us imagine that the people in that country carried on the usual human activities and in the course of them employed, apparently, an articulate language. If we watch their behaviour we find it intelligible, it seems 'logical'. But when we try to learn their language we find it impossible to do. For there is no regular connection between what they say, the sounds they make, and their actions; but still the sounds are not superfluous, for if we gag one of their people, it has the same consequences as with us; without the sounds their actions fall into confusion -- as I feel like putting it.

Are we to say that these people have a language: orders, reports, and the rest? There is not enough regularity for us to call it 'language'.

In these remarks Wittgenstein at first explicitly states the question of accord which he has been raising, using the examples of rules and orders, and people who respond to these in different ways ('Which one is right?'); he then replies to his own question indirectly, by making a series of claims about interpretation and regularity. He asks us to consider interpreting the language and actions of a people quite strange to us, and remarks that 'the common behaviour of mankind is the system of reference by which we interpret an unknown language'; he then argues that the interpretation of the language of a people requires the finding of 'regular connection between what they say, the sounds they make, and their actions' and that in the absence of such regular connection we could not regard sounds people make as language at all. What are we to make of these claims, and how do they constitute an answer to the general questions about correctness or normative accord which he has previously raised?
Without going further into exegetical detail, I think we can take Wittgenstein here to be making a series of related points which we can partly bring out as follows. We are concerned with the interpretation of speech, and speech seems a kind of action which we understand particularly clearly; and when we understand a person's speech we can use this to obtain understanding of that person's other actions and motives which is clear and precise, for in general persons can speak of their own beliefs, desires, and other motives with some authority. But as §207 suggests, speech is also a kind of action which cannot be understood in evidential isolation from other actions and the context in which it occurs. If we were presented with the highly patterned bursts of sound constituting speech, but really lacked any further information as to how the production of these bursts was interwoven with the situation and other actions of the person making the sounds, then we would not be able to interpret these sounds at all. (One can get some idea of this by trying to imagine learning a foreign language simply by listening to the radio, but without having any independent idea of the events with which the broadcasts were concerned.) The sounds of speech, however clear or clearly structured, are meaningless until systematically related to worldly objects and events; but grasp of their intrinsic nature or structure alone would not enable us to relate them to things in a precise and empirically disciplined way.

By contrast, as §207 also suggests, we can understand a lot of everyday human behaviour without relying on speech, at least up to a point. We can generally see the purposive order in people's behaviour in terms of their performance of commonplace intentional actions, and their being engaged in various everyday projects -- 'the usual human activities' -- as we can in the case of one another. But as Wittgenstein has previously stressed, unless we can link such actions with speech, we cannot, in many cases, know what people think; and in the absence of speech it might be doubtful how far we could ascribe precise thoughts or motives to people at all (Cf. §25, §32; and also §342). So taken together these remarks suggest that the interpretation of people as we practice it -- the explanation of human behaviour in terms of articulate thought and feeling -- requires that we correlate and co-ordinate people's linguistic acts, or their productions of signs, with their other actions. Linking speech with other action in this way enables us to tie the complex structure of articulate utterance to particular points in the framework of action and context, and thereby to interpret language; and this in turn enables us to interpret the rest of behaviour as informed by thought which, like that expressed in language, is complex, precise, and related to what may be remote in time or space from the speaker.

We can perhaps make Wittgenstein's claim in these remarks clearer by comparison with something which is more familiar. In our everyday practice of interpreting utterances we do not simply assign meanings to them; rather we characteristically take them as expressions of desire, belief, intention, and other motives. (Thus we take regularly take assertions as expressing beliefs, questions as expressing desires to know something, requests or orders as expressing desires that something be done, and so forth.) This enables us to interpret the motives which we take to be expressed in this way with precision, and also to relate such interpretation to the speaker's ability to express such motives with authority. Clearly, however, we could not take utterances as such expressions of motives with any degree of accuracy and certainty, unless we also had independent means of determining what the agent's operative desires, beliefs, or intentions really were. Evidently the means we use are the interpretation of further actions. We are able to regard utterances as accurate or authoritative expressions of motives because doing so enables us to interpret other actions, and with cogency, as stemming from those same motives, or others closely related to them. In understanding persons in this way, therefore, we in effect correlate their utterances with other actions, as effects of common causes (motives). Schematically, insofar as we take an utterance of 'S' as an expression of a desire, intention, or belief that P, and then confirm this by independently interpreting further actions as flowing from that same motive, we thereby correlate utterance and action, as effects of that motive. In regularly finding such correlations we find regular connections between utterances and actions; and these connections, as Wittgenstein claims, provide the foundations of interpretation, in the sense that they make interpretation as we practice it possible.

An important part of Wittgenstein's conception, as indicated in the remarks we have considered, is that the normative connections which we have been discussing -- the relations of accord among language, thought, and reality -- are imposed and discerned in the process of interpretation itself. Interpretation, on his account, is at once empirical and normative. In interpreting people we make sense of their language and action, and so find them, as he says, intellibible and logical; in this, and in the fact that interpretation
ultimately depends upon the detection of natural regularities, interpretation is comparable to science. But in the case of interpretation the regularities we detect are normative: they consist in the adherence of action, speech, and thought to norms or standards; for it is precisely because the regularities in behaviour which we discern in interpretation are ones which conform to these standards, that to discern them is to find the behaviour intelligible or logical.

We can bring this out by considering the practice of interpretation in a schematic way. To do so we must begin with something which is clearly fundamental to our interpretive abilities (as to all our intellectual abilities), namely our understanding of natural language. In understanding a natural language each of us is capable of understanding sentences, including those not previously encountered, on the basis of the words in them and the way they are put together. Hence each knows, with respect to his or her own language, countless things like the following:

The sentence 'Freud worked Vienna' is true just if Freud worked in Vienna.
The sentence 'Wittgenstein lived in Vienna' is true just if Wittgenstein lived in Vienna.
The sentence 'Cats are animals and dogs bark' is true just if cats are animals and dogs bark.

etc.

Generalizing over this in a rough but natural way, we can say that a person who knows a natural language thereby knows indefinitely many instances which conform to the pattern:

\[(1) \text{ 'P' is true just if P}\]

In understanding a language a person knows -- knows each of indefinitely many instances of -- a pattern of this kind. In this, as we can say, a person who understands a language knows an indefinitely large number of linguistic rules or norms; for each instance of such a pattern specifies a relation of normative accord, as between a sentence and a situation in which that sentence would be true. This pattern, therefore, is one for which Wittgenstein's questions as to how we are able to know about such norms arise; and this pattern is connected with many others, in accord with which a speaker may use a sentence 'P' to say that P, an imperative variant of 'P' to order that P, an interrogative variant of 'P' to ask whether P, and so forth. For the moment, however -- and following §206-7 -- let us consider how we use this pattern in interpretation, that is, in understanding the words and actions of another.

In trying to make sense of another's words and deeds we seek to understand them as products of the motives -- the intentions, desires, beliefs, wishes, expectations, hopes, fears, and so forth -- which give rise to them. These motives, in turn, have a special relation to language. When we describe a person's desire or wish, for example, we do so by means of a grammatical construction which embeds a further item of language -- a phrase or sentence -- which describes the content of the desire or wish, that is, what the person desires or wishes, or what the desire or wish is for. Thus for example we may say that a person desires to tie her shoelaces, or again desires that she tie her shoelaces. In this we use the phrase 'to tie her shoelaces' or the sentence 'she tie[s] her shoelaces' to describe the content of the desire. We can indicate both the generality of this phenomenon and its relation to the norms of language as these are described in (1) above, by setting out the following schematic generalization.

A sentence 'P' is true just if P
A belief described by 'P' (a belief that P) is true just if P
A desire described by 'P' (a desire that P) is satisfied just if P
A fear described by 'P' (a fear that P) is realized just if P
A hope described by 'P' (a hope that P) is fulfilled just if P
An intention described by 'P' (an intention that P) is fulfilled just if P
A wish described by 'P' (a wish that P) is fulfilled just if P

and so on.

Here we see an important aspect of both interpretation and normative accord. When we use a sentence 'P' to describe a motive, we thereby use that sentence to relate that motive to the world. We as it were transfer the relation of normative accord which holds between the sentence and the world to a
comparable relation which holds between the motive and the world; the conditions in which the sentence would be true become those in which a belief described by the sentence would be true, a desire described by the sentence would be satisfied, an intention described by the sentence would be fulfilled, and so on. So, as we can say also, each of these further instances of normative accord is an analogue of truth. This applies to other cases, in which we also describe action in the same that P way; we also have

A saying described by 'P' (a saying that P) is true just if P
An order described by 'P' (an order that P) is obeyed just if P
A request described by 'P' (a request that P) is fulfilled just if P
A demand described by 'P' (a demand that P) is fulfilled just if P
and so on.

This that P mode of description -- which of course has many grammatical variants which we are not considering here -- systematically implements our conception of motives and mental states as having intentionality, that is, as being directed upon, or engaged with, the world. It also indicates that in interpreting others, and hence describing their motives and actions in this way, each of us systematically relates another's utterances and actions to the norms implicit in our own uses of language. To bring this and other features of interpretation out more fully, let us focus on the central case of explaining person's actions by reference to desires.

In many everyday cases, we simply perceive a person's movements as intentional, that is, as informed by desire. For example we may see a person moving towards a drinking fountain, and take it that she desires to get a drink. If we are right, the person's behaviour (further movements) will bear this out: she will act (move, behave) in the ways required to get a drink -- say grasping and turning the tap, lowering her head so as to place her mouth in the way of the water, etc. -- and when she has finished she will turn to some other course of action. In such a case the role which we assign to the desire is that of shaping and organizing the complex series of bodily movements required for the satisfaction of the desire, that is, in this case, getting a drink. For if we ask why the person is making this movement or that -- why grasping the tap, why turning it, etc. -- one answer will be that she is doing this to get a drink. This role which we assign to the desire is plainly a causal role, and we can indicate it by saying that the causal role of a desire upon which a person is acting is to bring about -- cause -- the satisfaction of that desire. Thus the role in action of a person's desire to drink is to bring it about that the person drinks, and this is plainly generalizable.

In our list above we noted that a desire described by a sentence 'P' (a desire that P) is satisfied just if P. We can describe our example in accord with this, by saying that it is one in which the agent desires that she get a drink, and that this desire is satisfied just if she gets a drink. Then we can put what we have observed about the causal role of desire by saying that the role of a desire that P in action is to bring it about that P. If we use 'A' to stand for the agent whose action we are interpreting, 'des' to abbreviate 'desire' or 'desires', and '[-[causes]-]' to specify the causal relation, including that of organizing and shaping behaviour, which holds between motive and action, we can write this in a schematic form which relates it to (1) above.

A des that P -[causes]- P

This is something we find each time we interpret a successful action, since a successful action is one which results in the satisfaction of the desire which prompts it. This, however, is not all we find, as consideration of our example makes clear. What we observe is not just that the agent's desire brings about a situation in which it is satisfied, but also that the agent realizes this, and so ceases to act in such a way as to produce this result. Agents who do not realize they are succeeding in action tend to keep trying. This happens for example when we repeat ourselves unnecessarily even though someone else has heard and understood us. In this case our desire is satisfied, in the sense that the desired result has been brought about, but because we don't know this we still continue to act on the desire. In our example, by contrast, the agent got her drink, and as a result realized (came to believe) that this was so, and this, perhaps together with the drink itself, caused her desire to drink to cease to operate. Let us mark this by saying that in successful action the agent's desire is not only satisfied, but also pacified, that is, caused to cease to operate via belief in its satisfaction. Then using 'bels' to abbreviate 'believes', we have:
(2) A des that P -[causes]- > P -[causes]- > A bel that P -[causes]- > A's des that P is pacified.

This represents, as it were, the life-cycle of a single desire in successful rational action. Given the pervasive role of desire in the explanation of action, this is an important basic pattern. Also it contains another within itself, which can be taken separately, namely

(3) P -[causes]- > A bels that P

We find instances of this form not only in persons' awareness of what they have done, but more widely in the case of belief based upon experience or perception. In general, to perceive that P is to have perceptual or experiential reason to believe that P, which is caused by the situation which renders 'P' true. Hence we might represent a situation described by (3) more fully by

(3)* P -[causes]- > A has an experience (or perception) as if P -[causes]- > A bels that P

An interpretation of an action is characteristically held as an hypothesis, in the sense that further observation may confirm or disconfirm it. (2) indicates that we can regard an interpretive hypothesis about a desire as one which has the interesting feature of being framed and tested by successive uses of the same sentence. We can see this particularly clearly if we think of ourselves as tacitly applying (2) as we watch an action, or sequence of actions, unfold. Thus when we see a person start to move in one of the countless ordered ways characteristic of intentional action, we take (hypothesize) that person to be doing something: setting out to get a drink, to pick up a pencil, to go to the refrigerator, or whatever. We can regard this as our framing of an initial hypothesis, as to a desire upon which the person is acting, which we do by the use of some sentence 'P' ('desires that she get a drink', etc.). We subsequently regard ourselves as right or wrong in such an hypothesis, depending upon whether the person apparently does go ahead to get a drink (or whatever), and whether after doing so, and realizing this, the person turns, desire apparently pacified, to some other course of action.

Taken in this way (2) makes explicit that we intuitively test a characterization of desire or intention framed by the use of a sentence 'P' via successive uses of that same sentence. The initial hypothesis implies that if the agent acts successfully we will be able to use that same sentence to characterize the agent's emerging action, a belief which the agent forms in consequence of this action, and the role of this belief in altering the desire by which we take the action was governed. Viewed as such an hypothesis, a sentential characterization of motive lays down the series of predictive demands, which (2) displays; and hence the hypothesis stands to be disconfirmed by the failure of any of these predictions, and to be confirmed by their joint success.

Everyday interpretation of course involves far more than the ascription of desires as represented in (2). For a start we most commonly explain actions by citing reasons, that is, desires and beliefs which are related in a logical pattern. Thus, for example, if a person utters 'The day is warm' intending to say that the day is warm, we may take him to have wanted to say that the day is warm, to have believed that if he uttered those words he would do so, and so to have wanted to do this. Such ascriptions of desire and belief have a familiar pattern:

A desires that P [that he say that the day is warm]
A believes that if Q then P [that if he utters 'The day is warm' he says that the day is warm]
A desires that Q [that he utters 'The day is warm.']['

Read from the bottom up, the sentences which articulate a reason of this type have the logical pattern of modus ponens. This makes clear that if the agent succeeds in satisfying the final desire in the pattern, then, provided the belief in the pattern is true, the agent must also satisfy the desire which heads the pattern. To understand people's actions in accord with such a pattern is therefore, as Wittgenstein says, to find their behaviour intelligible or 'logical'. Writing this pattern uniformly with the others we have taken, we have

(4) A des that P & A bels that if Q then P -[causes]- > A des that Q
Now each explanation of a successful action in accord with (4) involves two sentences which characterize desires, and so two applications of (2). Most action, furthermore, stem from far more complex reasons than we have considered in our simple examples, involving many desires and beliefs at once. This means that they involve many instances of (4), which are themselves structured. This is hard to spell out in the syllogistic form above, even in cases which are relatively straightforward. It will be useful, therefore, to indicate another mode of representation.

We can regard a sentential specification of a desire as a specification of an agent's goal in action. Accordingly, we can describe each of an agent's goals by a single sentence, and show the derivational relations by which the agent's beliefs structure these goals by lines connecting the goal-describing sentences. Then we can represent the constituent structure of an agent's goals in action, or again that of an action itself, by a tree diagram, which grows down through a series of branching nodes. (Trees of this kind as it were have an ariel root.) Such a tree will have an agent's overall goal in acting at the top (root), and will grow down from this goal through the ordered series of other goals which the agent takes as requisite to secure the root motive. We can take each of these subordinate goals to give rise to a further tree of the same kind, until we reach goals which are simply the performing of various desired bodily movements in sequence, which we can label by M1, M2, etc.

Thus we might represent the example above as follows:

```
A says that the day is warm

A utters 'The day is warm'

A utters 'The'
A utters 'day'
A utters 'is'
A utters 'warm'

[[M1 M2 M3] [Mn Mn+1 Mn+2] [Mo Mo+1] [Mp Mp+1...]]
```

By this means we can indicate the overall structure of actions or projects approaching everyday complexity, such as getting cash from a till.

```
A gets cash

A inserts card
A enters number
A enters amount
A takes card
A takes cash

A enters '1' etc.
A enters '5' etc.

[[M1 M2...]] [Mn Mn+1...][...][M...Mx]
```

This kind of representation is intuitively fairly clear, but let us spell out what is involved a little more fully. Suppose we have a goal G connected by branches to sub-goals G1 to Gn, and these by further branches to further sub-goals G1,1, G1,2, etc., as in the following:
Here the top tree corresponds to a desire that \( G \) and a belief that if \( G_1 \) and \( G_2 \) and... \( G_n \) (in that order) then \( G \). This tree constitutes a complex instance of (4), as does the tree down from \( G_1 \), which corresponds to a desire that \( G_1 \) and a belief that if \( G_{1,1} \),... then \( G_1 \); and so on down the tree. When we spontaneously interpret an agent’s movements in terms of intentions and reasons, we tacitly relate these movements to such a tree, or to a series of such trees. (Ordinarily we do not fill these out consciously, but if pressed we can do so in more or less detail; and in this we are not introducing further hypotheses, but making explicit what we already tacitly took to be the case.) Each tree relates the sentence at its root to a sequence of hypothesized effects, which, if all goes well, should also be ultimately describable as a bringing about of the situation, and thence of the belief, and thence of the pacification of the desire, described by that same root sentence. The same holds for each subsidiary sentence likewise, and in the order marked by the tree. The whole hypothesis thus fixes for each goal for each intentional movement by which that goal is executed a place in a determinate order of satisfaction and pacification. This imposes a complex bracketing or phrasing, which segments the flow of movement upon which the hypotheses is directed into the series of units and sequences, groups and subgroups, which we perceive as the unfolding rhythm of intention in action. The whole, moreover, can be seen as consisting of iterations of simpler parts which correspond to each aspect of this segmentation, that is, instances of (2) governed by instances of (4). So we can see each goal-specifying sentence in a tree as applied repeatedly, now to articulate a motive as hypothesis, now to describe predicted (or cohering) effects of that motive as test, as in the simple case spelt out above. In such a tree, therefore, we find the basic hypothetical structure of (2) both repeatedly and in the large.

This sketch of some interpretive patterns is of course very incomplete; still it lends at least some plausibility to two ideas. The first is that our practice of interpretation can be seen as an empirical one, in which we frame and test hypotheses of a distinctive kind and form, as to the motives which cause, and therefore serve to explain, the behaviour of others. The second is that the role of language in these hypotheses indicates that in interpreting the behaviour of others we in effect systematically re-find the norms of our own logic and language in the causal patterns of that behaviour, and that it is the discovery that these causal patterns conform to these norms which enables us to regard the behaviour as logical or intelligible. Thus interpretation rests upon a natural co-ordination between interpreter and interpretee, in which the the norms which the former imposes as a matter of hypothesis reflect those in accord with which the latter tends naturally to behave. This is the co-ordination which Wittgenstein describes by saying that it 'is not agreement in opinions, but in form of life.' (§241) As we have been describing the process, an interpreter systematically maps sentences of his or her own language on to episodes in the behaviour of an interpretee, using the relations to the environment specified in (1) to describe the interpretee's behaviour as action motivated by desires and beliefs with environmentally specified conditions of truth and satisfaction. This is the mapping we describe in representing interpretive hypotheses as structured trees of the interpreter's sentences.

As is indicated by the treatment above of the speech-act of saying that the day is warm, speech can also be regarded as intentional action motivated by desire. To interpret speech in accord with (2) and (4), however, an interpreter needs to be able to specify the interpretee's beliefs about the conditions in which his or her sentences are true, since an utterance of '\( P \)' can say that \( P \) precisely because it is true just if \( P \). This means that the interpreter must master or describe a correlation of the interpretee's sentences with the conditions in which they are true, that is, a correlation for the interpretee corresponding to the interpreter's (1). Much philosophical work has been devoted to setting out the kind of theory which might yield such a correlation, and hence serve as a theory of meaning for an interpretee's language. What is important for our present purposes, however, is to see how an hypothesis involving a particular correlation might be tested; and this question arises even if the correlation which the interpretee seems to be using is the same.
as that the interpreter is using. For, as we may put the point, that fact that another's sentences sound just like mine so far only provides me with an hypothesis as to what they mean; and the question remains as to how this hypothesis can be tested in practice.

Wittgenstein's point in his remarks §206-7 above was that the testing of hypotheses as to the conditions in which sentences are true cannot be conducted by references to utterances alone, but requires finding regular connections between utterances and actions; and this, in terms of our sketch, means finding regular connections between instances of the (hypothesized) interpretee's correlation (1) and uses of (2) and (4) to explain the interpretee's non-verbal actions. There is an obvious way to do this. We find regular connections between utterance and action insofar as we interpret utterances as expressing desires and beliefs on which the utterers also act. In interpreting actions in terms of trees as above, we thereby frame and test hypotheses as to the desires (goals) and beliefs upon which the interpretee acts. So insofar as the interpretee's utterances express or specify these same goals or beliefs, then we can test a candidate correlation (1) by seeing how well it enables us find these utterance-action correlations. Insofar as an interpreter speaks rightly about her goals and beliefs, or about the environment as it is reflected in these, then our hypotheses about the truth-conditions of her sentences as specified in (1) ought to coincide with our hypotheses about her goals and beliefs as specified in instances of (2) and (4).

This means that the basic interpretation of both language and action is particularly facilitated by the interpretee's producing utterances which express or specify the goals and beliefs upon which the interpretee actually acts. An interpreter who can knowingly do this is one who, as we said above, has first-person authority about these goals and beliefs; and this authority is what Wittgenstein challenges us to justify in the remarks quoted above. So the ability to link sentences with our own goals, beliefs, and actions which Wittgenstein asks us to justify is also the ability to produce the utterances which, according to Wittgenstein, make it possible for others to interpret us, to make sense of our speech and actions generally. Further, we can observe that our possession of this ability makes a certain bootstrapping in interpretation possible. The more an interpretee can put his or her goals and beliefs into words -- the more the interpretee exhibits first-person authority -- the better an interpreter is able to use those words to understand both the interpretee's speech and other actions. But the better an interpreter is able to use an interpretee's words to understand her speech and other actions, the more fully the interpreter can check the interpretee's first-person authority. So we have a benign circle: the possession of first-person authority on the part of an interpretee makes it possible for an interpreter to understand that interpretee's utterances and actions; and the more better an interpreter can understand an interpretee's utterances and actions, the more thoroughly the interpreter can check and confirm the interpretee's possession of first-person authority.

This is a circle we can imagine ourselves working our way into in the case of people whom at first we do not understand at all; but it is also one which is familiar to us from everyday interpretive practice. Suppose I have an hypothesis as to what intentional action you are performing (or have performed or will perform), and you express an intention which accords with my hypothesis, and your behaviour bears this out. Questions of sincerity aside, this tends to show that my hypothesis was indeed correct, that your first-person authority is genuine and intact in this case, and that we use the sentences by which we describe your intentions in the same way, since we map them on to the same behaviour. Hence insofar as we take it that this could be done for each of my interpretations of your non-verbal actions, we assume that my degree of confidence in my interpretation of your actions can approach whatever degree I assign to your first-person authority; and also that whatever intuitive confirmation I have for those interpretations could be made to count also in favour of my understanding of your idiolect. The same of course holds as regards your interpretations of my actions and speech.

Each interpreter aims to map the sentences of his or her language onto both the utterances and non-verbal actions of an interpretee, and so onto the whole field of the interpretee's behaviour in its relations to the environment. So far as an interpretee has first-person authority, the interpreter can also map her own utterances with her own non-verbal actions, and thence also with the environment. An interpreter who has access to the interpretee's mapping can therefore compare and co-ordinate his mapping with that of the interpretee with constantly improving accuracy. Of course an interpreter will not always interpret accurately, and there are circumstances in which an interpretee's first-person authority will fail. Still, an interpreter can correct faulty interpretations in light of evidence provided by an interpretee, can check how far the interpretee's account is accurate, and can try to correct it where it is not. This process
allows of continual extension and refinement. So the fact that each of us in both a potentially accurate interpreter and a potentially authoritative interpretee would appear to allow us to calibrate our interpretations of verbal and non-verbal behaviour continuously and cumulatively, so as to give both something like the degree of precision and accuracy which we observe them to enjoy.

The considerations about interpretation which we have been discussing thus suggest an approach to the question with which we began, as to how we are able to understand one another so well. Also they provide answers to Wittgenstein's questions about self-knowledge and normative accord. What justifies each of us in thinking that we correctly use the words or concepts in terms of which we describe our own experiences, thoughts, and feelings is that another person might interpret our uses of those sentences, together with our other actions, in such a way as to confirm that we do use them this way. What makes it the case that I use my sentences correctly, as opposed to merely seeming to myself to, or again that I know my experiences, thoughts, and feelings, as opposed to merely seeming to myself to do so, is that another can independently interpret my uses of sentences, and can independently ascribe these thoughts and feelings, in a way which conforms with, and ratifies, my own practice. We are all intellectually bound together: insofar as my practice could not be made sense of by another, I should have no right to confidence in it myself. So on this account, while Descartes was right to think that he could be certain as to how things seemed to him, or how things were in his own mind, he was wrong to suppose that the basis of this certainty lay within his own mind, or could be found within the first-person perspective of his own case. The first-person perspective, in which we are most authoritative about the phenomena of mind and meaning, is not that in which an account of these phenomena can ultimately be grounded or justified. Rather, if Wittgenstein is right, our capacity to think and speak about ourselves is constituted as knowledge by a possible relation to others, which shows in our being such as to be interpretable by them. For it is in our natural co-ordination with one another -- in which each speaks and acts in ways which others can make sense of, and therefore in accord with the norms which each imposes on others in interpretation -- that our practices of judgment, and the phenomenon of normative accord which they exhibit, are ultimately to be regarded as based.

Our sketch of interpretation is of course only fragmentary, but it suggests that interpretation proceeds most surely where an interpreter can match his or her own account of an interpretee's motives with the interpretee's own expression of these motives in speech. (This maximize the 'regular connections' between utterance and action which Wittgenstein singles out as central to interpretation.) These theoretically ideal conditions for interpretation are in fact approximated in psychoanalytic therapy. Here an interpretee (analysand) provides an interpreter (analyst) with the fullest possible verbal specification of the motives which both are seeking to understand. Also the analysand engages in free association, reporting the contents of consciousness as they occur, without seeking to censor them, or to render them logical or sensible. This enables the analyst to frame hypotheses (interpretations) as to further motives on the part of the analysand, which both can then consider on the basis of the maximum of shared data.

Above we discussed the everyday practice of the explanation of action by reference to desires (goals) and beliefs. As noted at the outset, synchoanalysis extends this practice by relating dreams, symptoms, and other phenomena to desires or goals as well. The nature of this extension can partly be seen in very simple examples. Thus Freud found that when he had eaten anchovies or some other salty food, he was liable to have a dream that he was drinking cool delicious water. After having this dream, or a series of such dreams, Freud would awake, find himself thirsty, and get a drink. Probably many people have had this dream, or its counterpart concerning urination. And anyone who has such a dream will naturally regard it as a wishfulfilment in Freud's sense; that is, as (i) caused by, and (ii) representing the satisfaction of, the desire to drink felt on waking.

This natural reasoning is clearly cogent; and it turns upon the fact that the dreamer's desire is so closely related to the content of the dream. The desire is for a certain sort of situation (that in which the dreamer has a drink) and the dream represents that situation as real (the dreamer is having a drink). To put the point schematically, the dreamer's desire is that P, and the dream is that P, and this gives good reason to suppose that the desire brought about the dream. Also it seems that such a dream has a pacifying influence -- perhaps only a fleeting one -- on the desire which prompts it. The dream-experience of drinking seems to provide a form of temporary relief or check on the underlying thirst, the insufficiency of which is indicated by the dreamer's waking to get a real drink.
Such an account assimilates the dream to wishful thinking or imagining, and this, and its role in pacification, are familiar. We are aware in many other cases that our response to a desire or wish that $P$ is in one way or another to imagine, suppose, or make believe that $P$ (or something related to $P$) is the case. We know that people day-dream in this way regularly, and often more or less deliberately; and such episodes of imagining may give pleasure, and seem partly to pacify the desires which they represent as fulfilled. The same applies to the kind of make-believe found in children's play, or again to the suspension of disbelief or imaginative immersion involved in the theatre, cinema, video games, and the like. In these and many other cases, it seems, people make use of forms of imaginative representation to pacify desires which they cannot or would not actually satisfy by representations of their satisfaction.

These kinds of wishful imagining have a common pattern. In all these cases a desire (or wish) that $P$ leads to a form of imagining or making-believe that $P$, which in one way or another serves (perhaps only partly or incompletely) to pacify the desire. If we call the kind of belief- or experience-like representation involved in such cases 'b-representation', then we can write their common pattern as:

\[(5) \text{ A des (wish) that } P \text{-[causes]} \Rightarrow \text{A b-reps that } P \text{-[causes]} \Rightarrow \text{A's des (wish) that } P \text{ is pacified.} \]

This pattern is evidently closely related to (2) above. Both are patterns in which desire is pacified, and via representation; for belief, as it figures in (2) can be taken as the limiting case of belief-like representation which figures in (5). The kinship shows in the fact that (5) can be seen as a version of (2) in which the role of reality is left out. An instance of (5) is like a short-circuiting of an instance of (2): thus in the example of drinking by which we illustrated (2) above, the agent’s desire produced a real action resulting in a real drink, and thence in a pacifying belief that she was drinking. In a dream of drinking, by contrast, the mind (or brain) by-passes the path through reality which might result in real satisfaction, and produces the pacifying representation directly and by itself. This shows in that fact that (5) is like (2) except for the omission of `$\text{-[causes]}$'; that is, except for the production of the real action which satisfies desire and renders pacifying belief veridical.

To see something of the role of (5) in psychoanalytic interpretation let us consider the example with which Freud begins The Interpretation of Dreams, his own dream of Irma’s injection. In this dream Freud met Irma, a family friend and patient, whom he had diagnosed as hysterical and treated by an early version of psychoanalysis. He told Irma that if she still felt pains, this was her own fault, for not accepting his 'solution' to her difficulties. As she continued to complain, however, he became alarmed that she was suffering from an organic illness which he had failed to diagnose, and this turned out to be so. Irma was examined by some of Freud's colleagues, including his senior colleague M, and it became manifest not only that she was organically ill, but that her illness was caused by a toxic injection given by another of Freud's colleagues, his family doctor Otto. Thus the dream concludes as follows:

> M. said 'There's no doubt it's an infection, but no matter; dysentery will supervene and the toxin will be eliminated.'...We were directly aware, too, of the origin of the infection. Not long before, when she was feeling unwell, my friend Otto had given her an injection......Injections of that sort ought not to be made so thoughtlessly...And probably the syringe had not been clean. (IV 107)

This dream does not appear to be wish-fulfilling: in fact it dealt with topics which were not pleasant to Freud. It concerned the continued suffering of a patient who was also a family friend, and for whom, therefore, the question of his responsibility was particularly acute; and also about the possibility that he had misdiagnosed an organic illness as hysteria, which he described as 'a constant anxiety' to someone offering psychological treatment. But Freud systematically collected his free associations -- the thoughts, feelings, etc., which occurred to him -- in connection with each element of the dream; and in light of these we can that the treatment of these topics in the dream is in fact wishful, and in a way which is radical.

The topics of the dream had arisen on the day before. Otto had just returned from visiting Irma and her family, and had briefly discussed Irma with Freud, commenting that she was looking 'better, but not yet well'. Freud had felt something like a reproof in this, as though he had held out too much hope that Irma might be cured; and in consequence he regarded the remark as thoughtless, and felt annoyed with Otto. (Also, as it happened, Otto had been called on to give someone an injection while at Irma’s -- cf the topic of
the dream -- and Freud had just had news indicating, as he thought, that another of his female patients had been given a careless injection by some other doctor, and had been contemplating his own careful practice in this respect with satisfaction.) That night, in order to justify himself, Freud had started to write up Irma's case to show to M, who was respected by both himself and Otto, and who appeared in the dream as diagnosing Irma's illness and becoming aware that it was Otto's fault.

In considering the dream Freud noted that his desire to justify himself in respect of Irma's case, and in particular not to be responsible for her suffering, was apparent from the beginning, in which he told Irma that her pains were now her own fault. Also, he felt that his alarm at her illness in the dream was not entirely genuine. So, as Freud realized, it seemed that he was actually wishing that Irma be organically ill: for as he undertook to treat only psychological complaints, this also would mean that he could not be held responsible for her condition, by Otto or anyone else. This theme, indeed, seemed carried further in the rest of the dream, in which M found that Otto, not Freud, bore responsibility for Irma's illness. The whole dream, in fact, could be seen as a wishful response to Otto's remark. According to the dream, and contrary to what Freud had taken Otto to imply, Freud bore no responsibility whatever for Irma's condition. Rather, Otto was the sole cause of her suffering, and this was a result of Otto's bad practice with injections, a matter about which Freud himself was particularly careful.

The contrasting role of desire in action and wishfulfilment shows here particularly clearly. Freud's intentional action in response to his desire to be cleared of culpable responsibility was to write up a case history to show to his respected senior colleague M., whose authoritative judgment might serve to clear him. This is an action in potential accord with pattern (4), and so also with (2). His dream apparently shows the same motive at work, but in a very different way. There the desire to be cleared produced no rational action, but rather gave rise directly to a (dreamt) belief-like representation of a situation in which Freud was cleared of responsibility in a whole variety of ways, some involving M. These are instances of b-representation produced in accord with pattern (5).

We can think of the process by which we specify these instances, and thus represent the material of a dream in terms of pattern (5), as follows. The dreamer’s free associations, which range over intimate details of his or her life and thought, give information about incidents and emotions (Otto's giving someone an injection while at Irma's, his remark about Irma, Freud's annoyance, etc.) which appear to have influenced the content of the dream. These apparent connections between associations and dream are data which require to be explained. The explanation needed is one which specifies how the material from the associations is causally related to the content of the dream.

Inspection of Freud's dream and his associations reveals many such apparent connections.

We might start in a preliminary way to list some we have considered as follows:

<table>
<thead>
<tr>
<th>From the Associations</th>
<th>From the Dream</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freud wants not to be responsible for Irma's suffering.</td>
<td>Freud says to Irma 'If you still get pains, its really only your your fault.</td>
</tr>
<tr>
<td>Freud wants not to be responsible for Irma's suffering.</td>
<td>Irma is suffering from an organic complaint, for the treatment of which Freud is not responsible.</td>
</tr>
<tr>
<td>Freud is annoyed with Otto, for his remark implying that Freud was in some way at fault in his practice with Irma.</td>
<td>Otto is at fault in his practice with Irma.</td>
</tr>
<tr>
<td>Otto had given someone an injection while at Irma's, and Freud has been contemplating that his injections never cause infection.</td>
<td>Otto gave Irma an injection which caused an infection.</td>
</tr>
<tr>
<td>Freud desires to clear himself of responsibility for Irma's suffering.</td>
<td>Otto bears sole responsibility for Irma's suffering.</td>
</tr>
</tbody>
</table>
Freud was hoping that M's opinion of his treatment of Irma would clear him of responsibility.

M observes Otto's bad practice and recognises that Otto bears full responsibility for Irma's suffering.

Freud considered Otto's remark to him thoughtless.

Otto's injection of Irma was thoughtless.

Freud considered Otto's remark to him thoughtless.

M observes Otto's bad practice and recognises that Otto bears full responsibility for Irma's suffering.

Freud was hoping that M's opinion of his treatment of Irma would clear him of responsibility.

This list is incomplete but illustrative. It seems hard to deny that the relation of elements on the left to those on the right requires explanation in terms of a causal connection. This being so, the question arises as to what kind of causal hypothesis would provide the best explanation. Freud's hypothesis can be put as that these data are linked by *wishful imaginative representation*, and hence in accord with pattern (5). We can represent the hypothesis in relation to these data as follows.

<table>
<thead>
<tr>
<th>From the Associations</th>
<th>Hypothesis: that wishful imaginative representation (b-representation) links material from the associations and the dream as in accord with (5)</th>
<th>From the Dream</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freud wants not to be responsible for Irma's suffering.</td>
<td>Freud wishfully represents Irma's suffering as not his fault, but her own.</td>
<td>Freud says to Irma 'If you still get pains, its really only your your fault.</td>
</tr>
<tr>
<td>Freud wants not to be responsible for Irma's suffering.</td>
<td>Freud wishfully represents Irma as suffering from something for which he is not responsible.</td>
<td>Irma is suffering from an organic complaint, for the treatment of which Freud is not responsible.</td>
</tr>
<tr>
<td>Freud is annoyed with Otto, for his remark implying that Freud was in some way at fault in his practice with Irma.</td>
<td>Freud wishfully represents the situation as the reverse of that implied by Otto, so that it is Otto, not Freud himself, who can be accused of fault connected with Irma's suffering.</td>
<td>Otto is at fault in his practice with Irma.</td>
</tr>
<tr>
<td>Otto had given someone an injection while at Irma's, and Freud has been contemplating that his injections never cause infection.</td>
<td>Freud uses elements from reality to wishfully represent the situation as one in which Otto, not Freud himself, should be accused of fault connected with Irma's suffering.</td>
<td>Otto gave Irma an injection which caused an infection.</td>
</tr>
<tr>
<td>Freud desires to clear himself of responsibility for Irma's suffering.</td>
<td>Freud wishfully represents the situation as one in which he has no responsibility for Irma's suffering.</td>
<td>Otto bears sole responsibility for Irma's suffering.</td>
</tr>
<tr>
<td>Freud was hoping that M's opinion of his treatment of Irma would clear him of responsibility.</td>
<td>Freud wishfully represents M as finding that Irma's suffering was Otto's fault.</td>
<td>M observes Otto's bad practice and recognises that Otto bears full responsibility for Irma's suffering.</td>
</tr>
<tr>
<td>Freud considered Otto's remark to him thoughtless.</td>
<td>Freud wishfully represents Otto as thoughtless.</td>
<td>Otto's injection of Irma was thoughtless.</td>
</tr>
</tbody>
</table>
Freud’s interpretation thus serves to explain clearly discernable data by bringing them under the pattern represented by (5). The wishes introduced in the psychoanalytic explanation of dreams are thus comparable to the desires introduced in the explanation of action in accord with (2). This indicates that psychoanalytic hypotheses admit of testing, and hence of confirmation, in the same general way as those advanced in the commonsense explanation of action; and although (2) and (5) are only a small part of an account of interpretation, in psychoanalytic practice they can be seen repeatedly to home in on the same recently discovered but fundamental motives. Again, in psychoanalysis we also find the potential coordinating dialectic between the accuracy of the interpreter and the first-person authority of the interpretee, which apparently lends everyday understanding much of its certainty and precision. In respect of the motives with which psychoanalysis deals first-person authority is tested against interpretation more fully and explicitly, and gained and ratified more slowly. Nonetheless the aim of psychoanalysis can partly be described in terms of the restoration or achievement of first-person authority, and the intelligible harmony in desire which goes with this. Thus although we have been able to consider only a small fragment of either commonsense psychology or psychoanalyis here, the similarities suggest that the two share the same foundations, manifest in interpretation. If Wittgenstein is right, these foundations, although intuitive, are nonetheless potentially very strong; for they are those of all normative accord, and hence of articulate human co-operation, communication, and knowledge.


2 For this see Davidson’s Inquiries into Truth and Interpretation, Oxford: Clarendon Press 1984.

3 Such pacification may not be as deep or permanent as that achieved by satisfying action, but the effects can be genuine nonetheless. In Sleep and Dreaming, London: Harvester Wheatsheaf, 2nd Ed., 1993, Empson reports an experiment in which dreamers were deprived of water for 24 hours and given a salty meal before going to bed. On these nights their dream-reports included more water-related imagery, such as lakes or snow, as well as some explicitly thirst-satisfying objects, than on nights when they had been allowed to drink as they pleased. Also, subjects reporting gratifying dreams including themes of eating and drinking during the course of the night drank less in the morning, and rated themselves as less thirsty, than those who had not.

4 Freud The Interpretation of Dreams ‘Analysis of a Specimen Dream.’ (Vol IV, pp 104ff).