

The ontological commitments of common sense psychology 3Mental processes, experience and introspectionIntroduction

In [the previous lecture](#) I developed an ontological taxonomy of mental properties based on a basic distinction between mental states and mental occurrences where the defining characteristic of a state is that it cannot be said to occur or be occurring at a given point of time; though if, like a mental state, it is dispositional in character, it entails a liability to produce occurrences of a certain kind from time to time during the period of time over which it extends. Occurrences, I argued, are of two kinds, events which occur at specific points of time, but are not extended in time and processes which are extended in time, but which unlike states can be said to be occurring at any point of time during their period of operation. Some mental occurrences are mental events and some are mental processes. In the last lecture and in several previous lectures ([Lectures 11, 12 & 13](#)) I discussed the explanatory function and ontological commitments of mental state concepts. In this lecture I propose to discuss mental process concepts so that we shall then be in a position in the next lecture to discuss mental events which, as I argued in the last lecture, involve both an antecedent mental process and subsequent and consequent mental state.

Mental activities and experiences

In the last lecture I also drew a distinction within the category of mental process between active and passive mental processes i.e.: between mental activities and experiences. Mental activities are those occurrences which are referred to by verbs such as 'look', 'watch', 'listen', 'pay attention', 'read', 'scrutinise', 'ponder', 'enjoy' and 'dream' the distinctive feature of which is that one "can say of someone that he was doing something both at a particular point in time and for a period of time" (8e, p.107). There are certain other psychological verbs like 'feel', 'smell', 'taste', 'observe' and 'think' which are sometimes used to refer to a mental activity which is extended over time and sometimes to a mental act or event that is not extended over time. 'Thinking' moreover is commonly used in English as the equivalent of 'believing' in which case it refers not to a mental occurrence at all, but to a mental state or disposition. The expressions used to characterise experiences, which as I suggested last time, constitute the passive aspect of mental processes are either nouns like 'sensation', 'pain', 'itch', 'twinge', 'throb', 'thrill', 'spots before the eyes', 'ringing in the ears', 'feeling', 'experience', 'after-image', 'mental picture', 'train of thought' or 'dream' which the individual is said to 'have', 'feel' or 'experience' or past participle expressions like 'being hurt by something' or impersonal verbal expressions of the form 'It appeared, seemed, looked, sounded, smelt, tasted or felt to A as if p'. As we shall see, these impersonal verbal expressions or phenomenal descriptions as we may call them, are also used to characterise the interpretation which the individual puts on his experience, which is a mental act or event rather than a mental process. It is often very difficult to decide which of the two things the individual is trying to describe when he uses expressions of this kind, as he frequently does, in his introspective protocols

I also pointed out in the last lecture that in certain cases such as 'dreaming', and 'having a dream', 'thinking' and 'having thoughts', a 'visualising' and 'having a mental picture' it is possible to replace a mental activity expression with an expression involving an experience or passive mental process noun without changing the sense of what is said apart from a shift in emphasis from the passive experience to the active production of that experience by the individual concerned. I suggested in this connection that such replacement is not possible in the case of sensation nouns. However while it is true that it is not possible to replace a phrase involving a sensation noun with a verb, it is possible as I pointed out in discussing this topic in an earlier paper (8c, p. 57), to express this shift of emphasis from passive experience to active production of the experience in the case of sensations by describing the individual as 'paying attention to his sensation' rather than merely 'having, feeling or experiencing them'. Moreover in the case of verbs like 'looking', 'watching', 'listening', 'savouring' and 'feeling' (in the active sense) where what an individual is said to look at, watch, listen to, savour or feel is not a sensation or experience, but is some object, occurrence or stuff in his immediate sensory environment, there is nevertheless an implicit reference, which is seldom made explicit except by philosophers and psychologists, to the having of visual, auditory, olfactory, gustatory and

tactile sensations or sensory experiences which it is the function of these mental activities to produce. In the light of these considerations it can be plausibly argued that all mental processes without exception involve both these two aspects, the active production and control of experience and the passive reception of it, with a difference only of degree between the cases where one aspect is stressed in the words and expressions we use and the cases where the other aspect is stressed.

The Privacy of Mental Processes

In his book The Concept of Mind Ryle (pp. 11-15) caricatures and debunks a theory of mind which he calls 'the official doctrine' which he attributes to Descartes, but which in the form in which he presents it, it is probably more characteristic of the philosophical psychology adopted and developed by the Introspective Psychologists of the 19th century, particularly such men as Wilhelm Wundt (12), William James (5) and Edward Bradford Titchener (10a), now one of the fundamental points on which Wundt and Titchener in particular were never tired of insisting was that the mind as it is observed introspectively consists entirely of mental processes. James, although he does not insist on the term 'process' as Wundt and Titchener did, makes the same point with his insistence on that what he calls the 'stream of thought' or the 'stream of consciousness' is subject to constant and kaleidoscopic change.

It is one of Ryle's principal criticisms of the official doctrine, as he calls it, that all the contents of the mind are construed as mental processes and that it fails to recognise that there are other modes and categories of mental life. Incidentally it is intriguing to note in this connection that the Introspective psychologists in their insistence that mental life consists of mental processes were rejecting the earlier Associationist doctrine which conceived of the mind as made up of a set of discrete static entities known as 'ideas'. That however, is by the way. The point I want to make is that while Ryle is undoubtedly right in insisting that there are other kinds of mental thing besides mental processes and that if we emphasise such things as mental states and dispositions, we are led to recognise that mental life is at least, very much more a matter of what people publicly say and do than those who subscribe to the official doctrine would allow, there may in fact be very much more to be said in favour of the official doctrine than Ryle would allow provided it is treated, not as a thesis about mental life as a whole, but as a thesis about mental processes and mental processes only. Indeed all that was ever claimed by the Introspective Psychologists was that the part of mental life which is available to introspective observation which they called 'immediate experience' or 'consciousness' consists entirely of processes. They never, at least in their saner moments, wanted to claim that conscious experience is all that there is to what we call 'the mind'.

When we add to these considerations the observation that it is in its handling of mental state and disposition concepts that Ryle's logical behaviourist dispositional theory is most impressive, while all the cases in which Ryle, at least is forced to concede defeat are, as we have seen without exception, mental processes of one kind or another, whether they be experiences like sensations or mental activities like silently thinking, reading, dreaming or picturing things in the mind's eye, it is difficult so it seems to me, to avoid the conclusion that the two theories should be regarded not as rival accounts of the same set of concepts and phenomena, but as complementary accounts of two distinct groups of concepts and phenomena, the so-called official doctrine in the field of mental processes, a dispositional theory such as Ryle's in the field of mental states and a combination of the two in the field of mental acts and events. That at least, is the position for which I intend to argue.

What this view implies is that when we assert the occurrences of a mental process, whether it be a mental activity or an experience, we are asserting the occurrence of a process which takes place, in some sense, inside the person who performs the mental activity or has the experience in question in such a way that the occurrence of this process cannot ordinarily be detected by an external observer, but can be observed by the individual in whom it occurs by means of a special form of observation known as introspection, by virtue of which the individual is able to report to others on the mental processes occurring inside him from the observation of which they are necessarily excluded. This is the doctrine of privacy or 'privileged access', as Ryle calls it, which on the view we are considering, applies in some measure at least, to all mental processes.

Now while I would certainly want to maintain that the experiential aspect of mental processes is always private in this sense, it must be conceded that there are some aspects of the mental activity whereby the private experiences of the individual are generated and controlled which consist in publicly observable movements made by the individual in question. Looking and watching for example usually involve

movements of the head and eyes so as to bring the object of observation into focus and into line with the fovea. Similarly feeling, in the activity sense of that verb, involves either a deliberate movement of the fingers or some other sensitive part of the skin over the object of inspection or a movement of the object itself over a sensitive area of skin such as the cheek. Olfactory savouring likewise involves the publicly observable reaction of sniffing, just as gustatory savouring involves movements of the mouth and tongue aimed at maximising the stimulation of the taste buds by the stuff whose taste is being savoured. In such cases the function of the publicly observable movements is to maximise the effect on the individual's sensory experience of stimulation which derive from substances and stuffs in the environment so that their nature and character can be determined and assessed. In other cases, as for example when a man reads or thinks out loud or by writing something on paper, the stimulation is provided entirely by the self-stimulating verbal behaviour of the individual concerned and has the function in the case of reading aloud of decoding a visually presented input into a more readily intelligible auditory form and in the case of thinking aloud or on paper of either of planning or guiding current or future activity or else of providing some kind of entertainment or emotional release. In none of these cases however, is the occurrence of these movements and reactions a necessary condition for the occurrence of the mental activity in question in all cases. Nor is the occurrence of these movements an infallible sign of the occurrence of the mental activity. If we don't want someone to know that we are watching him, we can watch him 'out of the corner of our eyes', that is without making the head and eye movements which would be required to bring the image he projects on to the fovea. In this case the focus of attention is in the periphery of the visual field and objects in the main line of regard are effectively ignored. There is also the case of listening where apart from turning the head in the direction from which the sound is coming and cupping one's hand around the external ear so as to improve sound reception, there are no publicly observable movements that a man can make which show which of the many different sounds that occur simultaneously in his immediate environment he is actually listening to. Likewise in the case of reading and thinking although people sometimes read to themselves out loud and think by talking to themselves or by making marks on paper, they usually do so without giving any evidence of what they are doing apart from the eye movements involved in scanning the page in the case of reading. Moreover the occurrence of these publicly observable concomitants of mental activity do not by any means constitute infallible evidence of the occurrence of the mental activity in question. Most of you have probably had the experience that I have often had of suddenly realising that my eyes have been scanning a page of print in the way they usually do when I am reading what is written there, but without my having taken in or understood a word for several lines or even paragraphs. In such a case although I have been going through the motions of reading, I can hardly be said to have read anything or even to have been reading. Similarly if I mutter some empty phrase without paying attention to what I am saying, I am not thereby thinking aloud.

The conclusion I draw from this is firstly that these publicly observable movements only constitute part of the person's mental activity in so far as they affect and control the sensory experiences he receives and secondly that there are other ways of regulating, controlling and generating experiences which do not depend either on movements of the receptor organs or the part of the body in which they are located in relation to the environment or on auditory, visual or even kinaesthetic self-stimulation. This ability of the human organism both to regulate and produce the experiences which he receives without making any kind of muscular movement is illustrated on the one hand by the phenomena of selective listening known as 'the cocktail party effect' which has been subjected to extensive experimental investigation in recent years (2) and on the other hand by the phenomenon of mental imagery or picturing things in the mind's eye or in the mind's ear.

Experience, control of experience and the interpretation of experience

At this point in the discussion there are two very important distinctions that need to be made. The first distinction is one we have already implicitly made. It is between the kind of intra-psychoic or, as I prefer to say, intra-neural mental activity which is represented by such things as the focussing of attention on one of two or more simultaneous auditory messages or on some object in the periphery of the visual field without moving the eyes as to fixate it or by the production of a mental image on the one hand and the experience which these mental activities serve to control or produce on the other. The second distinction is between the experience itself and the way it is understood or interpreted by the individual whose experience it is. The importance of these two distinctions derives from the fact that although all these three aspects of the mental process and the mental events which results from it are covert in the sense that their occurrence

cannot be detected by an external observer who has only the publicly observable movements of the individual to go on, it is only the experience itself whose occurrence can be actually witnessed and observed introspectively by the individual himself. In the case of the mental activities like attending and visualising all the subject witnesses or observes is the effect of these activities on the experiences he has. How he manages to bring these effects about, when he does so without adjusting his receptors and without stimulating them by means of his own movements, is a question to which his experience itself provides not the slenderest clue. It should be emphasised however that what we do not and cannot witness or observe is how this mental activity is performed, the fact that it is performed is something that we do and can witness and observe, since as we saw in [Lecture 10](#) an action is defined in terms of its consequences and in this case the consequences of the mental activity are its effects on experience. How we know that it is we who are producing these effects when we have no knowledge of the process of production, is a problem to which we shall return later.

The distinction between an experience and the way the individual understands, construes or interprets it was a fundamental principle of Wundtian introspective psychology, particularly as it was developed by Titchener in his [Lectures on the Experimental Psychology of the Thought Processes](#) (10b). The basis of this distinction is the observation that it is at least logically possible for what is qualitatively the same experience to have two different interpretations on different occasions. The example which Titchener gives to illustrate this point is drawn from his own introspective observations. He describes it in the opening words of Lecture I as follows: "If I chance to be reflecting on the progress of science, there is likely to arise before my mind's eye a scene familiar to my childhood, – the flow of the incoming tide over a broad extent of sandy shore. The whole body of water is pressing forward, irresistibly as natural law decrees. But its front is not unbroken; for the sand is rock-strewn and uneven, so that here and there are eddying pools of unusual depth, and there again long fingers of the sea stretched out towards the land" (10b, p.3). Later in the same Lecture he remarks: "The mental vision of the incoming tide, which I described at the beginning of this Lecture, is no more definite when it recalls an afternoon's ramble than when it means the progress of science". Another example is the case of the ambiguous drawing like Jastrow's (4) duck-rabbit discussed by Wittgenstein (11, p. 194 ff), which can be 'seen' or interpreted either as a duck's head or as a rabbit's head. In this latter case it is arguable that there are two different experiences that go with these two different interpretations. That when it is interpreted as a duck the focus of attention, if not of fixation, is on what on this interpretation is the duck's beak, and that when it is interpreted as a rabbit the focus of attention shifts to a minor indentation on the right hand side which constitutes the rabbit's mouth and which needs to be ignored on the duck interpretation. On the other hand it can equally well be argued that these qualitative changes in the experience are a feed back effect from the interpretation and that initially what is to all intents and purposes the same basic experience is equally susceptible to either interpretation.

But whether or not these examples are acceptable as genuine examples of the same experience being interpreted in two different ways, there is one consideration which for me at least, provides a decisive argument for drawing this distinction, namely that an experience, whether it be a mental image or a sensory experience is a continually fluctuating process, whereas to understand or interpret something in a particular way refers either to the mental event whereby such an interpretation is established or to the mental state of so understanding or interpreting it which remains unchanged so long as it persists.

As I see it this categorical difference between an experience, qua mental process and the way it is understood or interpreted, qua mental state produced by that experience, has four important implications for our understanding of the nature of private experience:

(1) The dispositional theory of interpretations

In the first place, if experience is a process and its interpretation, in so far as it is extended over time, is a state, it follows on the view for which I have been arguing that while the experience itself is a private occurrence taking place inside its owner's skin, the interpretation that is put upon it is a disposition to think, talk and behave in a variety of ways, some at least of which are publicly and objectively observable. There are two ways of characterising the kind of disposition in which an interpretation of an experience consists, though they are in effect, two ways of saying the same thing.

The first is Wittgenstein's suggestion (11, I 143-155, pp. 56-61) that understanding something is a matter of 'knowing how to go on' as in the case where a man is said to understand the principle underlying the series of numbers - 1, 5, 11, 19, 29 - if he can continue the series according to a coherent formula which defines the relationship between the numbers comprising the sample. 'Understanding' in a case such as this,

of course, implies 'getting it right', which interpreting or understanding an experience in a given way does not. An illusion is a misinterpretation of an experience, but that does not prevent it from being a way of interpreting or understanding the experience. Nevertheless we can readily extrapolate from Wittgenstein's account of the cases where we get the interpretation right to those where it either is or may be wrong and suggest that to interpret something in a particular way is a matter of how we would be inclined or tempted to 'go on' about it.

The second way of characterising the disposition involved in understanding or interpreting something in a given way depends on pointing out the relationship between 'interpreting' and 'believing'. To interpret something as a Φ is to be inclined or tempted to believe, if it does not involve actually believing, that x is a Φ . Now as I have repeatedly argued in previous Lectures (especially Lectures [9](#), [12](#), [13](#) and in the paper (8d) enclosed with the previous lecture) to believe that p is to be disposed (a) to assert p and (b) to act on p . Hence the kind of half or incipient belief in which an interpretation consists may likewise be construed as a rather more temporary and provisional inclination to describe x as Φ and act accordingly.

(2) Sensationalism

The second consequence of the categorical distinction between an experience and its interpretation is that it provides an argument for the view that there is at least some truth in the much maligned doctrine known as sensationalism. 'Sensationalism' is defined by Baldwin (1) as "the theory that all knowledge originates in sensations; that all cognitions even reflective ideas, can be traced back to elementary sensations". Clearly if in saying that all mental life originates in or can be traced back to sensations is meant that all mental properties are complex assemblies made up of bits or elements of sensory experience or sense data, as philosophers used to call them, sensationalism is obviously false. Moreover if it is interpreted as equivalent to the thesis that all knowledge and belief, though not consisting of sensory elements, is nevertheless acquired through sensory experience, sensationalism, though not obviously false, ceases to make any claim which is distinguishable from that of empiricism apart from ruling out the possibility of acquiring any knowledge or belief from experiences of a non-sensory character. If however, we regard sensationalism, not as a thesis about cognitions or about mental life as a whole, but simply as a thesis about raw experience as distinct from the interpretation or construction that is put upon it, it does seem plausible to maintain that all experiences in this sense are either sensory experiences or sensations (i.e.: experiences resulting in the stimulation of the receptor organs) or para-sensory experiences, such as mental images and hallucinations which resemble sensations in a qualitative sense, but whose character is determined solely by the mental activity of the individual concerned.

My own view of the matter is that although it is logically possible that there should be an experience which is neither a sensory experience nor some kind of copy of a sensory experience like a mental image or hallucination, since as Wittgenstein's private language argument (11, I 242-277, pp. 88-96) shows, we can only describe a private experience by referring to its standard publicly observable concomitants, such experiences when they occur, cannot be intelligibly described by their owners. We can describe our sensory experiences or sensations because it is by means of such experiences that we learn to recognise what is going on in our environment as it impinges on our sense organs. We can therefore, identify a particular sensory experience, as I have expressed it elsewhere "by reference to the actual physical properties of the concrete physical objects, events and processes which normally, though not perhaps in the present instance, give rise to the sort of conscious experience which we are trying to describe". (8a, p. 49). By the same principle we can also describe experiences like after images and mental images by virtue of their resemblance to the sensory experiences in terms of which we learn to describe our sensory environment. But if an experience does not resemble a sensory experience in any way and is not the sort of experience which can be characterised by what it makes us believe or how we react emotionally to it, there ceases to be any way of saying anything intelligible about it apart from noting the time and place of its occurrence.

Furthermore an experience that does not result from sensory stimulation can have no function in signalling the presence of some state of affairs in the individual's internal or external environment. It is therefore difficult to see how the ability to detect the occurrence of such an experience could have any value to the individual in adapting to that environment. Likewise an experience that neither results from sensory stimulation nor resembles one that does in the way that mental images and hallucinations resemble sensory experience could not be used, in the way that mental images sometimes are, as a means of thinking about

an object or situation which is not currently impinging on the individual's sensorium. Since biological characteristics that have no function tend not to develop or tend to disappear if they cease to have a function, it is hardly surprising that such experiences are seldom, or ever reported. Consider here the gradual disappearance of visual sensations reported by people who have become blind.

(3) Uninterpreted experiences

But whether or not non-sensory or non sensation-resembling experiences ever occur, it is clear that even if they did the individual would not be able to describe them. And the reason why he would not be able to describe them is that he would not be able to interpret them in any way, however tentatively, since they would in no way resemble the kinds of experience which he has learned to interpret. This implies that it is logically possible for an experience to occur without any interpretation being given to it, though it also implies that any such experience, whether or not it is susceptible to such interpretation, could not be described by the individual unless and until it is so interpreted. Unconceptualized experiences, as distinct from unconceptualisable experiences, are certainly very rare. Nevertheless, in my view, they can and do sometimes occur. The reason why they are so rare is that mental activity like overt behaviour is characteristically purposive and goal-directed, and its primary goal is the achievement of an adequate and appropriate interpretation of experiences as they occur. The mind abhors an uninterpreted experience as nature abhors a vacuum. Nevertheless uninterpreted experiences sometimes occur in minds, as vacuums sometimes occur in nature. But since it is logically impossible to report an occurrence without having made the interpretation that it has occurred, it follows that the occurrence of an uninterpreted experience cannot be reported by its owner; and since we are wholly dependent on the report of its owner for our knowledge of its occurrence, it follows that neither its owner nor anyone else can ever know that an uninterpreted experience has occurred except in the case where what was originally an uninterpreted experience is subsequently interpreted and reported say, as a throbbing sensation on the basis of a subsequent mental image which is identified by the subject as a copy or reproduction of the previously uninterpreted experiences which he had on a previous occasion. Of course in such a case, we could never be certain that the mental image of the sensation accurately reproduced the features of the previous uninterpreted experience. But the fact that this supposition is unverifiable does not in my view and despite Malcolm (7) render it meaningless.

(4) Introspection

Perhaps the most important implication of the categorical distinction between experiences as mental processes and their interpretations as mental states is the recognition that the way in which the individual come to know how he is interpreting or has in the past interpreted an experience of his is necessarily very different from the way in which he comes to know about the experience itself. Both these forms of self knowledge have in the past been referred to as 'introspection', and the failure to distinguish between them has been a major source of confusion both in the writings of the Introspective Psychologists and in subsequent discussion by philosophers who are unsympathetic to the notion that human beings have any kind of power to inspect the contents of their own minds. The English word 'introspection' is somewhat misleading as a description of both these forms of self-knowledge. But it is very much less misleading as a description of our knowledge of our own experiences, than it is as a description of our knowledge of how we interpret them. Although it has a respectable ancestry in English going back to the 17th century, the word 'introspection' was introduced in the language of psychology & philosophy in the 19th century as a translation of the German 'Selbstbeobachtung' as used by Wundt (12) in his original description of the methodology of experimental psychology, and it is therefore to Wundt that we must look for an understanding what the term in its technical use was originally intended to mean.

In his discussion of Selbstbeobachtung or Introspection Wundt quite explicitly rejected the Kantian notion of Inner Sense (Innere Sinn) (6) and for two reasons; firstly because it seems to imply the existence of a special sense organ which responds to the current state of the mind and its activities, but secondly and more importantly, because it suggests, as indeed does the English word 'introspection', that the mind is introspecting somehow turns round and looks inside at itself and its workings. On Wundt's view the direction of the mind's gaze, if such an expression may be permitted, is exactly the same as in introspection as it is in 'extraspection' as we may call its more usual attitude or orientation. Wundt explains the difference between introspection and extraspection in terms of his famous distinction between Mediate and Immediate

Experience. Mediate Experience for Wundt is experience interpreted as it usually is, as a sensory contact between the individual and an external physical environment extended in three spatial dimensions beyond his skin. In Immediate Experience experiences which would normally be interpreted mediately in terms of an external physical reality are interpreted by the introspective observer as what in fact they are, namely as private occurrences within himself. In either case, according to Wundt, the individual is witnessing his experience and in either case he can, if he concentrates, be said to be observing or inspecting his experience as it develops. The difference between mediate experience and immediate experience, and hence between extraspection and introspection, is one of attitude and the kind of interpretation that is put on the experience as it develops.

Our normal attitude in everyday life, as we have seen, is an extraspective attitude which interprets experience mediately in terms of what is going on in our environment and it usually requires a very difficult feat of mental gymnastics to adopt the introspective attitude and examine the kind of experience we normally interpret mediately as a piece of immediate experience; it was in the act of performing this feat that the early experimental psychologists, who relied on introspection for access to information about experience, had to be trained. There are it is true, certain kinds of experiences such as bodily sensations, after images and mental images which even the man in the street normally interprets as immediate experiences because they do not correspond to any recognisable feature of the external environment. However as the phenomenon of dream experiences shows, if a mental image or after image becomes at all vivid, it only requires a reduction in the level of vigilance to a point where logical inconsistencies amongst the various interpretations are ignored for the mediate extraspective attitude to reassert itself with the result that such experiences are for the time being at least, interpreted as genuine encounters with an external reality.

Since all observations on this view, whether extraspective or introspective, involves having experiences, interpreting them in one way or the other and thus being in a position both to report and describe what is going on, it necessarily follows that it is only the experiences themselves and not their interpretation that can be observed and described by means of introspection. Nevertheless a man can only describe and report his experiences by virtue of having interpreted them as such i.e.: immediately or introspectively. Moreover since a private experience, as Wittgenstein's private language argument shows, can only be described in terms of its publicly observable concomitants, it also follows that he can only describe his experiences in terms of the way he is inclined to interpret them in mediate and extraspective terms. Thus in order to introspect and report his introspections, a man must not only interpret his experience, he must also know how he interprets and is inclined or tempted to interpret it. But how then does he know how he interprets or is inclined to interpret his experience? Not surely by observing his interpretations since on this analysis this would involve his experiencing his interpretations and interpreting them as interpretations, which would lead as Ryle (9) has pointed out to a vicious regress of second order observing of one's observings in order to account for this kind of mental self knowledge. Titchener in his discussion of this problem (10b) tries to argue that interpretations or 'meanings' as he calls them, do sometimes occur as introspectively observable experiences or conscious contents like the mental image of the incoming tide which in his thinking stands for the progress of science and the various kinaesthetic images and sensations which were 'discovered' by the introspective observers at Cornell under his direction in their attempt to discredit the claims of the Wurzburg school in the matter of imageless thoughts (3). Yet even Titchener is finally compelled by the evidence of his own introspection to concede that experiences are frequently interpreted and known by the subject to be interpreted without any accompanying mental image or sensation which carries or conveys the meaning in question.

Thus in the fifth of his Lectures on the Experimental Psychology of the Thought Processes, he says: "I doubt if meaning need necessarily be conscious at all - if it may not be carried in purely physiological terms. In rapid reading, the skimming of pages in quick succession; in the rendering of a musical composition in a particular key; in shifting from one language to another as you turn to your right or left hand neighbour at a dinner table; in these and similar cases I doubt if meaning necessarily has any kind of conscious representation [...] I was greatly astonished to observe some years ago, that the recognition of shades of grey might be effected, so far as my introspection went, in this purely physiological way. I am keenly alive to the importance of organic sensations, and [...] to that of reduced or schematic kinaesthetic attitudes. I was not at all astonished to observe that the recognition of a grey might consist in a quiver of the stomach. But there were instances in which the grey was 'recognised' without words; without organic sensations, kinaesthetic or other; without the arousal of a mood; without anything of an appreciably

conscious sort. I found not the faintest trace of imageless apprehension, if that apprehension is supposed to be something conscious over and above the grey itself. I cannot further describe the experience: it was simply a 'recognition' without consciousness (10b, pp. 178-9).

This conclusion which so astonished Titchener namely, that he had recognised or interpreted a shade of grey as one that he had seen previously and knew perfectly well that he had so interpreted it without their being any observable or describable conscious content or experience which constituted the interpretation or 'carried' that meaning to him, becomes perfectly intelligible as soon as we realise that to recognise or interpret an experience is a mental act resulting in the mental state of knowing or believing that the shade of grey was one seen before and not any kind of mental process or experience, and when we are prepared to allow that, we come to know how we interpret or what we believe or know about something, not by observation, but simply by virtue of the fact that the disposition in which the mental state in question consists, involves among other things, the disposition to assert the proposition which one thereby believes or is inclined to believe, but also for reasons discussed elsewhere (8d), the infallible capacity to assert that one is disposed.

Had the theory of mental dispositions subsequently worked out by Wittgenstein (11) and Ryle (9) been available in Titchener's day, he probably would not have felt the need to search so obsessively for sensations and mental images which would constitute the introspectively observable signs of the occurrence of a mental act or the existence of a mental state. Nevertheless the fact that he was finally convinced that interpretations or 'meanings' could occur and be known to occur without the occurrence of any such introspectively observable conscious content solely on the evidence of introspection, is itself a refutation of the behaviourist contention that because introspective observation cannot be checked by an external observer it is impossible for this method to reach conclusions imposed by the empirical evidence rather than by one's theoretical or emotional preconceptions. This raises the question of the propriety of using introspection alongside more objective methods of observation as a technique for scientific study of the only thing which introspection in the strict sense can be used to study namely, private conscious experience as distinct from both the mental activity which controls it and the way it is interpreted. Despite the serious methodological and conceptual problems which it presents which I would not wish to minimise (8b, pp. 110-2), since introspection or the kind of retrospective introspection which we are compelled to employ in the case of dream experiences is at present our only way of studying this strange phenomenon, my view is that we have to choose between using introspection and making what use we can of the evidence it provides or else ignoring altogether one of the most remarkable phenomena in the field of psychology (8b, pp.103-4)

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