KNOWING HOW AND KNOWING THAT

The verb 'to know' is used in a number of different ways in our ordinary conversation. We talk, for instance, of knowing Mary, of knowing German, of knowing what to do, of knowing what it means, of knowing the answer, of knowing how to play chess and of knowing that Sussex is an English county. Although we normally apply the word 'know' in different situations without involving any serious difficulty, arguments really may of course develop as to whether we really know what we claim to know or really know what we said we knew. Gilbert Ryle has shown that it is a concept which, like certain other mental conduct concepts, requires careful investigations if we are to be clear about its various logical functions. He has shown us that there are certain divergences between knowing how and knowing that which, if unrecognised, may cause us to make confusion about some important philosophical issues.

Ryle presents the following points of divergences between 'knowing how' and knowing that:

In the first place, 'knowing that' is a knowledge of
this or that truth or fact. To know a truth is to know a proposition. Since factual knowledge is propositional, we can say that 'knowing that' is propositional. Knowing the fact that two plus two is equal to four is propositional.

'Knowing how', on the other hand, is not propositional. Ryle explains the logical powers of 'knowing how', by relating instances of 'knowing how' to play chess, to swim, cook or cycle. When we say, he knows how to swim, we mean that he is capable of swimming when occasions demand. Even when he is sleeping, we can credit him with this ability. In the same way, when we say that someone knows how to play chess, or cook, we more often refer to the individual's ability or skill to perform these acts than indicate his competences to recite rules or formulas for these activities. These abilities do not consist in any act of thinking. That is why it is not propositional.

In the second place, there are some verbs, for example, learn, forget etc. which are capable of both 'how' construction and 'that' construction. But there are other verbs which do not admit both of these constructions but only one of them. If there were no difference between them, all verbs could admit both constructions. We never speak of a person believing or opining how, and though it is proper to ask for the grounds or reasons for someone's acceptance of a proposition, this question
cannot be asked of someone's skill at cards or prudence in instruments. This non-parallalism in language suggests that there is ultimately a distinction between knowing how and knowing that. Here Ryle only mentions this distinction but does not make clear the exact point of demarcation.

Lastly, 'knowing how' admits of degrees whereas 'knowing that' does not. 'Knowing how' is an ability or competence to perform an act. One can be more or less competent in a particular art. The expert knows how to swim better than the amateur. On the other hand, 'knowing that' is knowledge of fact which cannot admit of degrees. It is meaningless to say that one knows one and the same fact better than another. When we say that 'X' has more factual knowledge or is more learned than 'Y', we mean that 'X' knows a fact better than 'Y'.

The above distinction between 'knowing how' and 'knowing that' is the basis of Ryle's attack on the champions of the Intellectualists' legond who try to assimilate the two. According to their thesis, intelligent operation depends upon consideration of rules. Intelligent operation is an example of 'knowing how', viz., ability to play can be exercised through intelligent playing. But consideration of rules is really an apprehension of propositions, and therefore it gives
us propositional knowledge. So it is an example of 'knowing that'. Thus the official doctrine tells us that 'knowing how' can be reduced to 'knowing that' because intelligent performance involves a prior internal observation of some rules or criteria. These rules or criteria are expressed in terms of propositions which Ryle calls 'maxims', 'imperatives' or 'regulative propositions'. We act intelligently by following these rules. Thus the intelligent execution of an operation embodies two processes, one of doing, and another of theorizing.

Hence the problem arises whether 'knowing how' is really reducible to 'knowing that'. Ryle's answer is negative. He argues that the intellectualists' legend is false and that when we describe a performance as intelligent, this does not entail the double operation of considering the rules and then executing them. He advances the following arguments against the intellectualists' position.

The first argument is that some intelligent performances do not depend upon consideration of rules because in those cases no rules can be formulated, for example, making jokes. The witty man who is very efficient in making jokes and appreciating them may fail to cite any maxim or canon for them. So the practice of humour cannot be explained by the intellectualists' theory. Again, our aesthetic taste, tactful conversation
or manners and inventive techniques etc. are not always preceded by a prior theoretical knowledge. Therefore, some intelligent performances are not controlled by any anterior acknowledgement of the principles applied to them. If consideration of rules is a necessary condition of an operation being intelligent, it must be appropriate in every intelligent performance. But that is not the case. So consideration of rules is not a necessary condition of all intelligent performances.

The second argument tells us that to say that an intelligent performance depends upon consideration of rules is to say that efficient practice presupposes the theory of it. But the truth is just the reverse. What Ryle wants to say is that efficient practice does not presuppose but rather precedes the theory of it. Aristotle formulated the rules of syllogism. But before Aristotle, there were practices of reasoning and observing on them. Aristotle only abstracted rules of syllogism and thus constituted the theory of syllogism. In the case of intelligent performance also, the theory is adjusted in the light of efficient practice.

The third argument raises the most crucial objection to the intellectualists' legend. It points out that if an intelligent performance depends upon consideration of rules, then such consideration of rules
must itself be an intelligent performance, that is, for any operation to be intelligently executed, a prior theoretical operation has first to be performed intelligently. So by parity of reasoning, it must depend upon a previous consideration of rules, which must again depend upon a still previous consideration of rules and so on. The process would go on endlessly. And the endlessness of this implied regress shows that the application of the criterion of appropriateness does not entail the occurrence of a process of considering this criterion.

Moreover, it must be admitted that to act according to a maxim, I must be sensible and not stupid and the good sense cannot itself be a product of this general principle. The intelligence of a performance is not determined by its cause or mental antecedent, but by the manner or style of performance. But the intellectualists made a confusion between cause and manner.

These arguments show that the Intellectualists fail to reduce 'knowing how' to 'knowing that'. With this, their two motives for doing so (e.g., that of ascribing, intelligent process to physical process and that of showing that an intelligent performance is always governed by a mental act) are proved to be futile. According to Ryle, that performance
is intelligent which is an exercise of skill and that performance is non-intelligent which is not an exercise of skill. A trained parrot may say 'Socrates is mortal' after saying that 'Man is mortal' and 'Socrates is a man'. But this utterance is non-intelligent because the parrot has not the skill to give a slightly different reply if there is a bit of change in the circumstances. But a student of logic can apply skill in giving slightly different answer if there is a change of circumstance and so his utterance is intelligent. Thus the utterance of the student of logic is an exercise of his skill but the utterance of the parrot is mere imitation.

The Intellectualists might say that skill is a mental act. But Ryle holds that skill is not an act (neither physical nor mental) but an ability or disposition to perform an act. According to him, the distinction between the ability to perform an act and the act itself is a logical-type distinction or category distinction between a non-act and an act. So it is simply absurd to admit an unwitnessable mental cause behind the witnessable physical exercise. Ryle admits that intelligent performance is a mental ability but he does not admit that being private is a necessary and sufficient condition of being mental. A performance may very well be intelligent even if it is not privately done. Again, a performance may be private or secret, yet it does not follow that it must be intelligent.
What is private may also be 'imaginary'. In the section on 'In my head', Ryle holds that when we use the phrase, 'In my head', we use it in a metaphorical sense which really means 'imaginary'.

We have so far analysed Ryle's negative account of 'knowing how' which shows that intelligent operation does not depend upon consideration of rules, that is to say 'knowing how' is not reducible to 'knowing that'.

Ryle's positive account of 'knowing how' is that the intelligence of a performance is determined by the observation of rules, i.e., by the fact whether the performer is following rules or not. The ability to apply rules is a result of practice. From this point of view, an intelligent capacity or 'knowing how' may be wrongly identified with habit, for a habit like an intelligent capacity is also a disposition. To avoid such misinterpretation, Ryle makes three points of differences between intelligent capacity or 'knowing how' and habit.

First of all, in the case of habit, an action is the exact repitition of previous actions. But in the case of intelligent capacity, one action is not the exact copy of the
previous action but a modification of it. In the case of an intelligent capacity, "the agent is still learning."

Secondly, a habit is built up by sheer drill, in which we act rather blindly. But intelligent capacity requires proper training which develops intelligence by correction and modification.

The third and the most important point of difference is that habits are single track dispositions but 'knowing how' or intelligent capacities are multitrack dispositions. We can show our intelligent capacities in our actions, words, thoughts, feelings in thousand different situations.

Ryle agrees with the Intellectualists that in judging someone's performance as intelligent, we have to look beyond the performance because the same performance can be accidentally exhibited by an idiot.

But by 'looking beyond' Ryle does not mean consideration of rules in one's mind but consideration of the truth or falsity of some hypothetical proposition which he calls 'could and would' proposition. The difference between an intelligent person and an idiot is that the former can do a lot of things which the latter cannot. It is not the case that
the intelligent person is considering some rules and the idiot is not doing so.

The Cartesians hold that when one is doing a thing intelligently he is performing two actions. He is doing something in the physical world and at the same time exercising the rules of intelligence in his mind. Ryle admits that 'he is bodily active and he is mentally active' but adds that 'he is not being synchronously active in two different places' or with two different 'engines'. In other words, he is not performing a double action. There is one activity but it requires more than one kind of explanation, e.g., physiological, biological, rhetorical and logical, which are different from one another. As intelligent capacity or 'knowing how' is a multi-track disposition, its execution, i.e., intelligent operation also is to be explained from different points of view.

Israel Scheffler criticizes Ryle's theory of 'knowing how'. He says that Ryle's assimilation of knowing how to intelligent performance, though understandable, is surely dubious. For 'know how', according to Scheffler, covers not merely what he calls critical skills (Ryle's intelligent capacities), but also relatively routinizable or automatic competences, such as spelling, which once attained, normally require no critical effort in performance: We do not have a category of intelligent
pelling. Further, even in the case of skills not thus routinizable, attribution of intelligence normally goes beyond mere attribution of know how to read, or play chess etc. The operative criterion for knowing how to play is indeed variable and in some contexts we may wish to withhold the attribution of 'know how' from the student until a certain level of intelligent play is attained. But such a decision is not forced on us, and we may well construe intelligent play as a further condition beyond the achievement of a minimum strategic know-how. So Ryle by taking 'know how' as intelligent performance considerably narrows its full range excluding altogether the routinizable (non-Critical) competences on the one hand, and minimal achievement of the critical (non-routinizable) competences on the other.

Scheffler notes that in one passage Ryle tries to bring consideration of chess "propriety" under the title of 'know how' at least by implication. He is arguing in this passage, that one does not know how to play if all that one can do is to recite the rules. "But", he continues, "he is said to know how to play if, although, he cannot cite the rules, he normally does make the permitted moves, avoid the forbidden moves and protest if his opponent makes 'forbidden moves". (p 41). This, Scheffler holds, seems to conflict with Ryle's own theoretical account of 'knowing how' as intelligent performance. For no one who knows how to play chess needs to expend judgement in
deciding whether a piece is being properly moved, nor does he "exercise care, vigilence or criticism" in the process, thinking what he is doing all the time, so that every operation performed is itself a new lesson to him how to perform better" (p 43).

From this Scheffler comes to the conclusion that Ryle's theoretical account is, after all, too narrow. In using the present chess illustration, he provides a counter-example to his own theory. He thinks that the same point might also be made about Ryle's reference to "knowing how" to talk grammatically, in the same breath with knowing how to argue. Thus Scheffler is trying to make a broad construction of 'knowing how,' which does not limit it to cases of intelligent performance. He acknowledges a distinction between facilities and critical skills (which Ryle calls capacities) on the ground that the former but not the latter are relatively routinizable (for example, spelling, typing etc.), the latter involving always an ineliminable engagement of judgement in the performance. He further argues that facilities like critical skills belong to the realm of 'know how.' He shows that what he calls facilities are not incompatible with Ryle's secondary motivation for emphasizing critical skills (intelligent capacities). While Ryle's primary motivation is his preoccupation with refuting the intellectualists' legend, his secondary motivation, according to Scheffler, is the wish to contrast genuine 'knowing how' with the activity of the well-regulated clock and the well-drilled circus seal. Scheffler
says that facilities like critical skills, are abilities acquired through training. They are acquired through a variety of procedures involving repeated trials and including, or at least capable of being facilitated by the process of showing how, by description, explanation or example. This is a minimal, though crucial, element of understanding or communication, which differentiates even an automatic typing facility, for example, from the time telling of a clock.

"Regarding the performance of the seal." Scheffler says, "much depends on the view taken of its learning; if we allow that training is genuinely involved, it does not seem at all obvious that the seal must be denied to know how to perform its tricks."

There are, in any event, borderline cases which are difficult to decide, and it is sufficient if an analysis avoids clear counter-examples.

Scheffler holds that the above-mentioned distinction between facilities and critical skills underlies Ryle's contrast of "intelligent capacities" with "habits." He thinks that Ryle's characterization of intelligent capacities or critical skills is well taken. But the contrast he makes with habit is misleading, for he includes under habit not only facilities such as "the ability to give by rote the correct solutions of multiplication problems" and also "the smoking habit of a man", which according to Scheffler, is no ability
at all, hence not a facility, but rather a proneness or propensity. Scheffler holds that propensities are clearly different from abilities. No normal person, for example, is thought to have the permanent proneness to give by rote the correct solution of multiplication problems though many are considered to have the ability, while having the smoking habit is clearly more than having the practical ability to light up. Propensities do not belong to the realm of know how though they may presuppose know how.

Scheffler thinks that perhaps it is Ryle's grouping of propensities with facilities that provides still another cause for his exclusion of the latter from this sphere of knowing how to. But he includes facilities within this sphere, though they share certain common propensities with the excluded habitual propensities—in particular, the possibility of being rendered automatic.

He comments on another important distinction drawn by Ryle between intelligent capacities and habits. Ryle's point is that habits are built up by drill whereas intelligent capacities are built up by training. Ryle opposes training to drill and supposes that facilities are built up through drill, construed as a mere "imposition" of repetitions.
According to Scheffler, on the contrary, facilities like critical skills are developed through training, which always involves, at least in a minimal way, the notion of understanding. Practice in the sense of drill and critical practice may both, in his view, be involved in the process of training. Training, however, always involves understanding in the minimum sense.

Scheffler says that the reason which leads Ryle to say that facilities are routinizable, becoming increasingly automatic as they are developed. But this does not imply that drill alone is capable of building them up. Once they are developed, they are indeed automatic and repetitive, it cannot be inferred that they are therefore acquired in an automatic and repetitive way. "After the toddling age", says Ryle, "We walk on pavements without minding our steps". But then during the toddling age we do mind our steps and drill is, at least at this stage, inappropriate. Thus Scheffler shows that it cannot be the exclusive method for developing facilities. He suggests that drill is actually a sophisticated method in this and similar cases. Though it surely has a plan in developing facility, the relevance of showing how, through description, example, or explanation is never ruled out; it may be of special importance in early stages of learning, but it never altogether loses it's significance for the process. The potential relevance of insight, questioning, understanding
and communication remains indeed, even in cases where drill is the chief need of the moment. Such relevance, according to Scheffler, is an index of the intellectual character of procedural, as of propositional knowledge.

Scheffler's view is justified in so far as he says that by confining 'knowing how' to intelligent performance, Ryle narrows the field of knowing how. "The scope of 'knowing how' is much broader than intelligent capacities. There may be a number of cases where the performer automatically or habitually does something well without applying any intelligence at all. He is also right in saying that though 'drill' (which is required for growing habits) appears to be mere repetitions of a certain act, it also requires training at the beginning. So training is not opposed to drill. But still there is an important difference between habit and intellectual capacity that while the former is a single track disposition the latter is a multi-track disposition which can be demonstrated in various ways.

In another article³ Scheffler criticizes Ryle's theory of propositional knowledge or 'knowing that'. He argues, first, that Ryle's treatment of 'knowing that' is inconsistent and secondly, that certain remedies suggested by selected passage in Ryle's book are untenable, on independent grounds.
Scheffler points to two anomalies in Ryle's analysis of knowledge.

First of all, knowledge is classified by Ryle as both an achievement and a capacity although it cannot be both, because achievements are episodic but capacities are not. These properties exclude each other; so the joint attribution is self-contradictory. For Ryle explicitly introduces his main discussion of achievement words by stressing their episodic character, i.e., their character as signifying occurrences, while he stresses equally that dispositional statements "narrate no incidents", holding that to classify a word as dispositional is to say at least "that it is not used for an episode". Nor does he ever suggest that 'know' is a hybrid word both episodic and dispositional, of the sort he talks about under the level of "semi-hypothetical" or "mongrel categorical statements. He is perfectly clear and explicit in classifying "know" as a dispositional word, without qualification. He is also perfectly straightforward in calling achievement words "genuine episodic words". It follows that 'know' cannot be both an achievement word and a dispositional word. Ryle's total account is thus literally inconsistent.

Secondly, Ryle makes a major division among dispositions
by separating capacities from tendencies. Attribution of a
tendency tells us that something will very likely be the case,
whereas attribution of a capacity denies the likelihood that
something will not be the case. As Ryle puts it: "Tendencies
are different from capacities and liabilities, "would if...."
differs from 'could'; and 'regularly does.... when.......
' differs from 'can'. Roughly to say 'can' is to say that it is
not a certainty that something will not be the case, while
to say 'tends', keeps on', or is prone, is to say that it is
a good bet that it will be, or was the case. So 'tends to'
implies 'can' but is not implied by it." Fido tends to howl
when the moon shines, says more than it is not true that if
the moon shines, Fido is silent. It licences on his silence,
but positively to expect barking." (P-126).

Ryle says that 'know' is a capacity verb, "signifying
that the person described can bring things off, or get things
right, whereas 'believe.....' is a tendency verb and one which
does not connote that anything is brought off or got right."
He is referring here to "knowing that," rather than "knowing
how" and affirms explicitly that 'knowing that' and 'believing
that', operate in the same field and have propositional signifi-
cance. Yet he declares that to know is to be equipped to get
something right and not to tend to act or retreat in certain
manner." His reason for the distinction is that belief can be
qualified by such adjectives as 'obstinate', 'wavering', 'unanswering' etc. whereas 'knowing' cannot. Scheffler comments that it is not at all clear that the distinction he offers in explanation can be coherently maintained.

Ryle also declares that belief consists in propensities "to make certain--feelings" and he admits that knowing also involves some propensities. The question is, if 'knowing that' involves the same tendencies or propensities as believing, how can it be contrasted so sharply with believing as belonging to the category of capacities? Moreover, it is generally held that to know that something is the case implies to believe that it is. On general grounds, therefore, one would suppose that 'knowing that' involves the attributions accomplished by believing that.

Scheffler concludes from this consideration that there is at least a problem of interpretation for Ryle on this point. He suggests one way of meeting it, that is to say, that knowing, unlike believing, does not consist solely in propensities, but comprises also a surplus of capacities. He himself admits that it is questionable whether this is an adequate solution. But, after all, this is a minor problem. The most serious problem is to solve the inconsistency of offering a dispositional account of knowing and at the same
Scheffler explores various possible modifications of Ryle's account, viz., 1) that "achievements are abstract facts, not occurrences, so that knowledge can be both an achievement and representing the achievement of satisfying standards of enquiry", and 3) that "knowledge is a capacity for certain achievement such as finding out or saying what is the case." He rejects all these possibilities in favour of a more complex account of knowledge as involving a state of belief and a state of the world, plus other unspecified things, and as a complex concept comparable to theoretical constructs of science.

E. M. Adams also discusses Ryle's view of "knowing that". He uses Ryle's distinction between task and achievement verbs on the one hand and episodic and dispositional terms on the other, and adds the further distinction between a) capacity and dispositional achievement verb or b) episodic achievement verb. Task verbs such as 'play', 'look', 'argue' refer to some activity or undertaking and may be used in reporting it. Achievement verbs, like 'win', 'find', 'convince' and so forth, do not refer to some activity distinct from that referred to be their corresponding task verbs. They are used to report the success of the undertakings concerned.
To play a game is to do something; to win a game is not another activity over and above that of playing it, is simply to play the game successfully. The distinction between episodic and dispositional terms should be clear from the terminology. An episodic word is one that refers to an episode, an occurrence, an event such as 'fall' 'sleep' and the like. An dispositional expression, as the term indicates, refers to a disposition in the form of either a capacity, like 'strong', 'intelligent' etc. or a tendency, such is 'loyal', 'stubborn', 'docile' and so forth.

He agrees with Ryle regarding the view that, 'know' in the sense of 'know (s) that' may be used as a capacity dispositional achievement verb. It signifies the person described can bring things off, or get things right. But Adams differs from Ryle in holding that 'know' in the sense 'know (s) that' can also be used as an episodic achievement verb. Ryle argues against this. He contends that none of the episodes or occurrences from which the dispositional use is derived bear the name of 'know'. It is like 'grocer', he says. A grocer is never described as 'grocing' but as selling sugar, and so forth. The knower, the one with the knowing capacity, according to Ryle, 'sees, infers, deduces, and the like, at certain times, but not simply knows.'
Ryle says that a knowing 'episode' is not merely an occurrence or act, but strictly speaking, a complex of at least two elements, say, a b, with only one, say factor b doesn't seem to be such that it precludes the combinations' (a b) being episodic. Adams suggests, on the contrary, that the a is thinking that p and b is the success of it. He says that although winning is not a different episode from that of playing it, we do speak of winning as an episode. The issue, according, to Adams, is whether successfully thinking that P or merely the thinking involved is to be considered as an episode.

But a successful undertaking is still an undertaking and thus still an episode. Adams says that failure to recognize the peculiarity of the way in which knowing that differs from thinking that has led some to hold that 'know' is a simple unanalysable term that names a peculiar act.

Ryle expands his account of knowing by examining the concept of 'understanding' which he proves to be a part of 'knowing how.' we say that this man is acting intelligently, not merely by observing his behaviour. We also understand or make sense of it. To understand in this sense is to appreciate his behaviour and to appreciate is to apply appraisal concept. Appraisal concepts are concepts by which we appreciate the behaviour of other persons as intelligent, stupid, etc. So 'intelligence' is an appraisal concept. Only when I understand
a person's behaviour, I can appreciate his behaviour as intelligent or stupid. The problem is, how is understanding in this sense possible, that is to say, what are the necessary and sufficient conditions of understanding? Obviously, the necessary condition of understanding one's behaviour is to observe his behaviour. But though understanding involves observation, it does not consist only in observation. So mere observation is not a sufficient condition of understanding, we have to know something else.

According to the advocates of the mind-body dualism, this something else to know is knowing the mental states of those persons. But they hold that the mind of another person is a private theatre which is not observable. The only alternative left is to say that I can know his mind by inference from his bodily behaviour. But Ryle does not admit the inference theory of knowing others' minds. Inference in its simplest form is explained by means of an analogy. The Cartesians try to prove the existence of others' minds by the analogy of inferring the movements in the signal box by observing the movements of the signal arm. But Ryle says that this is not a good analogy. The connection between the signal arm and the signal box is a necessary connection for both exist in the physical world, but there is no necessary connection between a person's physical behaviour and his mental going ons. Body and mind are of different logical types and so one cannot
explain how the physical is connected with the mental. Thus this supposed analogy breaks down altogether.

Ryle puts forward other arguments for rejecting the argument from analogy. In the first place, in the argument from analogy, there is a discrimination between self-understanding and other-understanding. Secondly, the analogy is pitiably weak, for here the generalization depends on the generalization of a single case.

Lastly, it is based on the unrealistic assumption that different people behave in the same way under similar circumstances. But different people often behave in fundamentally different ways in similar circumstances.

Thus Ryle refutes the inference theory of knowing the mental states of others. This knowledge of mental states may be called "knowing that" such and such states are occurring in his mind. So the intellectualists' theory leads one to say that knowledge of others' mental states is "knowing that". But Ryle say that what is necessarily required for understanding is not "knowing that" but "knowing how". "Knowing how" is nothing but an ability or disposition or competence. By saying, "understanding is a part of knowing how", he means that understanding is an exercise of competence. In order to understand the performance of another person, one must have some degree of
competence to make similar performance. Thus the capacity of understanding is one in type with the capacity of performing. So they involve the same type of competence. But they need not involve the same degree of competence. That is to say, when I am speaking English and you understand me, you are also competent to make the same type of performance. But I may have this competence in a greater degree than you. So the appreciator need not have the same degree of competence like the performer. Thus what is required for understanding is some degree of understanding in the performance of the same type.

The analysis of understanding provokes Ryle to make another distinction between 'knowing how' and 'knowing that'. 'Knowing how' admits of degrees but 'knowing that' does not. I have explained this point earlier.

Now as understanding is nothing but a part of knowing how, it also admits of degrees. In the same way, learning how differs from learning that. As to the notion of mis-understanding, Ryle holds that it is a by-product of 'knowing how'. For mistakes are also exercises of competence. Only a person who has at least a partial knowledge of something can make wrong sense of it.

Hence it follows that 'knowing how' consists in the
exercise of intellectual capacity such as understanding, learning etc., whereas 'knowing that' is a mere theoretical knowledge that such and such is the case. So 'knowing how' cannot be reduced to 'knowing that'. The Cartesian theory of mind involves solipsism, for it tries to prove other people's mind with the help of an inference from their physical syntax. But such inference is not a logically satisfactory evidence for proving others' minds because the premises are either inadequate or unknowable. Ryle solves this problem by showing that we can very well know others' minds. When I see what someone is doing or hear some noises from him, I not merely passively see something or hear some noises, I am, at the same time, understanding what I hear or see. But this understanding is not inferring the occult causes. So it is not a case of 'knowing that.' It is rather appreciating how the operations are conducted. Thus knowing others' minds is a matter of understanding and understanding is a part of 'knowing how'.

The above discussion on 'knowing how' and 'knowing that' makes it clear that in order to emancipate intelligent performance from dependence upon the apprehension of truths, Ryle naturally places greater stress upon 'knowing how' than upon 'knowing that'. In fact, while the Cartesians put emphasis on 'knowing that' or propositional knowledge, Ryle proves, on
the contrary, that it is not 'knowing that' but 'knowing how' which we need to understand others' minds. Our intellectual capacities like understanding, learning etc. are all parts of 'knowing how'. He equates 'knowing how' with intelligent performance, with careful, skillful performance in which the agent would be commonly described as thinking what he is doing while he is doing it. The main motivation for this equation is Ryle's preoccupation with refuting the "Intellectualist legend" according to which intellectual performance needs some prior apprehension of propositional knowledge. In opposing this view, Ryle is primarily concerned to put forth an alternative conception of intelligence, as displayed in the manner of performance itself rather than in its mental antecedents. This is an important theory and deserves thorough examination to determine whether or not it is, in the final analysis, superior to its "intellectualist rival". This task will be easier if we start by examining some comments on Ryle's view.

D. G. Brown has severely criticized Ryle's distinction between 'knowing how' and 'knowing that'. Some of his points of criticisms are as follows:

In the first place, the distinction is indeterminate because the difficulty is rather, for each kind of knowing, to find out what is not an example. What is obscure is the boundary of each class and as a result the principle of division itself.
Let us make the point clear by the help of two examples. The first example is "He knows how a fan will fall". Ryle is of opinion that 'knowing how' is knowing how to do something. But here the person 'knows how' something will happen and not how to do something. It seems better to explain this sentence as an example of 'knowing that', e.g., he knows that the fan will fall in a certain manner. The second example is: "He knows that one way to slow down is to change down a gear." According to Ryle, 'knowing that' is knowing that something is the case. But here the person practically knows how to slow down by changing down a gear. So it can be used as an example of 'knowing how'. So if we go deeper into the meaning, then problematic situation arises and all this happens because the principle of distinction is not before us.

In the second place, Ryle's account even of clear cases of 'knowing how' to do something provokes a problem which seems hard to dissolve within the terms of his analysis. There are passages in Ryle's book which seems to identify 'knowing how' with 'being able to'. For example, knowing how to swim is simply equivalent to being able to swim. But in the case 'the watch is able to keep the correct time', can we say that the watch knows how to keep the correct time? So an ability cannot be identified with knowledge. If, however, Ryle means that 'knowing how' involves more than an ability, then what more is
involved in it, and how does it contribute to ability? Ryle's analysis of 'knowing how' cannot solve this problem.

Thirdly, Ryle does not distinguish between the English use and the Standard use of the phrase of know how. But Brown puts emphasis on this distinction. He says that it is necessary to distinguish between the English use and the Standard use. This distinction can be exemplified by the following instances:

i) 'John knows how to swim.'

The Standard use of 'know how' can be shown by the following example:

ii) 'The accused does not know how to address the magistrate.'

'Knowing how' in the English use is identical with 'being able to'. Thus John who knows how to swim is simply able to swim. But 'knowing how' in the standard use means 'knowing the best way' or 'the proper way of'. Thus the sentence given in example (2) means 'the accused does not know the proper way of addressing the magistrate.'
The above distinction is important to understand the status of 'knowing how'. But Ryle by giving his examples of 'know how' creates an impression upon us that he identifies 'know how' with being able to. So he seems to have the English use in mind and is thereby accused of two defects. First of all, he neglects the vast interesting territory covered by the standard use of 'know how'. Secondly, if he is confined to the English use only, then he is concerned with the relatively unimportant use of 'know how'. Because the English use of 'know how' is the English language use, for it has no parallel in other languages. But the standard use has its counterparts in other languages. So Ryle by neglecting the important usage of 'knowing how' is concerned with the comparatively unimportant one.

Lastly, by way of criticizing the intellectualists' doctrine, Ryle holds that 'knowing how' cannot be reduced to 'knowing that'. But Brown shows that 'knowing how' in its standard use is obviously reducible to 'knowing that'. Thus the example (2) can be reformulated in the following sentence:

"Of the various ways of addressing the magistrate, there is one way such that it is not the case that/accused knows that this is the most appropriate way of addressing the magistrate".
There is, however, no radical distinction between 'knowing how' in the English use and 'knowing how' in the Standard use. Ultimately the distinction is as follows. In the English use it is enough to know 'a way' but in the standard use, it is necessary to know 'the way', (i.e. the best way) of performing certain acts. And there are occasions where the English use of the same sentence can be illustrated as the standard use of 'know how'. So, as there is no radical distinction between 'knowing how' in its English use and in its standard use and moreover, as 'knowing how in its standard use is reducible to 'knowing that', the English use of 'know how' which Ryle makes here must equally be reducible to 'knowing that'.

Brown concludes that knowing, after all, is knowing that, and has a content, and the two main kinds of knowing can be distinguished by differences in content. He adds to the two kinds of knowing a new class which he calls practical knowledge. In the formulation of the content of practical knowledge, a particular kind of action is singled out. The primary criteria for ascription of such knowledge concern action of a specific kind, and these criteria lay down success in action of that kind or lay down some time, place, manner or the like for action of that kind. These performance criteria can be read off from the statement of which is known. The content of this type of knowledge is still propositional and can be formulated in a 'that' clause where the knower need not be able to say what he knows.
but exhibits his knowledge in performance.

Brown's arguments are not sound. The first argument that the principle of division is not clear can easily be refuted. There may be examples where 'knowing that' can be expressed in terms of 'knowing how'. Again 'knowing how' can be expressed in terms of 'knowing that'. But there is still a difference in meaning between the two types of knowing which their grammatical appearance cannot change. The second argument in redundant. For when we say 'the watch is able to keep the correct time', the words 'is able to' are applied to a machine and not to a person, we never expect from a machine that it will 'know how' to do such and such things. We only expect from a good watch that it's inner machinery will give us good service up to a certain period. By saying, 'the watch is able to keep the correct time.' We mean this much. The third argument also is not quite justified. It is very well true that 'knowing how' in one sense means 'knowing the proper way of'. But 'knowing how' in its most common use means being able to. Ryle holds that 'knowing how' admits of degrees. Generally when we say, one 'knows how' to do this thing, we do not mean that what he knows is the best way of doing this work. We only mean that this is one of the ways of doing the work. There is always the chance of some other person knowing it better or worse. So
by 'being able to' Ryle means that one is more or less efficient in doing a certain type of thing. In this respect, Ryle's view is better than Brown's. The last objection is most crucial to Ryle's theory. Brown shows that 'knowing how' sentences can be grammatically reduced to 'knowing that.' But by the same logic, it can also be demonstrated that 'knowing that' sentences can be formulated in 'knowing how' sentences. Brown himself has shown us in his first objection that the two types of knowing are mutually reducible. So the grounds on which Brown criticizes Ryle's theory are very weak and do not stand after proper examination.

His theory of practical knowledge throws some light on the nature of knowing. But here also he is biased on 'knowing that.' He says that this type of knowledge is also formulable in 'that' clause and so there is no need of 'knowing how.' But 'knowing how' like 'knowing that' is an important category of knowing. Mere theoretical knowledge without the ability to perform it in practice is of no utility.

A. D. Woollery points out the various ambiguities of 'knowing how' sentences. 'Knowing how' is commonly used as being able to do something (as a result of having learned). He contrasts this meaning of 'knowing how' with its three different meanings. 1) knowing what is required to be done, but being unable, through some defect or deficiency, to do it. For
instance: 'knowing how, as an actor to speak a certain line of an act but being unable to do it due to stage fright. 2) 'knowing how' to do an action well, i.e., with great skill. For example, if you want to find a man who really knows how to tune your car, go to Jones; Brown calls this use one standard use of 'knowing how.' 3) 'knowing how' in its most common use is contrasted with knowing how to achieve a certain result. The latter type of 'know' has to follow a comparatively long process to get a result. For example, knowing how to score a goal. This type of knowing, according to Woozley, involves some 'knowing that' or at least reasonably believing that, whereas 'knowing how' to perform actions of the swimming type does not involve any knowing or believing that about intermediary steps likely to bring out the desired result, because there are no intermediary steps. Hence it follows that 'knowing how' in one of its various senses involves 'knowing that' but in this case also we can very well know a fact without being sure of it. Being sure is an essential factor only in the first person use of this term. Woozley admits Ryle's merit in contrasting knowledge and belief on the point that in the case of knowing as opposed to belief, we do not allow that a man knows unless his answers are right.

We can agree with Woozley's view that knowing how to produce a certain result involves some intermediary steps.
But we are not always consciously aware of each step. Whether one can know that something is the case without being sure that is a different question and will be discussed in the next chapter.

Some other commentators are of opinion that 'knowing that' is a kind of 'knowing how'. H. J. Swann tries to prove that, although there is a prima facie distinction between these two types of knowing, 'knowing that' is nevertheless a special case (or sub-category) of 'knowing how'. He uses two arguments.

In the first argument, Swann points out that "Ryle seems to have implicitly demonstrated, by his own analysis of know in other parts of his book, that knowing that, when unpacked always turns out to be a case of knowing how". Swann agrees with Ryle on this point and says that as 'know' is a capacity verb and therefore dispositional, all cases of knowing can be ultimately reduced to knowing how. In the second argument he claims that knowing how does refer to statement-making or question-answer capacity and the difference between the two kinds of knowing lies only in the kind of statement we have the capacity to make.

Now he thinks that someone may object to this view by saying that in cases of sentences such as 'I know my tooth is now being drilled', 'knowing that' cannot be reduced to
'knowing how' provided we make a proper analysis of this sentence. When I say 'I know that my tooth is now being drilled, one may ask, how do you know? I can explain it in the following way. 'I have at the present moment a series of unpleasant physical sensation which, coupled with the evidence of my eyes and ears, indicate to me beyond all doubt that the dentist is now drilling my tooth.' Hence, when one asks whether my tooth is being drilled, I am able to reply correctly that it is—and this is what I mean by saying 'I know that my tooth is now being drilled.' Therefore, Swann says, "the reduction of knowing that to knowing how makes no difference to the decision analysis; indeed, the moment we have translated 'I know that' into its dispositional counterpart, we are already quite obviously, in the realm of 'knowing how.' For there is no basic difference between 'I am able to state' (reply correctly that) and 'I know how to state (reply) that.' The dispositional analysis tends to mask the authority-pledging character of 'I know' statements.

This raises a further problem. Is 'knowing that' really a pure capacity verb if it involves a decision—for decisions, surely are not dispositions but occurrences. Swann says that we may grant freely that deciding is an episodic and not a dispositional verb—decisions always occur at some moment in time. Nevertheless, when I say 'I know that P', I am not reporting any episode or occurrence; I am merely saying emphatically that 'I am able to state
Robbért Ammerman discusses three possible meanings of the word 'correctly' and shows that none of these meanings enable Swann's analysis to qualify it as a genuine reduction. The first interpretation depends on a merely grammatical point and Ammerman himself admits that it is difficult to believe that Swann intended it. In the second interpretation, 'capacity to state correctly' is equal to 'capacity to make a true statement.' Under this interpretation, Ammerman raises two objections against Swann's analysis. In the first place, he claims that the word 'correctly' is redundant since 'P has the capacity to state correctly what is the case,' one is saying no more than if one says 'P has the capacity to state what is the case.' The second objection is more important than the apparent redundancy. Any adequate analysis of 'knowing that' must preserve the distinction between genuine knowledge and right guessing or true belief. But Swann's reduction obliterates this distinction.

To the first objection Swann replies that the redundancy claim is "either trivial or false". It is trivial if Ammerman confines himself to the general formula (what is the case) as opposed to a specific know-claim (that so and so is the case). In the general formula, the word "correctly" makes
clear and at the same time emphasizes that P has the capacity to state what is in fact the case. If we omit 'correctly,' this effect can only be obtained by an unfortunate use of italics, e.g., P has the capacity to state what is the case. But Swann says that Ammerman's claim is false if we consider a specific know-statement such as 'P knows that a is b.' If we dispositionally analyse this statement as "P has the capacity to state a is b]" this is not a valid analysis. It is only by the inclusion of "correctly" that we are able to convey that a is in fact b.

The second argument of Ammerman, Swann shows, is misleading. The former argues that according to the latter's analysis, the capacity to state correctly what is the case is identical with knowing it. But there is an important difference between, for instance, the person who knows Hitler's present status (i.e., whether he is still alive or is dead) and the person who is able merely to guess and fortuitously happens to be right. Swann replies that just because a person is entitled to make a guess on a particular issue, for example, in the case of mountains being or not being on the other side of the moon, it does not mean that he genuinely possesses the capacity to state correctly one way or the other, even though it must be the case that there are, or are not,
mountains there. The same applies to Hitler's status. One's utterance that "Hitler is dead/alive" may be fortuitously true, but one can claim to know or to the capacity to state correctly that Hitler is actually dead or actually/only if he has relevant and sufficient evidence in favour of this context. But Swann states that this does not mean as Ammerman claims in his third interpretation of Swann's use of "correctly", that he has got to bring in further know-propositions to cover the evidence and thus, in the process of reducing these to dispositional statements, end up in circularity. In order to make a valid know-claim, one must have evidence which consists in having looked or listened or read something authoritative. It is a fact that know-claims are usually based on occurrences, such as looking, hearing and so forth. The verbs like 'looking', 'hearing', etc. are episodic: they report occurrences. But 'knowing that' statements, though based on statements reporting occurrences, have a different logic from them. They do not report occurrences but imply capacities. Thus Swann justifies his position against Ammerman that his reduction of 'knowing that' to 'knowing how' does not obliterate the distinction between knowing and right guessing or true belief.

Swann is right in bringing out the implication of Ryle's analysis. But he, too, is biased on 'knowing how' and ignores 'knowing that'.
Jane Roland criticizes Swann's theory that 'knowing that' can be reduced to 'knowing how'. He says that the distinction between 'knowing how' and 'knowing that' is really a distinction between "knowing how to perform skills" and "knowing propositions of a factual nature". He thinks that when Swann discusses the question of the reducibility of "knowing that" to "knowing how", he too is viewing these two types of knowing in this way. According to Roland, although Swann's reduction of 'knowing that' to 'knowing how' is legitimate for those 'knowing that' sentences which are cases of knowing factual propositions, there is still a basic distinction between these sentences and the kinds of 'knowing how' sentences which are cases of 'knowing how' to perform an operation. He says that the basis for this distinction is 'practice'. He names these two types of knowing type 'A' and type 'B' and adds a third type 'C' as subsumed under 'knowing how'. This type contains sentences which refer to knowing moral judgements or rules of conduct. Linguistically, sentences which refer to knowing the rules of conduct are 'knowing that' sentences, for we say "Johnny knows that he should be quiet when some one else is talking. But there seems to be a difference between these 'knowing that' sentences and 'knowing that' sentences which refer to knowing factual propositions because on the former case the evidence of Johnny's knowledge that he should be quiet must be presented at the level of action or conduct. Roland says that since this type
of distinction is not a capacity but a tendency, it cannot be subsumed under knowing-how category. For that category as set up by Ryle and expanded by Swann, and sub-divided here contains only capacities and not tendencies. So another category of knowledge which contains tendencies is necessary. But Roland leaves it an open question as to what the name of this category should be. For although 'Johnny knows that he should be quiet' is a 'knowing that' statement of tendency on the surface, it might turn out that it can be reduced to a 'knowing how' statement of tendency.

In a later article Roland extends the former view. From the former analysis, it seems to him that the learning of moral judgements and rules of conduct cannot be considered merely to be verbal learning. Thus a verbal test, no matter how ingeniously devised, will only warrant our saying that 'Johnny knows that he should be quiet' in the narrow sense of 'knowing that he should' which falls under 'knowing how', type B. In terms of the broad sense of 'knowing how he should' which refers to conduct, a verbal test is insufficient. On the other hand, learning moral judgement and rules of conduct cannot be viewed in terms of practice in certain behaviour. Since knowledge in these cases consists in a tendency to behave and not simply a capacity, something more than practice is involved. A test of moral judgements and rules of conduct in the broad sense must differ then from a test of skills.
Roland's thesis is definitely an improvement on Swann's view. In the conclusion of the second article, he rightly states that there are various types of 'know' sentences. Which one shall be made central to any given course is a matter for decision in the particular case. This question cannot be decided by reducing one category of knowing into another. He hopes that upon further analysis it may turn out that the two categories proposed here must be altered. In his own words, "we have to recognise that 'know' dispositions are varied and that it is of practical as well as of theoretical importance to sort out different kinds of cases".

J. Watling suggests that 'knowing that' is a kind of 'knowing how', the difference lies in the task to be performed. To know that some fact is the case is to know to tell the truth about matters of a certain kind, given of course the further ability to express propositions in some language. Knowing that something is the case is not the same as knowing how to describe correctly, for an animal may know facts without being able to express them in language, but it is the ability to describe, correctly given the ability to describe at all. The ability is not logically dependent upon the way it is acquired or upon how it is
exhibited. The importance of this analysis is that it puts emphasis on the abilities and behaviour of people who believe propositions rather than some process for generating the truth of the propositions themselves. But knowing a thing is not always confined to the overt behaviour of persons and ability to perform some act.

A. C. Danto\textsuperscript{13} intends to show unlike most of the commentators of Ryle that the two forms of knowing are not mutually reducible. 'Knowing how', according to him, is an absolute property, since dispositions are absolute properties. He says,

"It may be that neither m Nor we will know certainly that m knows how to do something until he exhibits this knowledge, namely by doing the thing. Yet even if his behaviour remains our criterion (and his) "know how to do a is true". But it is by no means obvious that 'knows... that S' is in this respect an absolute property of m, true of him if it is true that 'm knows that S'. If it were, then in principle m could determine whether he knows that S merely through observing himself (including behaviour) as in the case of 'know how'. But it is not typically the case that we find out whether we know something merely by observing ourselves involved, but typically also there must be observation of the world. Danto holds that in general, knowledge involves a relation between us and the world, rather than any absolute trait of
ourselves alone. He demonstrates this fact by saying that when a man knows how to climb trees, he enters into various relations with the world when he exhibits this knowledge. But these relations are not so much relations between him and the world, which includes him, as a climber of trees, as part of itself, exactly as it contains trees as parts of itself. In attempting to assimilate 'Knowing that' to 'Knowing how', the former is connected with an absolute trait of whomever 'knows that S' is true. But by the same logic, the relation between knowers and the world will be collapsed by making knowers parts of the world, and by making such relations as they may enter into the other parts of the world, intra-worldly relations. Danto says: "This lies behind Ryle's theory, though he was only trying to deflate knowledge, not reconstruct it as a kind of skill. But Ryle was attacking a theory (i.e., the intellectualists' legend) which supposed a cognitively intraversable gap between ourselves and the world. Danto comments that if 'knowing that' is assimilated to 'knowing how', then, since 'knowing how' locates us in the world, the gap would have been eliminated. Then by making himself that we know-how to be a matter of observation of behaviour, even in our own case, the space between ourselves and others would equally be collapsed, and we all should thus be tumbled into the world of purely public objects". But Danto points out that there remains an unresolved residence of knowing-that even here.
For if knowledge of knowledge is always knowledge of "knowing how", how is our knowledge of knowledge to be analysed? Here the sort of gap which was obliterated by the reduction of knowing - how, opens up again. For there is a difference between the knowledge which is in and a knowledge which is of the world, and confusion of them should always be avoided. So Danto is opposed to the principle of assimilation.

Danto's view that "knowing how" and "knowing that" are not mutually reducible seems to be right. But it cannot be denied that there is an intimate relation between the different uses of the verb to 'know', mainly between the two chief kinds of knowing, e.g., 'knowing how' and 'knowing that'. Now Ryle is quite justified in pointing out the important distinctions between these two types of knowing. But this distinction is not maintained till the end. As H. J. Swann pointed out"........far from having established a non-parallalism between the concepts of knowing that and knowing how, Ryle seems to have implicitly demonstrated, by his own admirable analysis of 'know' in other parts of his book, that 'knowing that' when unpacked, always turns out to the a case of 'knowing how'. In the section on "intellect", 'knowing that' has been indicated fundamentally as a dispositional capacity required in all intellectual operations of the
human mind. If both are dispositions required respectively in different intelligent and intellectual activities, it is difficult to see in what particular way they are non-parallel to each other.

It is true that knowledge is not always knowledge that something is the case. Knowledge is also exhibited in intelligent activity which is itself an operation which people may do intelligently or stupidly. An action is intelligent not because it is always followed by some rule or formulae. People may habitually perform a great many things very well without noticing how they do them. In many cases they could not say how they did them if they tried. Ryle seems to be right in saying that the display of intelligence lies in the manner of performance, rather than in its being accompanied or preceded by any conscious recognition of the relevant facts. But from this it does not follow that knowing that some thing is the case consists only in the disposition to behave in certain ways. Against Ryle's thesis that understanding is a part of knowing how, it can be objected that understanding or the capacity to appreciate something does not always imply the ability to perform the same act in practice. A number of instances can be shown in favour of this argument. In the case of musical appreciation, we see that many persons can appreciate a piece of music to be good or bad without the least ability to perform the same act themselves. The same thing holds good in case of appreciation
of art. An art-critic need not necessarily be an artist and vice versa.

So understanding is a different thing from the capacity to perform a certain thing. There are many cases which prove that they are different not only in degrees but these two are also different types of competences.

However, there are different kinds of knowing, and Ryle has brought into light two important types of knowing e.g., 'knowing how' and 'knowing that'. But in his discussion he completely ignores the role of the propositional content of knowledge, i.e., 'knowing that'. He has not explained the various possible ambiguities in 'knowing how' sentences but used it in the most common sense. But other commentators, e.g., Swann, Roland, Woozly etc. have pointed out that the phrase 'know how' can be used in a number of senses. Again there are sentences containing phrases like 'knowing why', 'knowing what', 'knowing about' etc. statements containing moral judgements and rules of conduct also need a different category of knowing.

Of the two main kinds of knowing, we get much information about, 'knowing how' from Ryle's analysis but only a little about 'knowing that'. The propositional content of knowledge is expressed through knowing that and it creates a number of problems. The rest of the thesis will contain a detailed examination of the conditions of 'knowing that'.
Ryle makes this distinction in his book, The concept of Mind (1949) in a way to criticize the intellectualists' account of mind which, according to him is based on a fundamental mistake which he called a 'Category Mistake'. By 'Category' Ryle means a logical type. Body and mind are of different logical types or categories, for body is a substance while mind is not. The Cartesians made a Category Mistake by calling mind a substance.

2. 'Conditions of knowledge' by Israel Scheffler.


6. 'Knowing and not knowing' by A. D. Woollley, Proceedings of


11. "On the reduction of knowing that to knowing how" by Jane Roland, Published in Language and concepts of Education (Ed. by B. Othenel Smith & Robert H. Ennis).


13. Analytical philosophy of knowledge by A. C. Danto, Chapter - I.