[Paper presented to the Department of Philosophy, University of York, 6th November 1986. At the end is included an appendix which explicates the structure of the main argument of the paper.]

DO WE HAVE INTUITIVE KNOWLEDGE OF WHAT IS THE CASE IN ALL POSSIBLE WORLDS?

U.T. PLACE

I hope you will forgive me, if I begin this paper with a few remarks of an autobiographical nature. Forty years ago last month [October 1946] I returned to Oxford after war service to resume the study of philosophy for which I had acquired a taste during a brief one term's introductory course in 1943. A year later in October 1947 I became one of the first intake into the new honours school of Philosophy, Psychology and Physiology or PPP as it came to be called, needless to say, combining my Psychology with Philosophy rather than Physiology. These anniversaries together with the thirtieth anniversary of the publication of my best known article 'Is consciousness a brain process?' (1956) have led me to reflect on the changes that have taken place over the past thirty to forty years both in our conception of the nature of philosophy as a discipline and in the way philosophy is done.

The late 1940s, when I was an undergraduate, was, of course, the heyday of Oxford ordinary language philosophy. Ryle was giving the lectures that became The Concept of Mind. Austin was destroying phenomenalism in his Sense and Sensibilia lectures and Strawson was giving the lectures that became his Introduction to Logical Theory. Traditional metaphysics was dismissed as conceptual confusion based on a mistaken view of the meaning of the words and expressions of ordinary language. The job of the philosopher was simply to clear away this conceptual confusion wherever it was to be found. A sharp distinction was drawn between these conceptual issues which were the province of the philosopher and the empirical issues which were the province of the empirical sciences. Empirical issues were not the concern of the philosopher. Consequently to show that an issue was empirically decidable at least in principle was to remove it from the list of genuine philosophical issues. Indeed it was widely believed that there are no genuine philosophical issues at all, that all traditional problems will turn out to be conceptual confusions or conceptual confusions disguising a genuine empirical issue which it is the business of some empirical discipline, and hence not philosophy, to decide. Just as Kant in the Prolegomena envisaged that traditional German Fleissigkeit would ensure that all outstanding metaphysical problems would have been resolved within fifty years of the date when he was writing, so ordinary language philosophy was going to liquidate all remaining philosophical issues in less time and with much less effort on the part of its practitioners.

Once this had been done, the only enduring role for philosophy lay in the field of empirical lexicography and empirical linguistics, as envisaged by John Austin.

A perceptive sociologist could have predicted that what actually happened was bound to happen. Ordinary language philosophy was sowing the seeds of its own demise, and a rapid demise at that. Far too much was invested in philosophy in the form of institutional provision, jobs and public expectation for a system which envisaged the effective liquidation of philosophy within twenty years at the most to survive as the dominant ethos within the discipline. Sure enough within twenty years, by the mid-nineteen sixties, ordinary language philosophy was effectively a dead duck. What has replaced it? In this country it has been replaced to some extent by what I think of as the Wittgenstein industry, the endless search through the Wittgenstein Nachlass as volume after volume appears from Blackwell's for some previously unrecognised philosophical insight that these works can yield. Amongst the Wittgensteinians the notion that philosophical issues are at bottom conceptual confusions lives on, but the idea that all the confusions will be resolved within the lifetime of anyone now living, if indeed ever, is no longer subscribed to.

In the United States, where Wittgensteinians are rare to a considerable extent amongst the younger generation of philosophers in this country also, philosophy is dominated by two major figures, Donald Davidson and Saul Kripke. Looked at from this point of view the significance of these two men and the secret of their influence in contemporary philosophy is that they have both in their different ways helped to keep philosophers in business, Davidson by preventing the traditional problem of the mind-body relation from falling into the hands of the empirical neuroscientists, and Kripke by generating a whole new domain of philosophical expertise, the determination of what is and is not true in all possible worlds.

I discussed Davidson's contribution in the seminar paper which I gave in May last year under the title Thirty years on – Is consciousness still a brain process? I pointed out that in my 1956 paper Is consciousness a brain process? I was arguing for the view that to hold the thesis according to which consciousness is indeed a process in the brain is an empirical scientific hypothesis which will ultimately stand or fall in the light of empirical evidence of psycho-physical correlation. In other words, the original "type" identity version of the mind-brain identity thesis lay firmly within the positivist tradition of ordinary language philosophy of the period in which it was conceived. The mind-body problem was in part a matter of conceptual confusion and in part empirically decidable in the neurosciences. Clear away the conceptual confusion and the empirical issue will emerge to be decided by specialists in the relevant empirical science. Despite the fact that both of us are arguing in favour of a form of materialism Davidson's position could not be more different from mine. For him the materialist thesis, the token identity of every mental state with some brain state, is not an empirical scientific hypothesis, it is the conclusion of what purports to be an a priori proof. Moreover a further consequence of the same premises is the well-known Davidsonian principle

which holds that there are no psycho-physical bridge laws, and from this it follows that no evidence of psycho-physical correlation can have any bearing one way or the other on the issue of the identity or supervenience of the mental on the physical. Thus the philosopher is able to embrace materialism and thereby stake his or her claim to make a constructive contribution to neuroscience without conceding anything of the philosopher's traditional claim to be the final arbiter as far as the mind/body relation is concerned and without having to dirty his or her hands in the muddy waters of empirical research.

Davidson, of course, is not alone in adopting this stance. Indeed, others such as Putnam, Searle, Dennett and Fodor have done far more to bring the philosopher's claim to arbitrate in matters of this kind to the attention of specialists in the other disciplines in this area. Nevertheless it is Davidson whose arguments have been most persuasive in moving the philosophers themselves in this direction. Similarly Kripke is far from being alone in opening Possible Worlds as a new field of philosophical enquiry and discovery. Putnam is again a name that springs to mind in this connection along with David Lewis and the late Richard Montague. But again I would take Kripke as the central figure partly because it seems to me that it is the case he puts forward in 'Naming and Necessity' which has been most persuasive as far as the generality of philosophers is concerned, but partly also because it is in Kripke's work that the dependence of the philosopher on his metaphysical intuition in order to determine what is true in all possible worlds is most clearly stated. To the cynic like myself the most striking thing about the Possible Worlds industry that has sprung up in recent years is the way in which it gives the philosopher, deprived by his refusal to engage in any form of empirical inquiry of the ability to make discoveries about what is true in the actual world, the chance to make discoveries about what is true in worlds that are merely possible. Unable to say anything about what actually is or will be the case, the philosopher becomes an expert on what might have been.

But in making these discoveries it is evident that a priori deductive reasoning alone is not going to be sufficient for the obvious reason that a priori reasoning yields nothing not already implicit in its premises. While it may show that the premises are inconsistent and therefore cannot all be true, a priori reasoning alone can never establish the truth of the premises from which the conclusion is deduced.

Agreement between the conclusions of an a priori argument with observation of what is the case in the actual world can hardly be used as evidence of [the] truth of its premises if both premise and conclusion concern what is true in all possible worlds. It is therefore not surprising to find that those philosophers who purport to tell us what is true in all possible worlds are compelled to lay claim to a faculty of metaphysical intuition in order to guarantee the self-evident truth of the premises from which they argue, premises like the intuition that Kripke attributes to Descartes, but which others attribute to Kripke, which holds that whereas the proposition heat is molecular motion is true in all possible

worlds, the proposition pain is C-fiber firing is not.

Having finally, after this rather lengthy preamble, got around to the topic of my paper, which is to examine the claim that we have this kind of intuitive knowledge, I would like to begin by telling you how the idea of discussing this topic was originally conceived. As you may know, in September last I attended a course on Meaning and Natural Kinds at Inter-university Graduate Centre at Dubrovnik in Yugoslavia. I was listening to one of the opening lectures of the course given with his usual clarity by David Charles of Oriel College, Oxford who has been the principal organiser of this series of courses. David was giving an exposition of contemporary essentialism in the tradition of Kripke and Putnam, before going on to compare it with Aristotelian essentialism. I was struck in listening to his exposition of contemporary essentialism by the constant appeal to intuition to justify the claim that this or that proposition is or is not a necessary truth and I passed a note to Kathy Wilkes, who[m] I was sitting next to, in which I asked the question, "Has anyone discussed the psychology/epistemology of intuitive knowledge in such a way as to justify the claim that we have or can have intuitive knowledge of what is true in all possible worlds?" Kathy's scribbled reply reads, "Not that I know of; and I'd expect it to be a fruitless enterprise anyway." That set me wondering whether Kathy was right. Is it true that we have no account of intuitive knowledge which would justify the belief that we have such knowledge in the case of what is true in all possible worlds? And given that we haven't, is it also true that any attempt to provide such an account would be fruitless? I have no reason to doubt that no published account of intuitive knowledge exists at present which justifies the belief that we have intuitive knowledge of what is true in all possible worlds. What we do have, however, is a theory of intuitive knowledge and although, at first sight, that theory does not appear to make much room for intuitive knowledge of what is the case in any world other than the actual world, on further reflection it turns out that a case can be made out for the view that such knowledge exists and can sometimes in some cases at least be relied upon.

The theory of intuition to which I refer comes from what to many of you may seem an unlikely source, the writings of the grand old man of American Behaviorism B.F. Skinner. Skinner's discussion of intuitive knowledge comes from a paper entitled 'An operant analysis of problem-solving' which originated as a separate paper in 1966, was published as Chapter 6 of Skinner's 1969 book Contingencies of Reinforcement and republished with open peer commentary in a collection of his so-called Canonical Papers in the Behavioral and Brain Sciences in 1984. The central theme of the paper is the distinction which Skinner draws between two kinds of behaviour which he calls contingency-shaped behavior and rule-governed behavior respectively. These two kinds of behaviour can be best understood as two different strategies employed by living organisms in adapting their behaviour to the contingencies prevailing in their environment. A contingency, as that term is used by Skinner, is a relation which may be a relation of causal dependence or of causal independence

which holds under certain antecedent conditions between some behaviour on the one hand and the consequences of so behaving on the other. All behaviour on this view is a matter of adapting to the prevailing contingencies. In other words it is a matter of selecting the behaviour which, under the prevailing conditions, will have desirable consequences and of suppressing any behaviour which, under those conditions, will have undesirable consequences. Contingency-shaped behaviour is behaviour which proceeds from a behavioural disposition or propensity which has been shaped by repeated exposure to the consequences of behaving in that particular way under those particular antecedent conditions in the past history either, in the case of learned behaviour, of that particular individual or, in the case of innate unlearned behaviour, of the species to which the individual in question belongs. This kind of unlearned behaviour that is characteristic of the species as a whole is said by Skinner to have been shaped by "the contingencies of survival". In other words, these behavioural propensities have been shaped by their success in securing the survival of the individual and the reproduction of the species in the particular ecological niche which is occupied by that species. In contingency-shaped learned behaviour the same process of natural selection takes place within the lifetime of the individual organism. Behavioural propensities whose consequences accord with the desires of the behaving organism are strengthened or reinforced. Behavioural propensities whose consequences are undesirable are weakened or disinforced and ultimately eliminated from the organism's behavioural repertoire.

A living organism whose behaviour is contingency-shaped in either or both of these senses can sometimes make a novel and creative response in a situation it has never previously encountered and to which its behavioural propensities have not been specifically shaped by the past history of the species to which it belongs; but it can only do so by noting some feature or features which the present situation has in common with one or more situations for which it already possesses an appropriate strategy by virtue of the way its behavioural propensities have been shaped either by its own past experience or that of the species to which it belongs.

Rule-governed behaviour, by contrast, escapes from the restriction to behavioural propensities shaped by the past experience of the individual and the species by virtue of being governed or controlled by a verbal formula or sentence uttered by the agent as a self-directed thought which is said to "specify" the contingency with which he or she is confronted and to which he or she is able to adapt his or her behaviour without having an innate capacity to deal with situations of that kind and without having to have had any previous experience of dealing with contingencies of that kind.

Needless to say, since only human beings have the ability to construct sentences of this kind and use them to control their own behaviour in this way, it follows that only linguistically competent beings are capable of rule-governed behaviour in Skinner's sense.

Now the same is true of the kind of behaviour that Wittgenstein talks

about as rule-following behaviour. Nevertheless it cannot be too strongly emphasised that Wittgenstein's rule-following behaviour and Skinner's rule-governed behaviour are quite different kinds of behaviour. The only thing they have in common is that in both cases the rules that govern or are followed are in some sense linguistic entities and some kind of linguistic competence is consequently involved in following or being governed by them. In other respects there is hardly any overlap between the two concepts. As we have seen, a rule for Skinner is a verbal formula or sentence uttered as a self-directed thought immediately prior to the emission of the behaviour which it thereby initiates and controls. The kind of example he has in mind would be an instruction like When you get to the T-junction, turn left which specifies an antecedent condition and the behaviour to be performed when that condition is encountered or a verbally formulated means-ends belief, like If I turn left here, it will bring me out onto the main road by the Coach and Horses which specifies the behaviour whose performance is up for consideration and the consequences of so doing. The relationship between the self-directed utterance of a rule in this sense and the behaviour which is said to govern it is strictly and directly causal. It should be noted, however, that in these examples the behaviour that is governed by the rule is only rule-governed under one of its descriptions, as the behaviour of turning left rather than right at a particular road junction. When described in terms of its component parts, braking, changing gear, turning the steering wheel, the behaviour, in common with all habitual and well practised skilled performance, is contingency-shaped.

For Wittgenstein a rule is not primarily a verbal formula or sentence. Some rules in his sense are written down as verbal formulae, but you do not have to rehearse the verbal formula prior to following the rule. Indeed there are many rules in Wittgenstein's sense such as linguistic rules which speakers follow without ever having been confronted by their verbal specification which, in the case of some semantic rules, never has been and never could be formulated. Moreover the relation between the rule and behaviour must conform if it is to be accepted as constituting a particular socially defined action or activity, using "defined" here in its sociological sense. The paradigm of rules and rule-following in Wittgenstein's sense are the rules of a game. The rules of most games are written down somewhere, but an experienced player of the game doesn't have to rehearse the rules in order to conform to them. In Skinner's terms the behaviour of the experienced player in following the rules of the game is behaviour shaped by the social consequences of deviating from them in the remote past. Such rule-following only becomes rule-governed in Skinner's sense under two circumstances: (1) in the initial stages where a novice is beginning to learn the rules of a game he or she has never played before and finds it helpful to rehearse the relevant rule in order to achieve conformity to it, and (2) where an umpire or referee rehearses the relevant rule in the course of arriving at a decision or ruling on how the game shall proceed. In all other cases rule-following behaviour is entirely automatic and hence, in Skinner's terms, contingency-shaped.

This is true even in highly intellectual games like bridge and chess which involve a great deal of what Skinner would call rule-governed behaviour, but the "rules" which the players rehearse and which govern the moves that they make or the cards they play are not the rules of the game. Those are taken for granted as part of the contingency-shaped framework within which the game is played. What are rehearsed are rules in the sense of the player's means-end beliefs about the consequences of making one move or playing one card rather than another.

Having, I hope, clarified Skinner's distinction between rule-governed and contingency-shaped behaviour, we are now in a position to introduce his theory of intuition, and here, I think, the best thing will be to allow Skinner to speak for himself. Having drawn the distinction between contingency-shaped and rule-governed behaviour, he continues as follows (Skinner 1969, pp.151-2):

> The classical distinction between rational and irrational or intuitive behavior is of the same sort. The 'reasons' which govern the behaviour of the rational man describe relations between the occasions on which he behaves, his behaviour, and its consequences. In general we admire the intuitive man, with his contingency-shaped behavior, rather than the mere follower of rules. For example, we admire the man who is 'naturally' good rather than the merely law-abiding, the intuitive mathematician rather than the mere calculator. Plato discusses the difference in the Charmides, but he confuses matters by supposing that what we admire is speed. It is true that contingency-shaped behavior is instantly available, whereas it takes time to consult rules and examine reasons; but irrational behavior is more likely to be wrong and therefore we have reason to admire the deliberate and rational man.
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> We ask the intuitive mathematician to behave like one who calculates - to construct proof which will guide others to the same conclusion even though the intuitive mathematician himself did not need it. We insist, with Freud, that the reasons men give in explaining their actions should be accurate accounts of the contingencies of reinforcement which were responsible for their behavior.

What I take Skinner to be saying here is that judgments are two kinds: (1) rational judgments which are generated by an explicit process of calculation, computation and/or inference and which are in his terms rule-governed and (2) intuitive judgments which are based on the shaping of the individual's judgmental dispositions by long experience of success and failure in making this kind of judgment in the past.

Now if I am right in thinking that this is the only rational account of intuition we possess, what can we say in the light of it about the possibility and actuality of our possessing intuitive knowledge of what is the case in all possible worlds?

One thing, I would have thought, is blindingly obvious and that is that no one has had or could possibly have had past experience of what is the case in any world other than the actual world. It follows that if what is required in order for us to have intuitive knowledge of what is the case in all possible worlds is that our judgmental behaviour should have

been shaped by our past experience of what is the case in such worlds, there is no way in which we could conceivably acquire such knowledge.

At first sight this would seem to be a knock down argument, given Skinner's theory of intuition, against the possibility of our having intuitive knowledge of metaphysical modality in the relevant sense. However, on further reflection, it appears that the experience of success and failure in making judgments of particular kinds need not require an actual encounter with the situation about which the judgment is made in order for its success or failure to be registered and thus affect the individual's subsequent judgmental dispositions. Moreover, although they would not ordinarily be expected to have experience of success and failure in making judgments about what is the case in all possible worlds, all competent speakers of a natural language do have a very great deal of experience of success and failure in using the words of that language to make judgments about events and states which they have never personally encountered including events and states of affairs which are counterfactual in the sense that they constitute what would or might have happened if things had been different from the way they actually were. The individual registers his own successes and failures in making such judgments partly by noting the agreements and disagreements between his own judgments and those made by others, especially those who have experienced the relevant situations or ones like them at first hand, and partly by noting which judgments or which predictions derived from those judgments are confirmed or falsified by the way things turn out in practice.

It follows from this that all competent speakers of a natural language do experience success and failure in making judgments about what is the case in situations which they have not and, in the case of counterfactuals, could not have experienced; and on Skinner's theory of intuition that means that the necessary preconditions for making intuitive judgments about what is the case in such situations are met. Moreover, since any judgment about what would have happened, if things had been different from what they actually are or were, is a judgment about what is the case in some possible world, it also follows that many such judgments are judgments about what is the case in some possible world. But to say that we have a disposition to form intuitive judgments about what is the case in some possible world is one thing, to say that we have intuitive knowledge of what is the case in such a world is another. The fact that we experience success and failure in making our counterfactual judgments is no guarantee that the propositions which we are congratulated for producing are true or that those we are criticised for producing are false. Moreover even if we could produce good reasons for thinking that our intuitive judgments with respect to the truth of counterfactuals can be relied upon, it is still a long step from the claim that we have intuitive knowledge of what is the case in some possible worlds to the claim that we have intuitive knowledge of what is the case in all possible worlds.

Nevertheless there is, I believe, a way in which the claim that at least some of our intuitive judgments about what is the case in all

possible worlds can be justified. It comes from the observation that just as the skilled performances involved in turning left, like braking, changing gear and turning the wheel, are contingency-shaped even when the decision to turn left is rule-governed, so the skilled performance involved in constructing and uttering an intelligible sentence is likewise contingency-shaped even in those rare cases where the gist of what one is going to say is rule-governed in that the strategy of saying something along those lines has been worked out in advance on the basis of a prediction of the probable consequence of the different things one might say on such an occasion. But if all linguistic utterances are contingency-shaped at the level of sentence-construction, it follows, on Skinner's account of intuition, that the only way we have of coming to know about the conventions or "rules" in Wittgenstein's and Chomsky's sense of that word to which the sentences of a speaker must conform if they are to be understood by a competent listener is by attending to the linguistic intuitions of a native speaker of the natural language in question which in the absence of any alternative authority - dictionaries after all are parasitic on the linguistic practices and intuitions of native speakers - we have no option but to accept as a true and correct record of the principles involved in the process whereby sentences are constructed and of the meaning of the lexical words used in them.

In elucidating these linguistic conventions or rules in the Wittgenstein/Chomsky sense, the key intuitions are those like the intuition which Kripke attributes to Descartes which tell us what can and cannot be predicted of something to which another predicate has already been applied without self-contradiction; and it is these intuitions as to what is and what is not self-contradictory to deny which have been traditionally used to determine what is the modality of the truth or falsity of a proposition, in other words whether a proposition, if true, is necessarily or merely contingently true. If the proposition is necessarily true its denial is self-contradictory; if its truth is contingent, its denial is not self-contradictory.

In many cases, however, propositions are only contingently necessary in the sense that it is only self-contradictory to deny them given the conventions or rules in the Wittgenstein sense governing the words contained in them. Thus to claim that a particular bachelor is married is only self-contradictory given the conventions that a bachelor is an unmarried male of marriageable age. If the conventions governing the word "bachelor" were to change in such a way that any man between the ages of say 18 and 25 qualifies as a bachelor regardless of marital status, it would no longer be self-contradictory to speak of a married bachelor. There are however necessarily true propositions which are not just contingently necessary in the sense that it is only a matter of contingent fact that the existing conventions make it self-contradictory to deny them, but which are necessarily necessary in that there is something absurd or self-contradictory about the supposition that the conventions for the use of the word or expression might change in such a way that what is now self-contradictory ceases to be so.

It is these necessarily true propositions which are of special interest to modal logicians because the principle that if p is necessary, p is necessarily necessary is one of the universally accepted axioms of all modal logics. It is for this reason modal logicians are inclined to think that the only necessary truths are those which are necessarily necessary and to dismiss the merely contingently necessary as of little consequence. In fact, I would suggest, most necessary truths are only contingently necessary, necessary by virtue of linguistic conventions which might easily have been other than they are, which have been subject to change over time as a matter of historical fact and which frequently vary from one natural language to another. Nevertheless there are some necessary truths that are necessarily necessary in the sense that no alternative convention is conceivable. The most obvious examples are in the case of logical and mathematical truths. We can be quite sure, for example, that no coherent logical system can be constructed anywhere at any time which does not include the law of non-contradiction among its axioms. It wouldn't be a system of logic if it didn't. Similarly, despite the possibility of different notations and different bases, we can be quite sure that no coherent system of arithmetic could exist anywhere at any time which did not have 2+2=4 as a necessary truth within it.

But while no one would seriously dispute the thesis that these logical and mathematical truths are necessarily necessary, are there reasons for thinking that there are also metaphysical truths which are likewise necessarily necessary to which we have access through the so-called faculty of intuition?

I am inclined to think that a case can perhaps be made out for thinking that there are. Unfortunately I have already taken up too much of your time, so I can only briefly sketch the case which I think it might be possible to make. It rests on the notion which comes, I suppose, from Strawson that metaphysics is the science which examines the fundamental assumptions about how the world is which are built into the system for representing events and states of affairs which is employed by all known natural languages and whose abandonment would reduce those languages or a substantial part of them to incoherence.

One example of such a metaphysical assumption which is undoubtedly a feature of all human natural languages and without which natural language would be unable to function as a method of communication is the common environment across which speakers use their language to communicate with one another is liberally populated by vast numbers of discrete and relatively stable entities or “substances” (to use Aristotles’s term in its Mediaeval Latin form) which can be identified and re-identified by virtue of their unique career of space-occupation over time. Without that assumption the method that is used by all natural languages for referring to the more ephemeral states of affairs and events depicted in sentences would collapse. This is the method whereby events and states are readily re-identifiable substances in their occurrence or existence.

It follows that to deny or otherwise undermine that assumption is

not just to contravene a linguistic convention that could easily have been other than it is. It is to undermine the system of reference on which all linguistic communication depends. Such assumptions are not just contingently necessary; they are necessarily necessary. There is no possible world which our language allows us to envisage in which they are not true.

By the same token, an intuition which reflects and leads us to formulate a necessarily necessary truth of this metaphysical kind – such as Kripke's intuition that there is no possible world in which he was and is Henry Kissinger – can be accepted as bona fide case of an intuition of metaphysical modality, of what is the case in all or, as in this case, no possible world. However, from the fact that there are some genuine intuitions of metaphysical modality it does not follow that all claims to possess such knowledge can be accepted without question, however distinguished the philosopher who makes them. For there are cases where different and equally distinguished philosophers claim to have different and conflicting intuitions; and they can't all be right. In my view, claims to possess this kind of intuitive knowledge can be accepted only in so far as (a) there is unanimity amongst claimants as to the proposition for which intuitive knowledge is claimed, and (b) there are grounds for thinking that the supposition whose radical incoherence is claimed as an object of intuitive apprehension is one whose denial would undermine the very system whereby the world is represented in language. In other words, although I accept that we can have intuitive knowledge of what is the case in all possible world based on our linguistic intuitions as native and thus contingency-shaped speakers of a particular natural language, such claims are subject to acceptance or rejection in the light of the existence or non-existence both of conflicting claims made by others and of arguments which make it reasonable to suppose that some fundamental metaphysical principle is involved in the claim and that the principle is question is true.

My conclusion, therefore, is this. Although the case for accepting a particular claim to such knowledge as genuine has to be made on grounds other than the process by which such intuitions are acquired (examining one's linguistic intuitions while envisaging some hypothetical situation), the contention that we do sometimes have genuine intuitive knowledge of what is metaphysically necessarily necessary and, hence, true in all possible worlds is consistent with the only rational account of intuitive knowledge we possess, namely, that offered by Skinner in Chapter 6 of Contingencies of Reinforcement.

Appendix

CAN THERE BE INTUITIVE KNOWLEDGE OF METAPHYSICAL MODALITY?

1. The only rational account of intuitive knowledge we possess is that given by B.F. Skinner in his 'Operant analysis of problem solving' (Skinner 1969, Chapter 6).

2. According to Skinner, an intuitive judgment is one that has been shaped by repeated exposure to success and failure in the past experience of the individual who makes judgments of the kind in question in contrast to judgments based on verbal calculation or on explicit inferences derived from verbal information supplied by others from a combination of such information with verbally formulated observation sentences based on the thinker's past experience.

3. No one has or can have had past experience of what is the case in any possible world.

ERGO

4. No one has or can have had past experience of success and failure in making judgments about what is the case in all possible worlds which is based on experience of what is the case in one or more such world.

ERGO

5. According to the only rational account of intuitive knowledge we possess, no one can have intuitive knowledge of what is the case in any possible world.

YET

6. All competent speakers of a natural language have experience of success and failure in the correct application of the lexical words belonging to that language both in identifying instances to which they apply and in formulating true statements about events and states of affairs that they have never personally encountered including counterfactual events and states of affairs, success and failure being partly a matter of agreement or disagreement with the judgments of others (Wittgenstein) and partly a matter of agreement or disagreement with the speaker's own subsequent observations.

ERGO

7. According to the only rational account of intuitive knowledge we possess, all competent speakers of a natural language can acquire intuitive knowledge of how the lexical terms of that language are correctly applied to the description of events and states of affairs that the speaker in question has never personally encountered.

ERGO

8. It is consistent with the only rational account of intuitive knowledge that we possess, that there should exist competent speakers of a natural language who possess intuitive knowledge of what it would and would not be correct to say given the supposition that a given possible world exists.

HOWEVER

9. What it is correct to say, given the supposition that a given event or state of affairs exists, depends on the linguistic conventions which are maintained by and within the verbal community constituted by the competent speakers of the natural language in question whose reaction to what a speaker says determines the success or failure of that particular utterance.

ERGO

10. According to the only rational account of intuitive knowledge we possess, the only form of intuitive knowledge a speaker can have of what it is or is not correct to say, given the supposition that a given possible world exists, depends on and is relative to the linguistic conventions which are maintained by and within the verbal community constituted by the competent speakers of the natural language spoken by the speaker in question.

MOREOVER

11. It is true of most of the linguistic conventions maintained by and within a particular verbal community that while it is self-contradictory, given those conventions, to suppose that they might be other than they are, the supposition that a particular convention might be other than it is, is not self-contradictory, provided that the other conventions remain as they are or are modified in such a way as to accommodate this change in the

convention in question.

AND

12. If a supposition is self-contradictory its negation will be called a "de dicto necessary truth". If a supposition is not self-contradictory, the truth or falsity of both it and its negation will be described as "de dicto contingent" or as "a matter of de dicto contingent fact".[1]

ERGO

13. There are some propositions which are not only contingently necessary in the sense that their de dicto necessity depends on a matter of contingent fact about the linguistic conventions which prevail within a given verbal community.

NOW

14. It is true of some of the linguistic conventions maintained by and within a particular verbal community that to suppose the conventions to be other than they are leads inevitably to a contradiction, given that the other conventions remain as they are.

ERGO

15. There are some propositions which are necessarily necessary in the sense that their de dicto necessity rests on a convention which cannot be abandoned without reducing the whole system of linguistic conventions or a substantial part of it to incoherence.

MOREOVER

16. There are several varieties of necessarily necessary truth in this de dicto sense, logical truths which either are or derive from logical axioms without which any system of logic would either be incoherent or cease to be a recognisable logical system, mathematical truths which either are or derive from mathematical

[1] I have here fallen in with Kripke's usage despite the fact that it appears to me a perversion of the traditional distinction which I take to be the same as that between using a term or expression and mentioning it. On this usage all first order necessities are de re, all second order necessities are de dicto.

axioms without which any system of counting and numerical calculation or some particular system of calculation or mensuration would be rendered either incoherent or no longer a recognisable way of performing the operations in question, scientifically necessary truths whose abandonment would render incoherent a significant body of established scientific theory and finally metaphysical necessary truths which I take either to be or to follow from the fundamental assumptions about how the world is which are built into the system for representing events and states of affairs which is employed by all known natural languages and whose abandonment would reduce those languages or a substantial part of them to incoherence.

ERGO

17. It is consistent with the only rational account of intuitive knowledge we possess that the intuitive knowledge of what it would be correct to say, given the supposition that a given possible world exists, consists of necessarily necessary truths of this metaphysical kind.