Chapter 4

Foundational Semantics

The goal of this chapter is to examine some key notions of theories of reference of proper names, mainly the notion of proposition, from the perspective of foundational semantics. As we said earlier, in section 1.4, the task of foundational semantics is to look at what it is about speakers’ behaviour that endows different kinds of expressions with the semantic value they have, or rather, the semantic values the descriptive semantics predicts they should have. An important part of the foundational undertaking is to look at how the speaker communicates her intentional states (e.g., beliefs) in her utterances so that these have the desired effect on the speaker. This is why we shall focus on what the frameworks we have been investigating, that is Kripke’s, Stalnaker’s and Lewis’s framework, have to say about the content of utterances. The relation between what one can assume that the speaker intends to communicate and what a theory predicts she actually manages to get across is one of the main points we shall address.

As we had already indicated, any account of modal and descriptive semantics of a particular kind of expression can be successful only if it makes plausible predictions about the prerequisites the speaker has to meet in order to use that kind of expression successfully. By focusing on the notion of proposition, we shall, in a natural way, extend our investigation of descriptive and modal semantics of proper names. This is because, as we shall see, the lessons of pre-
ceding chapters have rather immediate consequences for an account of propositional content. An account of content, while being a part of foundational semantics, is especially closely connected to the account a theory puts forward to deal with modal statements. This we shall see at many points in this chapter.

Our investigation is going to be epistemological – we shall focus at the epistemological consequences that setting up a possible-world framework in a particular way has with respect to the notion of proposition. Where we encounter particularly important problems, we shall investigate various suggestions that were put forward to amend the situation. This will especially be true of the Pierre puzzle. As before, we shall proceed author by author. This will allow us to fully appreciate the internal coherence of various approaches to semantics of proper names, and see which of the approaches seems best suited to be a basis of our own proposal.

4.1 Believing in Propositions

Some of the theories we have been analysing so far – as well as many we have not mentioned – take the notion of proposition to be central to describing the content of utterances. However, the particular notion of proposition we have been working with seems to have some features that might make it difficult for actual natural language users to use propositions in the way they are supposed to, that is, to express their intentions, beliefs, and desires. We shall now look at those problems, and see to what extent the frameworks we have described in the preceding chapter suffer from some counterintuitive consequences of their notion of proposition.

So far, we have assumed a notion of proposition according to which a proposition is defined as a function from possible worlds into truth-values. This is basically the approach that has been pioneered by Kripke. To fully understand this definition and its implications, one should look at the concepts on which it is based. Firstly, one should take into consideration the kind of possible-world framework this notion is applied to. We have examined in detail Lewis’s,
Kripke’s and Stalnaker’s possible-world frameworks in the chapter on modal semantics. The results of that chapter shall be of use to us now.

Secondly, one should appreciate the extent to which the notion of a truth-value that is used in defining a proposition is, or is not, important. Basically, the most noteworthy thing about truth-values here is that there are only two of them – true and false. We could reformulate the definition of proposition leaving out all reference to the notion of truth. We would then view a proposition as a subset of some domain of possible worlds. The role of truth-values is simply to distinguish those possible worlds that are a part of the selected subset from those that are not. In other words, a proposition is fully defined, relative to a domain of possible worlds, by a subset consisting of those possible worlds for which it has the value true. Therefore, if two propositions are defined for the same arguments, and take the same value for each argument, they are identical. Propositions are fully extensional functions.

This has some far-reaching consequences. Propositions are often used to characterise the objects of intentional mental states, for example beliefs. But it follows from our definition of proposition that an agent who believes a particular proposition believes by the same token all propositions that are identical with, that is, necessarily equivalent to, the believed one. This is called the problem of logical omniscience. It is especially pressing when we turn to necessarily true propositions. A necessarily true proposition is true in every possible world under consideration. Therefore, all necessarily true propositions (in a given domain) are necessarily equivalent. Hence, there is really only one necessarily true proposition, the tautology. By believing in one necessarily true proposition, the speaker is predicted to believe all of them. That is a very counterintuitive result.

One area of inquiry where the problem of logical omniscience has vast consequences is mathematics. The way the notion of proposition functions, implies that if the statements of mathematics are necessary – as many philosophers would indeed claim – then the whole of mathematics consists of one true proposition, which can be expressed in many different ways. I will not deal with mathemat-
ics in this chapter or anywhere else. An analysis of the particular problems of mathematics within a particular semantic system is a chapter of its own, and it does not fall within the focus of the present enterprise.\footnote{The issues sketched here have generated an enormous amount of discussion whose records would fill libraries. I shall only focus on those features of the discussion that have a direct bearing on foundational semantics of proper names, that is, I shall be looking at the links between a descriptive account of proper names, the ways this influences the set-up of a possible-world framework, and the consequences this has for the notion of a proposition, with an emphasis of the foundational semantic issues.}

### 4.1.1 Do We Believe in Necessary Propositions?

The problem of logical omniscience is very simple and convincing. Basically, if propositions are indeed functions from possible worlds into truth-values, how can they be objects of intentional states or even just their adequate characterisations? What strategies can be adopted to deal with this problem?

One possible reaction would be to reject this coarse-grained notion of proposition – according to which propositions do not have an internal structure – and endorse instead one more finely grained. There are many philosophers who have taken this route, Hartry Field\footnote{See for example Field, 1977.} being currently perhaps the most prominent advocate of the fine-grained notion.\footnote{It is, of course, quite a bit of simplification to talk about the fine-grained notion of proposition. There are good many versions around. Our purpose here is, however, only to sketch the idea on which this alternative approach is based.} The basic idea of the fine-grained approach is that some problems can be avoided if we assume that a proposition has a structure that mirrors the structure of the sentence that is used to express it. A proposition is then seen as an ordered set of things, properties and relations. This approach has its advantages, breeds its own problems, and as to its practicality the jury is still out.\footnote{The literature dealing with fine-grained approach to content and structured propositions is very extensive. Among the important works are Fodor and LePore, 1992, Cresswell, 1985, King, 1996.} The motivation behind this notion of proposition is that by
enabling us to distinguish more finely what it is that agents believe, it should provide us with more plausible objects of intentional states. However, its main attraction is also the cause of its main problem: where the coarse-grained approach, such as the one where we individuate propositions by truth-values, sees too many equivalencies between propositions, the fine-grained approach may see too few. As a consequence, it may be difficult for the advocates of this notion to explain why different sentences can play the same role in agents’ reasoning.

However, so far we have only dealt with frameworks that use a coarse-grained notion of proposition, and we shall continue this trend. We shall now look at various defensive and evasive strategies that have been proposed to deal with the problem of logical omniscience, and with the problem of unwanted identities between propositions, within that approach. We shall look again at the possible-world frameworks we examined before, and see whether and to what extent they are actually vulnerable to the problems outlined above.

4.1.2 Why Put Up With Logical Omniscience?

In Stalnaker’s recent work, we find an attractive classification of approaches to the problem of logical omniscience. I shall briefly introduce it here because keeping it in mind will help us see what various authors are doing, and shed light on the basic strategies they use to deal with the problem of logical omniscience.

There are basically two ways, Stalnaker says, to reconcile the fact that people do not believe all logical consequences of their beliefs with a theory that predicts that they do.

On the one hand, one may interpret the notion of belief in one’s logic as being about belief in the ordinary sense of the word, but restrict the domain of its application to idealised believers. These believers would have unlimited memory capacity and infinite computational ability and speed. Ordinary people cannot think of ev-

5The presentation of this section follows Stalnaker, 1999c, 242-245.
everything – these idealised believers could.

On the other hand, one may leave the domain of application unrestricted, thus including ordinary agents such as you and I, but reinterpret the concept of belief to which one’s logic is intended to apply. One would then assume a difference between an ordinary belief and a belief in some technical sense. One could, for example, distinguish belief in the ordinary sense from *implicit belief*, where one’s implicit beliefs would include all deductive consequences of one’s beliefs. Crucially, one would not have to assume that these implicit beliefs are accessible to the agent to whom they are ascribed. Being logically omniscient with respect to such implicit beliefs would be easy – in fact, even the least reflective agent could not help being logically omniscient in this sense.

Both of these idealisations begin by conceding that agents cannot believe, in the ordinary sense of ‘believe’, all logical consequences of their beliefs. But why should one try to idealise the situation in the first place? Why not try to develop a logic that describes beliefs in the ordinary sense as held by ordinary agents? There are, basically, four different motivations for idealising belief in either of the ways sketched above.

Firstly, one may idealise in order to get at the underlying mechanisms. Complicated behaviour of a system may be explained by an interaction of various mechanisms that can best be understood by looking at how they work in isolation. A theory may focus on one component, and view the action of other components as external interfering factors. The assumption of logical omniscience is sometimes seen, at least implicitly, as an idealisation motivated in this way. Failures to believe all the consequences of one’s beliefs are seen as resulting from a kind of cognitive friction that impedes the natural process of drawing consequences. This, Stalnaker says, is an attractive picture, but we shall see that it rests on an implausible conception of what belief and knowledge are.⁶

A second reason for idealisation can be simplification. It may be that some features of a system that complicate its accurate de-
scription can be, for some purposes and in some contexts, neglected. It has been suggested that the assumption of logical omniscience in normal epistemic logics is of this kind. Robert Moore, for example, says that logics that imply logical omniscience

\[ \ldots \text{represent idealizations that are reasonable approximations to the truth for many purposes. While no rational agent's knowledge is closed under logical consequence, outside of mathematics there seem to be few cases where this significantly affects an agent's behavior.} \]^7

Yet this, Stalnaker claims, is an underestimate of the extent of the distortion. Any context where an agent reasons is a context that is distorted by the assumption of logical omniscience since reasoning (at least deductive reasoning) is an activity that deductively omniscient agents would have no use for. To such idealised agents, deliberation is unnecessary. In fact, any kind of processing or computational activity is unintelligible as an activity of a deductively omniscient agent. It is hard to see the adoption of deductive omniscience as a harmless simplification if the logic of knowledge that adopts it cannot say anything about such essential activities as reasoning and deliberation.

A third kind of justification for idealisation is normative: whatever the actual divergence of real agents from logical omniscience, is it not something that rational agents should strive to approximate? This suggestion seems, at least *prima facie*, plausible but a number of philosophers have suggested that rational agents may have reasons to avoid accepting all the consequences of their beliefs. For example Gilbert Harman says that ‘many trivial things are implied by one’s view which it would be worse than pointless to add to what one believes.’ He proposes a principle of reasoning he calls ‘clutter avoidance’: ‘One should not clutter one’s mind with trivialities.’^8

Stalnaker says that even if deductive knowledge were a normative ideal, that would not be a reason to build it into one’s theory of knowledge.

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^7Moore, 1988, 363.

^8Harman, 1986, 12.
The fourth reason for idealising is more pessimistic. Perhaps it is just that at the moment we cannot do any better than to idealise either the believer or his beliefs. Stalnaker concludes that this reason comes closest to the truth. We shall now look at various possible-world frameworks and see to what extent the problem of logical omniscience arises within them. We shall also look at how they try to deal with the problem.

4.1.3 Propositions and Worldbound Individuals

We shall start by looking at the way a strongly realist possible-world framework deals with the problem of logical omniscience. In doing so, we shall draw strongly on our previous study of Lewis’s work (subchapter 3.1). The following investigation is not intended to show what Lewis’s own approach to foundational semantics is. It is meant to show what the consequences of a strongly realist possible-world framework are with respect to foundational semantics. In the following section (section 4.1.4) we shall briefly outline Lewis’s actual position to foundational semantics. For the time being, let us just note that Lewis developed his possible-world framework to suit the analysis of counterfactual statements, not in order to capture the content of people’s intentional states. His own analysis of objects of belief does not rely on the notion of proposition under investigation here. We chose his framework in order to investigate what happens with the problem of logical omniscience in a strongly realist possible-world framework, and of that Lewis certainly is an advocate.

Two features play a prominent role in distinguishing a strongly realist possible-world framework from its less realist brethren. Firstly, there is the worldboundedness of individuals within it. Because a non-actual possible world exists in the same sense in which the actual world does, an individual, say Samuel, can only exist in one world. Surely, there are individuals in other possible worlds that resemble Samuel arbitrarily closely but they are, strictly speaking, distinct from him. This claim is at the core of the theory of counterparts.

The other important feature of a strongly realist approach to possible worlds is that it is, at least in its general form, profoundly
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non-essentialist. There are no properties, save formal ones, that an individual and his counterpart in another possible world have to share.\(^9\) We dealt with these claims in section 3.1.2. Let us now look at the consequences these two features of a strongly realist framework - the worldboundedness of individuals and absence of essential properties - have for the possible-world-based notion of proposition.

We shall look at three kinds of sentences, those expressing identity \((a = b)\), those expressing predication \((Pa)\) and those expressing general predication (e.g., ‘all \(a\)’s are \(b\)’s’). Sentences expressing identity between singular referring terms, such as ‘Hesperus is Phosphorus’ are – if we take those terms to be rigid designators – usually taken to express necessary propositions. If an identity statement is true, it expresses a necessarily true proposition. As we just noted, in a strongly realist framework, individuals are worldbound. This follows from tenet (b) of the theory of counterparts (see section 3.1.2): Nothing is in two worlds. Both Hesperus and Phosphorus therefore exist only in one world, in this case the actual one. The statement expresses a proposition that is true in every possible world where the referent occurring in it exists. Here, however, the referent exists always only in one world. As a consequence, the necessity connected with an identity statement is always limited to one world. This is somewhat strange but not really counterintuitive.

What is surprising, however, is that something very similar happens with predication in sentences such as ‘John is tall’. Here the individual, John, exists only in one world, in our case the actual world, and is described as having some property, e.g., ‘being tall’ in that world. However, if John is indeed tall in the actual world then per definition he is tall in every world in which he exists. Lo and behold, ‘being tall’ just turned out to be one of John’s essential properties. If fact, every property that can be truly predicated of an individual in a given world is essential for that individual. These examples also illustrate that the notion of rigid designation for sin-

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\(^9\)An individual is also a counterpart of itself but for the time being I am interested only in those counterparts that are not in the same world as the individual they are a counterpart of.
gular referring terms finds little use in a framework of worldbound individuals.

We can generalise now and say that in a strongly realist framework that has the features outlined at the beginning of this section, necessity collapses for all propositions expressing predication to and identity of individuals. That is, not only is it the case that all identity between individuals, if true, is necessarily true, but the same holds of all properties of individuals. Having a red tie on is essential just as much as being human is. This is a proximate consequence of having worldbound individuals. We have lost, with respect to individuals, the distinction between necessary and contingent properties. The ‘traditional’ problem with necessary statements is that it is predicted that in virtue of believing in one necessary statement of the form $P_\alpha$, one believes in all necessary statements of that form. In this particular case, because all statements involving individuals are necessary (in a particular way given by the world-boundedness of individuals) but only true in one world, the whole problem of logical omniscience becomes very hard to even comprehend.

Let us now turn our attention to general predication, to sentences like ‘All cows are mammals’. Cows may exist in various possible worlds and, depending on the way the counterpart relation is set up, even though they may be mammals in some, they may turn out to be automata or look just like eggs in others. While the strongly realist framework delivers masses of essential properties to individuals, it assigns none to classes or kinds of individuals. In fact, given the variety of shapes and forms the counterparts of some actual-world kind may assume, it is hard to see what holds members of a kind together across possible worlds save the fact that they are counterparts of each other.

One could object that this strict reading of worldboundedness is uncharitable. Let us take this objection seriously and concede that though Lewis consistently defends the notion of worldbound individuals, an individual and its counterpart are representations of each other. Let us assume that even though strictly speaking I cannot hold a counterfactual belief about an actual-world individual, for example Mark Twain, because such belief involves Mark Twain’s
counterpart, having this counterfactual belief is almost the same, or close enough to having a belief about the actual-world Mark Twain. Once we made this concession, we can say that a ‘rigid designator’, e.g., the proper name ‘Mark Twain’ will refer to all of Mark Twain’s counterparts.

How shall we then analyse a statement ‘Mark Twain is Samuel Clemens’? Given a few reasonable presuppositions (e.g., that we are talking about the famous American writer using his real name and his pseudonym), the statement is true in the actual world. Because it is a statement of identity between two singular referring terms, it should be true in every possible world where the referent exists. At this point, however, we should take into consideration some further features of counterpart theory. As we discussed in section 3.1.2, the counterpart relation is nontransitive, nonsymmetric, and an individual can have more than one counterpart in another possible world.\textsuperscript{10} It need not trouble us now that the relation is nontransitive and nonsymmetric. At the moment, we are interested only in the relation between an actual-world individual and its counterparts, not in the relation between those counterparts and their counterparts, or those counterparts and the actual-world individual. What is troubling is that the actual-world individual, Mark Twain, can have more than one counterpart in another possible world. Which one of them should the name then refer to? A rigid designator should refer to the same individual in every possible world. There is no provision here for an individual splitting in two or more. Within the theory of counterparts we cannot guarantee a unique referent of a singular referring term in a non-actual possible world. This is an unpleasant problem and matters get worse still. A counterpart of an actual-world individual, Mark Twain, even though it is by definition the thing in that possible world that resembles Mark Twain most closely, may still be nothing like Mark Twain in any but a formal sense. Mark Twain’s counterpart could be a wax figure resembling him, a gorilla who managed to write Tom Sawyer, or a park bench. In a framework where ‘the same individual’ may turn,

\textsuperscript{10}This is discussed in Lewis, 1979b, 113.
in a non-actual possible world, into all sorts of bizarre things, the
notion of rigid designation looses its meaning. And this is a nat-
ural consequence of the non-essentialist approach adopted by the
strongly realist framework.

We can apply some of these observations to an analysis of uni-
versal statements, such as - again - ‘All cows are mammals’. We
can assume that the belief we express using this statement concerns
not only actual-world cows, but also cows’ counterparts. However,
not surprisingly the counterparts may turn out to be very unlike the
cows we know, and, indeed, they may not be mammals at all.

All in all, if we apply to Lewis’s work the strict reading, on
which nothing exists in two worlds, the notion of necessity collapses
for statements involving individuals. On the more lenient reading,
where we allow rigid designators to refer across possible worlds, we
get such a distorted notion of rigid designation that it seems of little
if any use. It may still happen that a pair of universal statements will
pick out the same proposition (by being true in the same possible
worlds) but because kinds and mass terms are not assigned any
essential properties, these cases will occur at random, defying any
attempts of systematic description.

The partial collapse of the notion of necessity on the strict read-
ing leads to a proliferation of necessary propositions. All statements
involving individuals turn out to be necessary, even if it be only in
one world (the actual world of the individual involved). On this
reading, one taking the worldboundedness of individuals seriously,
the problem of logical omniscience takes two forms, both of them
leading to bizarre consequences. We can assume either that proper
names are treated as directly referential, or that they are not. If they
are, then they help individuate the propositions in which their refer-
ent figure. This makes each statement about an individual necessary
in the world where that individual exists, and logical omniscience,
while formally present, does not lead to a prediction that an agent
believes in any more propositions than the one he asserts. If we do
not treat names as directly referential, all propositions of the same
form regarding individuals are necessary and we cannot separate
them (a statement of Pa and of Pb cannot be told apart). On this
reading, logical omniscience becomes extremely pervasive.

On the more lenient reading of the strongly realist proposal some of the problems of the strict reading dissolve but the notion of an individual (a potential referent of a rigid designator) is so strange that the necessity of statements involving individuals does not correspond to anything intuitive.

We have just observed a very strange behaviour of the notion of necessity within a strongly realist framework. As we emphasised in sections 3.1.9 and 3.4, the prediction that individuals are world-bound is integral to the core of a strongly realist approach. The world-bound notion of individual makes seemingly obviates the need for the adoption of any degree of essentialism should be adopted into a realist framework. We saw here that these two features – world-bound individuals and lack of any form of essentialism – were the main culprits responsible for the partial collapse of the notion of necessity and the critical weakening of the notion of proposition. It is fair, however, to repeat that Lewis developed his possible-world framework to deal with other issues (e.g., relative probability of different counterfactuals), and did not intend it to be used to account for the foundational semantics of any kind of terms. His own account of foundational semantics, as we shall see in the following section, takes a completely different route.

### 4.1.4 Lewis’s Folk-psychological Approach to Foundational Semantics

As we mentioned at the beginning of the previous section, the notion of proposition does not play an important role in Lewis’s foundational semantics. In fact, he is critical of approaches that take this route. Lewis himself adopts a causal approach to foundational semantics but it is causal with a bit of difference. Lewis’s approach is cautiously internalist in making the wide content derivative of the narrow one, it does not presuppose realist views on science, and it is – not surprisingly – rather critical of Kripke’s work. And it is presented as grounded in folk psychology.

In order to get an idea of how Lewis’s proposal works, we should
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get acquainted with the notion of folk psychology. According to Lewis,\(^{11}\) we have a good understanding of how people operate mentally. We can think of this understanding as a sort of theory—folk psychology. Folk psychology is shared tacit knowledge, just like the knowledge of grammar. It is a powerful instrument of prediction—we can tell which predictions conform to it and which do not. It has evolved over thousands of years of close observations of one another. Its predictions do not always turn out to be correct but we can be confident that folk psychology is largely on the right track. What can folk psychology do for the project of foundational semantics? Lewis says that

Folk psychology concerns the causal relations of mental states, perceptual stimuli, and behavioural responses. It says how mental states, singly or in combination, are apt for causing behaviour; and it says how mental states are apt to change under the impact of perceptual stimuli and other mental states. Thus it associates with each mental state a typical causal role.\(^ {12}\)

Lewis defines a causal role of a mental state as follows: Assume we managed to elicit all those tacit principles of folk psychology. Let us say that whenever \(M\) is a folk-psychological name for a mental state, folk psychology will say that the state \(M\) occupies a certain causal role, an \(M\)-role. The meaning of state \(M\) is then ‘the state that typically occupies the \(M\)-role’. A definition of a causal role of one mental state involves other mental states: causal roles of mental states are interdefined.\(^ {13}\) The causal roles of mental states involve responses to perceptual stimuli. Often, the relevant features of those stimuli will be secondary qualities, e.g., colours. One cannot specify these qualities in purely physical terms because that would go beyond what is known to folk psychology. Yet, if we analyse secondary qualities purely in terms of the responses they are apt to provoke, the argument will be circular. That is why, Lewis urges,\(^ {14}\)

\(^{11}\)My account of his position is based mainly on Lewis, 1995, 412-431.
\(^{12}\)Lewis, 1995, 416.
\(^{13}\)Lewis, 1995, 416.
\(^{14}\)Lewis, 1995, 416.
we should say that folk psychology includes folk psychophysics. Folk psychophysics tells us that a pair composed of some secondary quality, say colour, and the corresponding sensation occupies a complex causal role that consists partly, but not always, in the former causing the latter. This should do the trick—we have a derivative role associated with the name of the secondary quality, for example colour, and another associated with the name of the sensation. And jointly this pair occupies a complex causal role.

There is another reason to fear circularity in folk-psychological explanations—it concerns the behaviour that mental states tend to cause. We often describe behaviour in mentally loaded terms as ‘action’. To say that John passed the salt to his dining companion is to describe his behaviour but it is a description that presupposes a great deal about how his behaviour serves his desires on basis of his beliefs. In describing even just a salt-passing action we might end up invoking John’s beliefs about the presence of his dining companion, the words the dining companion used to ask for the salt, the weight of the salt-shaker, etc. A description that would take all of John’s beliefs into account would turn into a folk-psychological description of his whole environment.\(^{15}\) On the other hand, just like in the case of secondary qualities, a purely physical description of the behaviour would go beyond what is known to folk psychology. Fortunately there is another kind of description, one that is available to folk psychology, that we can use. We can say that when John took hold of the salt-shaker, his body moved in such a way that if he had been on the surface of Earth with a salt-shaker placed suitably in front of him, under normal gravity, and his dining companion was within his reach, then the trajectory of John’s arm would deliver that salt-shaker to a suitable distance of his friend. This is not a description people would usually give, but it is recognisable as correct and it does not involve references to John’s or his dining companion’s mental states.

When we describe a mental state \(M\) as the occupant of the \(M\)-role, it is a topic-neutral description since it says nothing about

\(^{15}\text{Lewis, 1995, 417.}\)
the kind of state that occupies that role. It may be non-physical or physical, and if physical, it may be a state of neural activity or current on a silicon chip. Just what kind of state occupies the \( M \)-role is an a posteriori matter. This is an important feature of the folk-psychological approach.

Even if we were able to identify a mental state with an underlying physical state, such identification would be contingent because it would be a posteriori. In other words, Lewis argues against Kripke, science is not a vehicle of discovering necessary a posteriori truths.

Kripke (1980) vigorously intuits that some names for mental states, in particular ‘pain’, are rigid designators: that is, it’s not contingent what their referents are. I myself intuit no such thing, so the non-rigidity imputed by causal-role analyses troubles me not at all.\(^{16}\)

The motivation for the non-rigidity of names of mental states (e.g., ‘pain’) follows an epistemic line: Imagine you are in pain. There is some physical state that causes that state. Now consider a counterfactual situation which is exactly like the actual situation except that some other physical state occupies the cause role of pain. How could you distinguish the two situations? You could not. Kripke would predict that in the counterfactual situation you are not in pain. Folk-psychological approach, on the other hand, assumes that usually we know well enough when we are in pain. The term ‘pain’ refers to a mental state that plays a certain causal role because it tends to cause certain behaviour and influence other mental states. It would not be pain if it did not.

It is quite possible that there is a variation across worlds as to the states that occupy the folk-psychological roles and deserve the folk-psychological names. In fact, these states possibly vary even within the actual world. If we admit that at least some folk-psychological roles are occupied in animals (e.g., that dogs can be in pain) then there is probably a variation between species. And quite possibly here are variations even within one species, for example in how various tasks are divided between the brain’s hemispheres.

\(^{16}\)Lewis, 1995, 419.
Lewis’s use of folk psychology may seem to demand too much of something that is assumed to be common tacit knowledge but it could be employed quite successfully to avoid a number of problems that the causal approach to mental states has to face. Lewis’s explanation uses on the one hand the notion of the normal connection between a physical state and a mental state, on the other hand argues against the rigid designation for names of mental states. In this it is somewhat reminiscent of Stalnaker’s information theoretic account of intentionality, which we presented in section 3.3.5, and which seems rather more attractive. It was, however, in the interest of a fair presentation of Lewis’s views, that his folk-psychological explanation of content of mental states should be included here. Having done that, we can turn our attention to an evaluation of the problems a strongly realist possible-world framework faces when applied to foundational semantics.

4.1.5 The Realist Concludes

We saw in section 4.1.3 that a non-essentialist possible-world framework containing worldbound individuals does not give rise to an interesting notion of proposition. This is because the notions that underlie the notion of proposition as we discussed it – the notion of necessity, the notion of what it takes to be a particular individual - are not built into the framework in any but the most formal sense. In Lewis’s work, the notion of proposition is not intended to be applied to an account of belief. We saw in the previous section that Lewis’s own account of foundational semantics takes quite a different direction.

We can now perhaps hypothesise that an interesting notion of proposition relies on a notion of trans-world individual, which is in turn based on some kind of essential properties. By adopting some essential properties into the framework one can perhaps derive a more interesting notion of proposition but the problem of logical omniscience will be still alive and kicking. Just how this happens is what we shall investigate in the following section.
4.2 Propositions in Kripke

We have already touched upon various issues connected with propositions in Kripke’s framework in previous chapters. We discussed the source of necessity of various kinds of a posteriori statements in section 3.2.8, and briefly described the distinction between the epistemic and the metaphysical level with respect to statements, truths, and states of affairs (in section 1.7.3). We can apply some insights from those sections to our current problem.

It is well known that in his *Naming and Necessity*, Kripke outlines the difference between epistemic and metaphysical distinctions with respect to statements.\(^\text{17}\) We should note that although Kripke uses the term ‘statement’ fairly consistently, the way he uses it, and the properties he endows it with are basically the same that apply to the notion of proposition. The questions we can and should ask about statements in Kripke are such that we can quite confidently, at least for the time being, treat his notion of statements as if he used the notion of proposition.

The distinction of a priori versus a posteriori is described as epistemic, having to do with the way we came to know the truth of the statements, while the distinction necessary versus contingent has to do with the metaphysical status of the affairs a statement describes. An existing state of affairs is necessary if it could not have been otherwise, that is, if it holds in every possible world, and contingent if there is a possible world where it does not hold. This well-known characterisation does not actually tell us very much. In order to know whether some statement is necessarily true one has to know whether the state of affairs it describes is necessary. In order to know that, one has to know whether the property it ascribes to individuals or kinds involved in the statement obtains necessarily, and that in the end relies on the notion of necessary properties.\(^\text{18}\) Whether something is necessarily this or that way depends on the

\(^{17}\)Kripke, 1980, 32-38.

\(^{18}\)This does not apply to statements of identity between individuals. It seems that we know a priori that if two proper names refer to the same individual, then a statement expressing it is necessary.
way the world is, it is a metaphysical concept and science is supposed to be the tool of unravelling the texture of reality. These are all claims we dealt with when discussing Kripke’s work previously. While in themselves these claims may well be controversial, claiming that Kripke indeed subscribes to them is not. We shall now look at the implications these claims have for the issues we are currently investigating: the problem of logical omniscience, the individuation of content, and, more generally, the suitability of the proposition-based approach to content for a foundational-semantics account of the behaviour of proper names.

Firstly, we should establish, just as we did in Lewis’s case, whether Kripke ever intended statements or propositions to play an important role in foundational semantics. Just as in Lewis’s case, in Kripke’s case the answer is not difficult to come by: to Kripke, statements are the carriers of content.\footnote{For example in Kripke, 1979, 241, when introducing the Pierre puzzle, Kripke says that on his theory as presented so far, “Whether a sentence expresses a necessary truth or a contingent one depends only on the proposition expressed and not on the words used to express it.” and just a little further on the same page he admits that “The situation would seem to be similar with respect to contexts involving knowledge, belief, and epistemic modalities.”} It is through statements, by expressing propositions, that people communicate their beliefs and desires. Of course, there are more speech acts than just assertion but Kripke focuses on statements as primary instruments of sharing information.

In Kripke’s framework, statements, or propositions, are in a rather good shape: his possible-world framework, unlike Lewis’s has a strong concept of necessity as well as a notion of a trans-world individual. We can derive a meaningful notion of a necessary proposition, and the problem of logical omniscience rears its head once again. Kripke distinguishes between the epistemic and the metaphysical aspect of statements, but does that help with respect to the problem of logical omniscience? A speaker may know the truth of a statement in an a priori or a posteriori manner, but the object of his knowledge, the proposition believed, may still be individuated only by its behaviour across possible worlds. And if that is so, then
there is still only one necessary proposition, one that takes the value ‘true’ in all possible worlds.

Perhaps, though, we should have a second look at the reasons that lead Kripke to use the term ‘statement’ rather than ‘proposition’. In *Naming and Necessity*, Kripke says that ‘...it is very far from being true that this idea (that a property can meaningfully held to be essential or accidental to an object independently of its description) is a notion that has no intuitive content...’  

This turns out to be very important, in fact, one of the main lessons of *Naming and Necessity* is that individuals, and, in general, all referents of rigid designators, have necessary (essential) and contingent (accidental) properties regardless of the description under which they are presented. A statement featuring an individual or a kind – and all statements that Kripke deals with fall under this description – is true or false depending on whether the referent or referents have the property ascribed to them contingently or necessarily or not at all (again, with the exception of statements of identity between proper names). The point is that an individual or a kind can be traced through possible worlds and that it can be found out whether a statement describes it truly or not. The ‘statements’ of Kripke’s work turn out to have more structure than propositions because their truth and falsity depends on the referents of the rigid designators involved in them. While propositions are fully extensional, statements have some structure.

These propositions with added structure, propositions where it matters what individual or kind they are about, are called ‘singular propositions’. Kripke does not use that term very much, if at all, but Kaplan does and we talked about them at length previously.

To what degree does the introduction of structure into statements make it easier to account for their use in intentional contexts? We should, after all, keep in mind that while the truth of statements can be known either a priori or a posteriori their truth-value depends, Kripke says repeatedly on metaphysics, which has nothing to do

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20Kripke, 1980, 41.
with epistemology. Endowing statements or propositions with this limited kind of structure I have just described alleviates the problem of logical omniscience but does not make it go away. Kripke can capture that believing that Harry is human is different from believing that John is human but cannot distinguish between believing that John is human and that he is an animal or that he has a heart and that he has kidneys. And that is not all. Even if Kripke did not have a problem with necessarily co-extensive properties, there would be a problem concerning ascribing properties to individuals that is grave enough to cause one many a sleepless night. The problem is known as the Pierre (or Kripke’s) puzzle.

4.2.1 Kripke is Puzzled About Pierre

We have just pointed out that even after introducing a degree of structure into statements, Kripke still has a problem with co-extensive properties. Clearly, of some properties we do not know whether they are co-extensive or not. It may therefore happen that we use two different sentences to express the same proposition without being aware of it (e.g., if we say that Jimmy has a heart and that Jimmy has kidneys).&footnote{These two sentences are notoriously claimed to be necessarily co-extensive. I have not checked that claim myself and am happy for the moment to rely on the folklore.} This consequence of our ignorance of some necessary properties can translate into ignorance of the mutual relation between necessary a posteriori statements. However, according to Kripke, science can and will, given enough time, find out which properties are necessary and which are contingent of various individuals and kinds. This much we have shown (in section 3.2.9). Hypothetically, we could one day find ourselves in a situation where we would know, in all cases, which properties are necessarily co-extensive. A full knowledge of metaphysics would be available. But would this be a situation where we have a full access to a posteriori necessary statements? It seems that this question has to be answered in the negative.

The problem that Kripke – and many others – face has to do with
the apparent failure of substitutivity of coreferential proper names in belief contexts. This problem plagues many theories, also theories that are quite different from Kripke’s, and we shall briefly mention some of them later, but let us now look at the way Kripke presents it.\textsuperscript{23} In this form it is known as the ‘Pierre puzzle’ or ‘Kripke’s puzzle’.

Kripke is an advocate of a Millian view of the reference of proper names, according to which

\ldots a proper name is, so to speak simply a name. It simply refers to its bearer, and has no other linguistic function. In particular, a name does not describe its bearer as possessing any special identifying properties.\textsuperscript{24}

We can define this view as follows:

\textbf{(M)illianism: The meaning of a name is exhausted by its referent.}

As Kripke points out, if names are Millian, they should be transparent in the following sense:

\ldots if a strict Millian view is correct, and the linguistic function of a proper name is completely exhausted by the fact that it names its bearer, it would appear that proper names of the same thing are everywhere interchangeable not only \textit{salva veritate} but even \textit{salva significatione}.\textsuperscript{25}

A weaker version of this view – one not requiring an identity of meaning, whatever that on the Millian view may be – has been called ‘Shakespeareanism’.\textsuperscript{26} We can summarise that as follows:

\textbf{(S)hakespeareanism: Codesignative proper names are inter-substitutable in other expressions \textit{salva veritate}.}

\begin{footnotes}
\item[23]Kripke, 1979.
\item[25]Kripke, 1979, 240.
\item[26]The name was introduced by Peter Geach (Geach, 1968, 165) after quoting Shakespeare’s line ‘A rose / By any other name / would smell as sweet.’
\end{footnotes}
If names are Shakespearean – and Kripke seems to be committed to that view – they should be substitutable even in contexts involving knowledge, belief, and epistemic modalities. This consequence has been recognised as problematic for a very long time.\footnote{See for example Frege, 1893, re-print in English 1952, footnote 2.} We can easily imagine a competent speaker who will sincerely assent to ‘Cicero denounced Catiline’ but not to ‘Tully denounced Catiline’. The perceived failure of substitutivity of proper names in belief contexts has been seen as an argument against a Millian theory of names.\footnote{The example and the criticism has been famously presented in Quine, 1960, 141-146.}

Kripke’s treatment of the topic stands out because it shows that a puzzle about names in belief contexts can be generated without presupposing a Millian view. It can be derived using much weaker and more general principles that seem rather hard to reject.

We shall assume that a speaker is competent but not omniscient, sincere, reflective, and not conceptually confused.\footnote{A speaker is sincere if she does not consciously say something she believes to be false. She is reflective if she also takes pains to present her beliefs accurately.} Two general principles are used in deriving Kripke’s puzzle. Firstly, there is the disquotational principle, \((D_{\text{English}})\), stated as follows:

\[
(D_{\text{English}}): \text{If a normal English speaker, on reflection, sincerely assents to ‘}P\text{’}, then he believes that } P.\footnote{Kripke, 1979, 248.}
\]

Here ‘\(P\)’ can be replaced by any appropriate English sentence that lacks any indexical or pronominal devices or ambiguities that would ruin the intuitive sense of the principle. Of course, we can fashion analogous principles in and for other languages, including French.

Secondly, we presuppose a principle of translation, \((T)\):

\[
(T)\text{translation: If a sentence of one language expresses a truth in that language, then any translation of it into any other language also expresses a truth (in that language).}\footnote{Kripke, 1979, 250.}
\]
The Pierre puzzle is well known, so let me just summarise it briefly.\textsuperscript{32} Let us suppose that Pierre is a normal French speaker who does not speak a word of English. In the course of his life he has heard about London (which he, being French, calls ‘Londres’). On the basis of what he heard, he came to the conclusion that London is pretty. Therefore, he says, in French, ‘Londres est jolie’, that is, translated into English, ‘London is pretty’. We can therefore conclude on the basis of (\(\text{D}_{\text{French}}\)) and (\(\text{T}\)) that:

(1) Pierre believes that London is pretty.

Later, Pierre moves to London, to one of its not-so-attractive parts, and learns English purely by exposure. He learns, among other things, that the city he lives in is called ‘London’, and he comes to the point where he willingly assents to ‘London is not pretty’.

We can then conclude, using (\(\text{D}_{\text{English}}\)), that

(2) Pierre believes that London is not pretty.

Pierre, living in London, has no inclination to assent to ‘London is pretty’. He did not learn, however, that ‘London’ and ‘Londres’ are two names of the same city, and is therefore still likely to assent to ‘Londres est jolie’, that is, that London is pretty. The question is: does Pierre, or does he not believe that London is pretty?

If ‘London’ and ‘Londres’ have the same semantic value (just like the notorious ‘Hesperus’ and ‘Phosphorus’), we should conclude, using (\(\text{D}_{\text{French}}\)), (\(\text{D}_{\text{English}}\)) and (\(\text{T}\)), that Pierre thinks both that London is pretty and that it is not pretty.

It seems impossible, Kripke goes on to say, to deny that Pierre once believed that London is pretty – he was in the same situation as any monolingual Frenchman who believes that London is pretty. We also cannot say that now that Pierre lives in London he does not believe what he once did because he did not change his mind. We cannot deny Pierre’s belief that London is ugly since his command of English does not set him apart from his neighbours in London. Thus we seem forced to conclude that Pierre holds both that London is pretty and that it is not pretty.

\textsuperscript{32}On basis of Kripke, 1979, 254-255.
We may suppose that Pierre, in spite of the unfortunate situation in which he now finds himself, is a leading philosopher and logician. He would never let contradictory beliefs pass. And surely anyone, leading logician or no, is in principle in a position to notice and correct contradictory beliefs if he has them.\textsuperscript{33}

But it is clear that Pierre, as long as he does not know that ‘London’ and ‘Londres’ name the same city, is not in a position to revise his contradictory beliefs. He lacks information, not logical acumen.

A similar puzzle can be constructed using just one language, and relying only on the principle of disquotation. In this case, Pierre learns that ‘Paderewski’ is a name of a famous pianist who lived at the beginning of the 20th century. Knowing that, he will assent to ‘Paderewski had a musical talent’, and we can infer that

\[(3) \text{Pierre believes that Paderewski had a musical talent.}\]

Later he learns of someone called ‘Paderewski’ who was a Polish nationalist leader. Pierre has a low opinion of musical talents of politicians, and concludes that Paderewski had no musical talent. We can then infer that

\[(4) \text{Pierre believes that Paderewski had no musical talent.}\]

From there, it is but a short step to conclude that

\[(5) \text{Pierre believes both that Paderewski had a musical talent and that Paderewski had no musical talent.}\]

If this is the case, we seem forced to conclude that Pierre holds contradictory beliefs, and is therefore not rational.

In both the London/Londres and the Paderewski case, we are compelled to believe that a supposedly rational person holds contradictory beliefs, and is therefore not as rational as originally supposed. This conclusion seems unpalatable yet the reasoning is simple and convincing enough. It seems that in order to avoid the puzzle,

\textsuperscript{33}Kripke, 1979, 257.
we should give up one of the seemingly innocuous premises on which the puzzles are built.

As it is, the Pierre puzzle seems bad enough to give one dizzy spells. The primary cause of its apparent intractability lies in the difficulty associated with finding the culprit step or the unwarranted assumption in the reasoning. That is why responses to the puzzle differ widely in their interpretation of what the puzzle is ‘really’ about. It can be seen as challenging Kripke’s theory of reference of proper names – but we shall show that other theories of reference are vulnerable to it as well. It can make us re-think our views on translation practices or habits of reporting belief. It raises questions about our notions of rationality and content. Approaches to the puzzle differ in their direction as well as depth, and the following attempts at dissolving the puzzle represent, to some degree, the variety of approaches that have been taken.

4.2.2 Naive Contextualism

Contextualism is an approach that attempts to dissolve Kripke’s puzzle by challenging the principle of disquotation. It has been championed by, among others, Joseph Moore.34 The main strategy of contextualism is to show that Kripke cannot exclude from his disquotation principle sentences that contain “indexicals or pronominal devices or ambiguities that would ruin the intuitive sense of the principle”35 and still make his argument.36

To characterise what goes wrong in the Pierre puzzle, a notion of misdisquotation is introduced. Misdisquotation is supposed to arise from an oversimplification of the relation between a person’s act of linguistic assent and her states of belief. The aim is to show that Kripke ‘misdisquotes’ Pierre. It is alleged that ambiguities and indexicality can be present in a sentence implicitly, and that the best way to deal with it is by ‘contextualising’ Kripke’s disquotation principle. A contextualised disquotation principle looks as follows:

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34 In this section, I base my description of contextualism on Moore, 1999.
35 Kripke, 1979, 249.
4.2. Propositions in Kripke

(DC): If (i) a normal, English speaker, $x$, sincerely and reflectively assents to ‘$P$’, (ii) ‘$P$’ expresses content $C$ in the context of assent, and (iii) ‘$P$’ also expresses content $C$ in the context of attribution, then ‘$x$ believes that $P$’ is true in the context of attribution.\(^{37}\)

Principle (DC) is supposed to ensure that we attribute to an agent a belief in a sentence only if the content of that sentence does not change between the context of assent and the context of attribution.

Moore characterises content rather loosely as “sets of possible worlds or states of affairs, perhaps,” and then adds: “suppose also that we take a speaker’s assent to a sentence as an expression or endorsement of the content that sentence has as a sentence in the shared public language.”\(^{38}\)

It is argued that even a sentence that does not contain any overt indexicals or ambiguities can change its content between contexts without the believer changing her mind. Moore provides some examples of sentences that can change their truth-value depending on the context. For example, a shift in the implicit domain of quantification may lead to misdisquotation. Imagine Jenny looking around a party and declaring ‘Everyone is drunk.’ She would be misdisquoted if we said later, in a context of looking for a taxi to take her and her party safely home, ‘Jenny believes that everyone is drunk.’\(^{39}\) Ambiguity too can lead to misdisquotation. We can construe an example where ‘bank’ becomes actively ambiguous in the sentence ‘Jones believes that Smith puts money in banks.’\(^{40}\) To prevent misdisquotation, the following principle of contextualism is proposed:

**Contextualism:** It is possible that a belief sentence containing no obvious indexicals (or other explicit parameters) is true of a believer relative to one context, and – simultaneously, without contradiction, and with no change in the

\(^{37}\)Moore, 1999, 341.

\(^{38}\)Both quotations are at Moore, 1999, 343.

\(^{39}\)That is, everyone including potential taxi drivers.

\(^{40}\)Both examples are at Moore, 1999, 348.
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believer – false of that believer relative to a different context.41

Not surprisingly, Moore goes on to argue that we should not disquote Pierre when he airs his opinions about Paderewski. Saying ‘Pierre believes that Paderewski has musical talent’ is an example of misdisquotation.

Moore’s contextualism is neutral about how one should semantically explain the ways in which a context affects our use of names in belief reports.42 Allegedly, we are free to invoke neo-Fregean senses (following for example Forbes43), we may refer to names in a Language of Thought (as Fodor does44), or we could employ the apparatus of shifting ‘relevant alternatives’ (using Stalnaker’s apparatus45). A contextualist only has to claim that there is some such class of semantic entities (like neo-Fregean senses), and that on some occasions more than one of its members is associated with a unique actual individual. The nature of those semantic entities is to be determined by a theory of belief reports. Until that is done – and doing it is not within the scope of Moore’s account – we can neutrally refer to those entities as ‘guises’. We can appeal to them in explaining what the world is like according to Pierre or other puzzled subjects, and remain Millian. It is not quite clear, Moore admits,46 whether the guise-like entities can perform the semantic job that is expected of them and be, at the same time, epistemically and metaphysically acceptable. Guises are invoked to help us understand why subjects do not always know who their de re beliefs are about. They are essential the contextualist explanation:

In treating Kripke’s example, the contextualist will distinguish contexts not only by which individuals are in a domain

41Moore, 1999, 347.
42Moore, 1999, 349.
45Stalnaker, 1981.
46Moore, 1999, 349.
of discourse, but also by which guises are relevant and available for the task of reporting Pierre’s beliefs.\footnote{Moore, 1999, 349.}

In a context where two guises have the same salience, a contextualist can withhold an answer or else say that a sentence containing them does not have a truth-value. According to this approach, it is true that Pierre believes that London is pretty, and also true, albeit in a different context, that Pierre believes that London is not pretty but there is no context in which both sentences are true. Pierre’s rationality thus seems redeemed.

This account of the Pierre puzzle seems vulnerable to several kinds of criticism. Firstly, it is grounded in a rather exacting notion of rationality, according to which

\begin{quote}
For any rational, non-compartmentalised subject, \(x\), and any sentence ‘\(S\)’ it is not true to say in a fixed context ‘\(x\) believes that \(S\) and \(x\) believes that not \(-S\).’\footnote{Moore, 1999, 353, notation adjusted for consistency.}
\end{quote}

Moore does not explain what ‘being non-compartmentalised’ means but we could infer that it presupposes that a rational agent is capable of accessing all her beliefs and making sure none contradict each other. The opposite, a situation where an agent holds contradictory beliefs, is described as a form of irrationality on the part of the agent, and it is not, according to Moore, to be taken lightly. He says: “…the irrationality might be as mild as insufficient attention or carelessness in cognitive housekeeping, or it might be some more significant breakdown in mental functioning.”\footnote{Moore, 1999, 353.} This conception of rationality, while endorsed by Kripke,\footnote{Kripke, 1979.} has been under attack,\footnote{By, for example Salmon, 1986 and Sosa, 1996.} and would need a good defence if it is to be sustained. Moore, however, seems quite comfortable about taking it for granted.

Secondly, the principles quoted above – the contextualised principle of disquotation (\(\text{DC}\)) and the principle of contextualism – are not supported by a theory of content and a theory of meaning. The
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principle (DC) tells us that we must not disquote if the content of the assertion changed, but then we should have the means of telling when this happens, and the contextualist approach, at least in the form presented by Moore, does not provide these. Saying that content can be characterised as sets of possible worlds or states of affairs does not count as providing a theory of content. Thus while the idea behind the (DC) principle seems plausible, the lack of elaboration on the notions used in it is crippling.

Thirdly, the examples Moore uses to motivate his claim that the content of a sentence can change even if the sentence does not contain overt ambiguities or indexicals are not convincing. One of the examples I quoted here contains the word ‘bank’ – a notorious and overt example of ambiguity, another example contains a quantifier that changes its domain.

Fourthly, it is certainly tenable to admit that sometimes we refer, as it were, ‘under a guise’, but unless it is specified whether a guise becomes a part of the content, we have not learnt very much. Moore’s main idea seems to be that we should not disquote a sentence if its content changes. We could then infer that if this approach is to help us with Kripke’s puzzle, a proper name (like ‘Paderewski’ or ‘London’) can be responsible for a change in content. Therefore, whatever version of ‘guise’ we adopt, it has to be semantically relevant. If this is the case, it is hard to see how Moore can claim that he remains Millian.

Finally, the basic strategy of contextualism (at least as it is presented by Moore) – the banning of disquotation if the meaning of a sentence changes between relevant contexts – could be interesting if its repercussions were further explored. The next approach is an example of this.

4.2.3 The Hidden Premise

David Sosa’s treatment of the puzzle\(^52\) has been influential, and deserves attention. As we saw earlier, Kripke’s aim was to show that

\(^{52}\text{Sosa, 1996.}\)
the traditional argument, concerning Cicero and Tully, should not be seen as arguing against Millianism or against thesis (S), because an analogous argument can be made without using substitution. Sosa’s aim is to show that even the analogue involving Paderewski invokes Millianism in a covert way. Sosa’s aim is not to refute Millianism (though he offers an alternative), it is rather to show that Kripke’s argument should not be seen as supporting Millianism because it presupposes it.

Sosa claims that when examining the Pierre puzzle about London, one may be tempted to reject the principle (D). But disquotation is something we commonly rely on in practice. We may find it questionable or suspect but whatever its merits, something like a principle of disquotation describes our everyday practice of reporting beliefs. Therefore, if we rejected (D), we would have to find some other principle to replace it. From a pragmatic viewpoint then, trying to undercut the principle of disquotation seems inadvisable.

The appearances also go against blaming the principle (D): the traditional Fregean puzzle, involving Cicero and Tully, seems to point to the substitution (and, consequently, some form of Shakespeareanism) as the source of the trouble, and Kripke’s puzzles look analogous to the Fregean puzzle. This similarity is something that Kripke himself is keen to note when describing the aims of his ‘Puzzle About Belief’, saying

We will also give an example,..., to show that a form of (Frege’s) paradox may result within English alone, so that the only principle invoked is that of disquotation (or, perhaps, disquotation plus homophonic translation). It will intuitively be fairly clear, in these cases, that the situation of the subject is ‘essentially the same’ as that of Jones with respect to ‘Cicero’ and ‘Tully’.

(The principle of disquotation is indirectly connected with the principle of translation. Disquotation is used in belief reports, and translation is used when we want to make the utterances and beliefs they

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53 The following arguments are taken from Sosa, 1996, 385-386.
54 Kripke, 1979, 253.
express available in a language different from the one in which they were expressed. In both cases, what gets reported is the content of an utterance – we translate the meaning of what is said (this is especially obvious in the translation of idioms), and disquote likewise. In that sense, the two principles are connected.

Moreover, Kripke-style cases can be re-created without using either the principle of disquotation or that of translation. David Sosa reports\(^55\) that he used to think it an interesting coincidence that there was a well-known politician named John Glenn, since there was also a famous astronaut of the same name, who, Sosa had thought, died on a later mission. Now imagine Sosa’s situation before he discovered his error: he would have attributed to himself the beliefs that John Glenn has been in space and that John Glenn has never been in space. What goes on here is not an inference to beliefs from assertions. It is a direct recollection, and – just like the Padewerski case – it does not invoke the principle of translation. The point Sosa makes is that it seems useless to try and stop Kripke’s examples before they reach the stage when, on the basis of the agent’s assertions, beliefs that \(x\) is \(F\) and that \(x\) is not \(F\) are attributed to the agent.\(^56\) It seems then only natural to admit that neither disquotation nor translation are to blame for Kripke-style problems, and focus on what is left.

It may be helpful to think about the kind of situations that do not allow a creation of a Kripke-style analogue. Imagine Rock, a normal monolingual English speaker who has never left his small town of Paris, Texas.\(^57\) Though he himself has never been to France, he heard of the famous city of Paris. On the basis of what he heard, he is inclined to say, in English, ‘Paris is pretty’. Based on his sincere utterance, we can thus conclude

\[(1)\text{ Rock believes that Paris is pretty.}\]

His opinion of his hometown is not so favourable. Based on what he knows he is inclined to assert ‘Paris is not pretty’. We can then

\(^{55}\text{Sosa, 1996, 384.}\)
\(^{56}\text{Sosa, 1996, 385.}\)
\(^{57}\text{This example is found in Sosa, 1996, 386.}\)
conclude that

(2) Rock believes that Paris is not pretty.

The non-puzzle is: how should we describe the situation? It might seem that on basis of (1) and (2) we could conclude that:

(3) Rock believes that Paris is pretty and Rock believes that Paris is not pretty.

(4) If Rock believes that Paris is pretty and Rock believes that Paris is not pretty, then Rock has contradictory beliefs.

(5) Rock has contradictory beliefs.

(6) If Rock has contradictory beliefs then Rock is not rational.

(7) Rock is not rational.

Of course, the ‘Paris’ of this case is ambiguous. In claiming (3), we do not attribute to Rock any contradictory beliefs. If we were to describe the logical structure of sentence (3), we would use different constants for each occurrence of ‘Paris’. We can only use the same constant to represent a proper name if the name is not ambiguous.

One may argue that this point is obvious. Kripke-style and Frege-style cases cannot be generated with ambiguous names. What Millianism implies is that what is semantically relevant to a name is just its denotation. Therefore, names that are co-designative have the same meaning, and are not, properly speaking, ambiguous. ‘London’ and ‘Londres’, just like ‘Tully’ and ‘Cicero’ may sound different but their semantic value is the same. The principle that seems to be at work in Kripke’s puzzles is this:

(H)ermeneutic: If a name in ordinary language has a single referent then it may correctly be represented logically by a single constant.\(^{58}\)

\(^{58}\)Sosa, 1996, 388.
In effect, the principle (H) takes having a single referent to be synonymous with being unambiguous. In arguments involving ‘Cicero’, ‘London’, and ‘Paderewski’, (H) seems essential in creating the contradictory results. The principle follows from Millianism (though it does not hold vice versa): if the only meaning of a name is its referent, then having a single referent is sufficient to guarantee the propriety of representing a name by a single constant.

Sosa’s point is that something like the principle (H) is implicitly used in the Paderewski puzzle, which was supposed to be a defence of Millianism in the sense that it did not rely on either substitution or translation. Having circumvented and accepted both the principle of translation and the principle of disquotation, respectively, we are left in a position where the most likely culprit is the principle (H). It is, Sosa claims, this principle, (H), that makes us characterise Pierre as not rational. Kripke-style cases cannot be reconstructed if the term in question is seen as ambiguous. In making his case in support of Millianism, Kripke had to presuppose something like the hermeneutic principle, he had to presuppose that a single referent implies a single meaning. But that was what he set out to defend. This is why Sosa finds Kripke’s argument insufficient as a defence of Millianism.

Sosa’s reaction is to reject the hermeneutic principle, and adopt a Fregean position, according to which even a term that has only one referent can have numerous senses. If we assume that names have meanings over and above their referents, and if we accept that those meanings can vary even if the referent does not, we can then accept that a name can be ambiguous even when it has a single referent. In this picture, a name that has a number of meanings should be represented by different logical constants, one for each sense. “In short, Fregeanism can see ambiguities to which Millianism is blind.”

If a Fregean position were accepted, one could make sense of Pierre believing both that London is pretty and that it is not pretty, and

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59It may be that what is at work is a stronger principle (H'): A name in ordinary language may correctly be represented logically by a single constant if the name has a single referent. (Sosa, 1996, footnote 11, 398).

60Sosa, 1996, 389, emphasis in the original.
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explain how he can remain a rational agent.

A Fregean could insist that the expressions an agent uses to express his beliefs should not contain any ambiguity. But that would be too strong—we can and do report beliefs that contain ambiguous terms, for example definite descriptions. “However—and this is crucial—our use of ambiguous expressions in the belief attribution should be disambiguated in a way that matches the original use of the ambiguous term by the person disquoted.”61 Similarly, we translate ambiguous expressions into our language correctly only if we disambiguate the terms in question correctly.

Sosa’s argument is designed to show that in order to produce a Kripke-style case, something like the principle (H) has to be presupposed. This creates a problem for Kripke on two counts: Firstly, Kripke intended to show that a Frege-like puzzle can be reconstructed using only assumptions about disquotation and rationality, and now it turns out that he used a Millian premise. Secondly, (H) is the weakest part of the argument. Adoption of a Fregean position, that is, a rejection of the principle (H), leaves in place the much less controversial premises used by Kripke, and dissolves the puzzle. Sosa’s aim is neither to claim that Millianism is indefensible nor to show that Fregeanism is the only way out of the trouble. What Sosa shows is that Kripke’s argument does not support Millianism because it presupposes it.

4.2.4 Sophisticated Localism

Localism is a theory developed by Akeel Bilgrami62 in response to both Frege’s and Kripke’s puzzle. Its aim is to harmonise two sets of desiderata. Firstly, it seems desirable that beliefs attributed to an agent should make her rational by her own lights, that is, represent a consistent state of affairs in the world as she conceives of it. Secondly, the content of an agent’s beliefs should not be separated from her external circumstances in a way that would allow for

61Sosa, 1996, 394-395, emphasis in the original.
scepticism about the external world. These two sets of constraints seem to pull in different directions. Depending on which is seen as more pressing, one can see theories as being internalist or externalist in their motivation, or accounting primarily for narrow or wide content.

Bilgrami starts off by trying to account for the internalist intuitions, and then proceeds to explain how the content thus specified (narrow content) relates to the external world. Admittedly, a theory that starts off from the narrow or Fregean notion of content cannot be made compatible with externalism of a Kripkean or Putnamian kind. The task is therefore to find a version of externalism that could fit the bill. The following example illustrates the direction Bilgrami takes.

Imagine two agents. One of them knows chemistry, the other one does not. The difference in their knowledge should make a difference to the way an external substance determines the concept they express with the term ‘water’. That is, though it is the same substance, water, that determines their concepts, each agent’s concept will be different if their background knowledge differs. Because it is an external substance that determines their concepts, a commitment is made to a kind of externalism about content, but because the way in which an external substance determines the concept is constrained by the background beliefs of the agent, the content thus determined captures the external world as the agent conceives of it.

The main problem with content conceived of along these lines is that it would be too finely grained since it is unlikely that any two agents have exactly the same background beliefs regarding an external substance. Bilgrami addresses this concern by pointing out

\[63\text{In my presentation of Bilgrami’s views I follow his Bilgrami, 1998.}\]
\[64\text{From Bilgrami, 1998, 597.}\]
\[65\text{One may argue that any reasonable internalist theory should allow for this degree of determination by external circumstances. This would be a valid remark but Bilgrami’s point here is to specify the degree to which an externalist element is incorporated into his theory. Whether we call his theory moderately externalist or moderately internalist is just a question of labelling.}\]
\[66\text{Bilgrami, 1998, 598.}\]
that a form of contextuality of content – what he calls ‘locality’ of content – offers a common-sense solution. The notion of locality is illustrated by the following example. Imagine once again the two agents, one of whom knows chemistry, whereas the other does not. Let us say that the former one is drinking a certain substance from the tap because he is thirsty after a game of tennis. In this context, his background chemical beliefs are irrelevant to his concept of ‘water’. In this context, therefore, he shares his concept of ‘water’ with the latter agent. In fact, in most contexts of thirst-quenching we can abstract from the differences between these agents’ concepts of ‘water’. In some contexts, however, such as in a chemical laboratory, the differences in background beliefs do come to the foreground.

In the context of the Pierre puzzle, this helps explain how Pierre’s concept of ‘London’ will change as his external circumstances alter and he moves to London. When he lived in France, Pierre shared his concept of ‘Londres’ with other Frenchmen who have never been there and knew it only from postcards and other media that represented it in a favourable light. When he moved to London, he started acquiring a concept of that place in a similar way in which other Londoners who lived in the same area did. Then he came to the conclusion that London was not pretty. The ‘expert knowledge’ he does not possess concerns the fact that ‘London’ and ‘Londres’ are two names for the same city. In most situations, however, his concept of ‘London’ will be very similar to that of other Londoners, and the lack of expert knowledge would only come to the foreground if he, for example, met another Frenchman, one who would know that ‘London’ and ‘Londres’ are one and the same place.

This approach to belief and content has to address some concerns related to the normativity of meaning and the social aspect of language. It is here that Bilgrami’s approach becomes more controversial.

There is a sense in which meanings are not social. One need not attribute to an individual the concepts of his fellows if that individual does not possess some particular expert knowledge that they do possess. An individual can be at variance with the experts, yet even his individual meaning can be seen as public because others can and
do understand idiosyncratic meanings. Thus, Bilgrami argues, the private versus public distinction does not need to coincide with the individual versus social one. It is possible for a speaker to display publicly her individual meaning (people sometimes use words in non-standard ways and when prompted, explain) just as it is possible to express privately a social meaning. This idea, that an individual’s meanings or concepts are not necessarily constituted by the socially constituted reference, prompts the objection that Bilgrami does not account for the normativity of meaning. To illustrate it, we can use an example provided by a well-known advocate of semantic externalism, Tyler Burge.\(^{67}\) In the picture Bigrami presents, if Burge’s arthritis sufferer – let us call him Bert – claims to have arthritis in his thigh, he can be counted as saying something true given what he means by ‘arthritis’. He can vary from the majority by what he means by that word, and yet is not be counted as being wrong in his use or the underlying concept. This is a consequence Bilgrami accepts.

The application of Bilgrami’s localism to belief reports has also attracted some criticism.\(^{68}\) Let us look again at Bert, the arthritis sufferer. Bilgrami concedes that “we would, in everyday reporting of belief, say ‘Bert believes he has arthritis in his thigh’”\(^{69}\) but he also claims that this common usage misleads us about the actual belief content. Ebbs criticises Bilgrami’s rejection of our ordinary practice of attributing beliefs. Yet Ebbs himself proposes a distinction between ‘concepts’ and ‘conceptions’ of external entities, such as arthritis, where the concept of arthritis is logically independent of any individual’s beliefs about arthritis and it is only the conception that captures them. It may be argued, however, pace Ebbs, that what is relevant to understanding Bert is his conception of arthritis, and the same holds for every speaker. Concepts are then introduced only to account for the normativity of meaning and there is actually very little else we can say about them.

Bilgrami’s theory may have been inspired by Kripke’s puzzle but

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\(^{67}\)The original thought-experiment was presented in Burge (1979).

\(^{68}\)The following point was made by Ebbs, 1998.

\(^{69}\)Bilgrami, 1992, 74.
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his proposal amounts to a new and refreshing view on meaning in general, not just meaning of proper names and natural kind terms. The consequences of his view are many, and I shall not recount them here – it would take us too far from the direction we set out to follow in this chapter.

4.2.5 Keeping Files

There is an approach that has a localist flavour but focuses on proper names – these are the so-called ‘dossier’ or ‘file’ theories of proper names. It has been around for some time and exists in numerous forms. The form I shall present here was developed by Graeme Forbes. Like David Sosa, Forbes thinks that in the end the Paderewski puzzle relies on a Millian premise, and that if we want to solve it, we have to give an alternative explanation of the functioning of proper names. The proposal he advocates is a modified Fregean position. According to Forbes,

...when we receive what we take to be de re information which we have an interest in retaining, our operating system may create a locus, or dossier, where such information is held; and any further information which we take to be about the same subject can be filed along with the information we already possess. More precisely, the system files what I call “classified conditions”; a condition stands for something that an object can satisfy, and the classifier is what specifies the subject’s attitude to a certain related proposition.

An example of a classifier is ‘believed to be true’ or ‘hoped to be true’. The role of a name is to identify a file or label a dossier. The

\[\text{footnote text}^70\] This approach has been championed by for example John Perry (1980), and Segal and Larson (Segal and Larson, 1995 and Segal, 2001). The term was probably first used by Garreth Evans (in Evans, 1982, 399). Its analogue in the formal semantics, however, appeared first – I mean the discourse representation theories of as presented for example in Heim, 1988, Kamp, 1981, and Kamp and Reyle, 1993.

\[\text{footnote text}^71\] In the following presentation of his views I rely on Forbes (1990) and Forbes (1996).

\[\text{footnote text}^72\] Forbes, 1990, 538.
cognitive significance of a sense of a name then is ‘the subject of this dossier’. As we learn more about the subject of the dossier, we may delete or add new information. Applying this to the Pierre puzzle, we may say that there is no confusion as to what Pierre’s beliefs are. He has two files under two homonymous names ‘Paderewski’. The problem is in figuring out how to properly report his beliefs. Forbes approaches this problem by saying that this may be a case of expressive inadequacy.\textsuperscript{73} The way we tend to deal with it is by enriching our language by qualified names. We shall thus speak of Pierre’s beliefs regarding Paderewski the pianist and those regarding Paderewski the politician. In this way, we shall, in our report, do justice to Pierre, save him from irrationality he is patently not guilty of, and get out of the puzzle.

One may object that both Sosa and Forbes owe us a better and more detailed defence of the positions they take in order to solve Kripke’s puzzle. One possibly troubling objection is that different agents attach different senses to the terms they use, which leaves us in a difficult spot if we want to explain how is it possible that those terms are used in a successful communication.

4.2.6 What Pierre Taught Us

Beside the obvious things, like how to say ‘London’ in French, we learned quite a few lessons from Pierre. My selection of responses to Pierre was not intended to be fully representative because some of the most influential accounts of the puzzle take the form of full-fledged theories of proper names and belief\textsuperscript{74} the pursuit of which would lead us away from the direction we chose.

Still, there are some observations we can make on the basis of the literature we reviewed. First of all calling it a ‘puzzle’ is somewhat misleading in that it suggests that there is a single good solution that would become apparent once we got all the pieces in their right place. We have seen, however, that Kripke’s scenarios unearth a whole cluster of problems that touch upon a number of basic problems of

\textsuperscript{73}Forbes, 1990, 561.

\textsuperscript{74}I have in mind Salmon, 1986, and Dummett, 1973b.
4.2. Propositions in Kripke

philosophy of language and mind – what is a proper name, what are the objects of our beliefs, what is the connection between belief and a public expression of it, what are the criteria of rationality, and what are the criteria of understanding a speaker correctly? The simplicity and the intuitive appeal of Kripke’s examples give all these questions a renewed urgency.

We have seen that approaches that attempt to prevent the puzzles from developing are not very attractive in the end. To claim that the principle of disquotation should not be used suggests a disregard for a common practice. It is unappealing because what if not our actual linguistic practices should be our guide for analysing natural language.

We should bear in mind that convincing Kripke-style examples can be constructed without any recourse to the principle of disquotation (witness the John Glenn case) or the principle of translation (as in the Paderewski case). In a case like that involving John Glenn, we cannot place blame on the reporting practice because it is the speaker himself who analyses his beliefs and utterances, and we cannot find fault with a translation process because no such process is going on. An analysis of this kind of examples leads us thus to an investigation of the content of speaker’s utterances and his beliefs. That does not mean, though, that there is nothing interesting to be said about the varieties of the quoting practice. Investigations in this direction have led to some interesting results, though I have not mentioned them here.\(^\text{75}\)

It would seem that accounts that focus on the principle of substitution and those that focus on content can be, more or less, phrased in terms of each other. A satisfactory characterisation of the content of speaker’s utterances would give us the means of ensuring that we disquote and substitute not only salva veritate but also salva significazione. The ‘dossier’ theories of proper names and localism take this direction.

\(^{75}\)I have in mind the polemic, which started mainly in response to Davidson’s ‘On Saying That’, (Davidson, 1968). Lepore and Capellen’s article on quotation (Lepore and Cappelen, 1997) is definitely worth reading in this context.
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trates another interesting point: some authors who take a theory of content to be the main challenge posed by the Pierre puzzle focus on a general theory of content (e.g., localism), others deal primarily with a theory of proper names (e.g., the ‘dossier’ theories). Both approaches can have interesting results but it should be born in mind that puzzles similar to those presented by Kripke can be generated using demonstratives (I have in mind Quine’s Ortcutt case). This is not surprising because both proper names and demonstratives have been claimed to be directly referential. What the approaches dealing with content have in common is their preoccupation with the issue of externalism: they try to see to what extent the external circumstances we find ourselves in determine the content of our thoughts and utterances.

In the responses to the Pierre puzzle I presented in previous sections, I have not dealt explicitly with the issue of standards of rationality. It should be mentioned at least here. Kripke and a number of other authors\(^{76}\) claim that a speaker who is caught holding contradictory beliefs should be seen as irrational and somehow in deep trouble. Yet it would seem that having contradictory beliefs is a frequent predicament. Just how frequent depends on what theory of content we champion. If, for example, we hold that the content of utterances is best characterised by fully extensional, non-structured propositions, being wrong about a single necessary proposition (even by thinking, for example, that the statement that expresses it is contingent) would be enough to condemn a speaker to irrationality. If, in using singular propositions, we introduce a degree of structure to characterise content, the situation improves marginally. As long as we hold that the content of an utterance is characterised by sets of possible worlds where the situation described by the statement holds, we cannot make a difference, on the level of content, between various ways of expressing necessary propositions. In the case of singular propositions, this consequence is limited by the fact that a proposition includes the individual figuring in the statement. Yet even necessarily equivalent statements regarding just one individual

\(^{76}\)For example Sosa, 1996, and Moore, 1999 just to name a few.
can be expressed in more ways that the speaker is aware of. It would seem that we have neither the logical acumen nor the knowledge required to ensure that we do not hold mutually contradictory beliefs. I suspect that being inconsistent is commonplace even among logicians. If that is so, how come it does not get us in trouble all the time? Some philosophers, e.g., Dummett,\textsuperscript{77} have argued that we do not get in trouble because we do not actively hold all of our beliefs all the time. We call on our beliefs in the relevant contexts. Our beliefs and our knowledge are to some degree compartmentalised, and we feel the need to resolve an inconsistency only when we become aware of it.

Kripke claims that “...surely anyone, leading logician or no, is in principle in a position to notice and correct contradictory beliefs if he has them.”\textsuperscript{78} Yes, we correct contradictory beliefs when we notice them, but are we in principle in a position to spot all of our contradictory beliefs? To do that, we would have to be able to run through all of our beliefs and check them. Unlike Kripke, I do not think that is possible.

Finally, in the background of both Kripke’s article and the responses it provoked there is a network of assumptions about the individuation of proper names. It is a difficult topic that deserves special attention.

4.2.7 One Name or Two

A Fregean strategy à la Sosa and some internalist approaches to the puzzle imply that we should individuate proper names in a different way than Kripke does. This could be criticised because it amounts to a change in the basic assumptions of the puzzle. On the other hand, spelling out exactly how Kripke individuates proper names is not as simple as it may seem. What matters here is that if it turned out that Kripke’s assumptions in some way presuppose Millianism (which he sets out to defend) then they should be up for discussion,

\textsuperscript{77}Dummett, 1973b.

\textsuperscript{78}Kripke, 1979, 257.
and their modification or rejection should be seen as a legitimate move in a criticism of the puzzle.

In trying to establish what picture of individuation of proper names Kripke presupposes, we have several clues to follow. Firstly, Kripke defends a Millian thesis according to which the semantic relevance (or the meaning) of a proper name is its denotation, and not its connotation. Closely connected with this thesis is the claim that names are rigid designators, and the descriptions we may use to fix the name’s reference do not become a part of its meaning.

What may be the case is that we fix the reference of the term ‘Cicero’ by use of some descriptive phrase, such as ‘the author of these works’. But once we have this reference fixed, we use the name ‘Cicero’ rigidly to designate the man who in fact we have identified by his authorship of these works.\(^{79}\)

According to Kripke, the two ways then in which Pierre seems to use the name ‘Paderewski’ – ‘Paderewski the politician’ and ‘Paderewski the musician’ – do not amount to a genuine bifurcation of the name. As long as ‘Paderewski’ refers to one and the same person, it is just one name. Within Millianism, we are not in a position to posit an ambiguity if what we mean by ambiguity is one word having more than one meaning. This seems to be a consequence of the Millian view that was intended and argued for by Kripke.

Can we generalise this, and say that when words refer in the same language to the same object they have the same meaning? If this were the case, would it imply that ‘Tully’ and ‘Cicero’ are the same proper name because they have the same meaning? Kripke’s position on this point seems to be that while co-referential names are synonymous they are not identical. On a metaphysical level, though, the identity between referents of coreferential names is necessary. He says that

\[\ldots\text{whenever 'a' and 'b' are proper names, if a is b,\ldots, it is necessary that a is b.}\]

\(^{79}\text{Kripke, 1977a, 92.}\)
names have to be necessary if they are going to be true at all.\textsuperscript{80}

However strong the synonymy between ‘a’ and ‘b’, we cannot conclude that the two are identical. We can suppose that the reason behind this is that ‘a’ and ‘b’ are distinct words. So while the function of proper names is, according to Kripke, simply to refer,\textsuperscript{81} they are also – at least to some extent – a part of language. Let us see what we mean by this, and what the repercussions are.

In the presentation of the Pierre puzzle, the French name ‘Londres’ is translated into English as ‘London’ using the principle of translation for English. The possibility of translating a proper name seems to be an essential part in the derivation of the puzzle. We would not translate into another natural language a term or a formula that is not a part of that language but belongs to some other symbolic system, for example musical notation.\textsuperscript{82} It may then seem that proper names are a part of natural language in a similar way in which for example natural kind terms are. If proper names are, indeed, a part of language, it would seem that knowledge of those names is relevant to a speaker’s competence in a given language. Of course, no speaker can be expected to be a competent user of all expressions of any language. We certainly would not want to say that an Englishman who does not know what ‘catalpa’, ‘Pripyt’ or ‘Glengarry’\textsuperscript{83} mean, in the sense of knowing even just whether these are names of people, artefacts, natural kinds or what not, is less than fully competent in his language.

On the other hand, could someone be a competent speaker and not know any proper names or natural kind terms at all? This question leads us to the issue of a connection between linguistic

\textsuperscript{80}Kripke, 1977a, 73.

\textsuperscript{81}See Kripke, 1977a, 72: “It would, therefore, seem that the function of names is \textit{simply} to refer, and not to describe the objects so named by such properties as ‘being the inventor of bifocals’…”

\textsuperscript{82}There are different standards of musical notation between which we can translate, but that is not relevant to my point here.

\textsuperscript{83}All these expressions are included in \textit{The American Heritage Dictionary of the English language}, Morris, 1981.
competence and world knowledge. It is hard to imagine a competent language user whose world knowledge is so restricted as to miss all proper names and natural kind terms.\textsuperscript{84} People whose language misses too many of those proper names and natural kinds terms one could reasonably expect them to use (those directly relevant to their everyday lives), are either individuals whose language function is compromised by a disease or an injury (e.g., aphasiacs) or people whose competence in other areas of life is limited by some disorder in their broader mental functioning.\textsuperscript{85} It is reasonable to expect a competent speaker to be able to use language in such a way that she can influence other speaker’s beliefs in the way she intends, and acquire new beliefs that are relevant to her life, that is, that she can make herself understood and understand others. That is why it is reasonable to expect a person to know names of people, animals and substances she is likely to encounter in her environment,\textsuperscript{86} and names of places and people around her. There are, however, some substances that are universally present in people’s lives, e.g., water. We can then expect every speaker to be able to use their names.

Language competence and competence in other areas of life are linked. We cannot spell out exactly how much of either is required for someone to be considered a competent speaker but cases of extreme deficiency highlight the connection.

Acquisition of a second language deserves a special consideration. There, at least in the Pierre case, we have a speaker who is already competent in one language. Without making any controversial assumptions about a connection between language and beliefs, we can assume that a speaker is likely to express his beliefs in that language in which he has the best chance of being understood by the persons he communicates with at a given occasion. We might say that for a

\textsuperscript{84}I believe a similar point could be made about other kinds of expressions but want to keep focus on directly referential terms.
\textsuperscript{85}The language abilities of individuals in early stages of language acquisition is, of course, quite a different question.
\textsuperscript{86}I suspect that for example the reason why fewer and fewer people know the names of even rather common plants is that their relevance to our lives has diminished.
truly bilingual speaker the competence in both languages should be
the same, meaning that the speaker should be able to express the
beliefs he has as a speaker of one language just as well in the other
one. If a native German speaker has a belief which he expresses by
saying ‘Schnee ist weiss’, and his English is as good as his German,
then he would also assent to ‘Snow is white’. If he believes that
Venedig ist schön, he also believes that Venice is pretty.

However, we should not take this line of thinking too far. Our
linguistic competence regarding particular terms is limited by our
knowledge of the items they name. One may well believe that the
black widow is a very dangerous spider yet fail to recognise it in
one’s bathroom.\footnote{I know a person to whom this happened – his ‘pet’ spider in
the bathroom turned out to be a black widow. Fortunately, it was pointed
out to him in time, and he lived to tell the tale.}

Pierre’s problems with London are so puzzling
because, on the one hand, his situation is like the situation with
a black widow (where we have a competent speaker lacking some
particular information), and on the other hand, he fails to map his
‘French’ beliefs unto his ‘English’ beliefs even though they are highly
relevant to his life in London. His ignorance regarding the relation
between ‘London’ and ‘Londres’ is so astonishing as to make us
doubt his linguistic competence.\footnote{One could also point out that the
very set-up of the puzzle is rather far-fetched. It seems quite unlikely that Pierre
got to London from France without knowing where he was going, and
that he lived there without coming in contact with the places he knew from
postcards or other sources that contributed to his opinion that ‘Londres est jolie’.
One could, however, modify the puzzle to make it more plausible. Imagine
someone, say Jane, who is a keen amateur reader of Roman history. So she
forms a very unfavourable opinion of a place in England called ‘Durolipons’.
Not only was it just a couple of huts huddling together in
mud and rain, giving occasional shelter to highwaymen, but the very aspect of
the place seemed unfriendly and not fit for habitation. She would never want
to live there. Yet then she applies for a job in Cambridge, quite certain that
it is a place where she would like to live. We, of course, rightly suspect that
Durolipons and Cambridge are one and the same place.}

There is a difference between proper names and natural kinds
terms that should be mentioned. Proper names, unlike natural kind
terms, are frequently imported into languages without much further
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ado. Place names especially are often simply ‘hijacked’ from their language of origin. However, names of places that have been historically significant for the speakers of some language sometimes receive a name in that language that may be quite different from their original name (‘London’ and Londres’, ‘Köln’ and ‘Cologne’, ‘Warszawa’ and ‘Warsaw’ for example), and it is good form to use, for example, an English name when speaking English. But what of the names that do not change between languages, for example ‘Amsterdam’ in Dutch and in English? Is there one name in two languages or are there two homographic names? And what about Amsterdam, New York? Does it have a Dutch name or an English one? I think these are genuinely grey areas where traditions of use dictate the most effective approach, that is, the approach that makes communication run as well as it can.

4.2.8 Conclusion

We saw in section 4.2 that being able to separate the metaphysical from the epistemological status of statements is very important to Kripke’s project. This distinction makes it at least prima facie plausible that we could know or believe necessary propositions because if those propositions make factual claims about the world they are likely to be a posteriori. The problem of equivalence of necessary propositions persists but is mitigated by adopting the notion of a singular proposition. Singular propositions involve in an essential way the individual or natural kind they are about, and this limits the number of sentences that can be seen as expressing the same proposition.

The Pierre puzzle presents a serious problem for Kripke because it can be interpreted as challenging the presuppositions of direct reference and of rigid designation. To blunt the challenge, an advocate of Kripke’s position would have to show that the puzzle can be dissolved without altering Kripke’s position on proper names (or, more generally, without altering the account of content that Kripke seems to presuppose). We did not find such a defence of Kripke’s position in the literature we reviewed, but that does not mean that
it could not be done. As I noted earlier, the responses to the puzzle presented here are only a sample of the relevant literature that is out there. We could see, however, that there are a number of difficult problems that have to be faced in solving the puzzle. It is important to keep in mind that any solution to the Pierre puzzle that is incompatible with a Millian view of proper names would challenge some substantial claims that underlie Kripke’s work. If we conceded that proper names have a meaning that goes over and above their reference and that this meaning is semantically relevant, i.e., that it influences the truth-value of the sentence in which the name figures, we would have to substantially modify the claim that names are directly referential, and that would complicate the applicability of the notion of rigid designation. Kripke does not claim that names do not have any meaning in terms of information value or descriptions attached to them, but he does claim that whatever sense they have is not a part of their semantics. The Pierre puzzle challenges these central claims of Kripke’s work.

4.3 Stalnaker and Necessary Propositions

Among the philosophers whose work we have been examining, Stalnaker worries the most about the problem of logical omniscience. He mentions the vulnerability to it as a drawback of his approach in Stalnaker, 1984, and devotes two articles (‘The Problem of Logical Omniscience’ part I and II) to it. We have outlined the problem at the beginning of this chapter, in section 4.1 but let us now return to it, and see why Stalnaker finds it so troubling.

In section 3.3, we investigated Stalnaker’s approach to modality. We saw that according to him, propositions do not reflect the structure of sentences that are used to express them. In fact, on Stalnaker’s view, propositions are conceptually independent of language. For a given state of affairs and a set of relevant possible

\footnote{Stalnaker, 1999c and Stalnaker, 1999d.}
worlds, propositions tell us where a state of affairs holds and where it does not. They are purely extensional.\textsuperscript{90} Their role is to deliver informational content, which is identified with their truth-conditions. This coarse-grained approach to content gives a special urgency to the following questions: When believing a proposition, which of its consequences and applications are believed as well, so to say, by the same token? How is it possible that someone who believes that \( P \) can fail to believe that \( Q \) even if \( P \) and \( Q \) are equivalent?

Here is what we shall do in the following sections: In Stalnaker, 1999a, Stalnaker describes what he considers the received view of how beliefs are stored. We shall try to see how it works, and contrast it with the view that Stalnaker himself advocates. Finally, we shall connect the position Stalnaker arrives at (in Stalnaker, 1999a and Stalnaker, 1999d) with other themes from his work, focusing on the Gricean accents of some of his early articles. Our aim throughout the following section will be to examine Stalnaker’s approach to belief, and to focus on the way he tries to deal with problems that arise along the way. One of those problems is the notorious problem of logical omniscience. We hope to place Stalnaker’s views on belief in the context of his own work and competing theories. Let us start by presenting what Stalnaker considers the ‘received view’ of storing beliefs.

\subsection{4.3.1 Storing Sentences in Boxes}

The sentence storage model of belief is implicitly assumed by so many philosophers that it deserves to be called ‘the received view’.\textsuperscript{91} It has been championed, among others, by Gilbert Harman, Jerry Fodor, and Christopher Cherniak.\textsuperscript{92} Stalnaker analyses this approach to belief, using its shortcomings to motivate his own proposal. In his analysis, Stalnaker makes an important assumption

\textsuperscript{90}We shall delve somewhat deeper into Stalnaker’s conception of propositions little later, in section 4.3.3.

\textsuperscript{91}The presentation in this section follows Stalnaker, 1999c but elaborates on some points, and goes beyond it in others.

about what he calls the ‘ordinary’ notion of belief. According to the ‘ordinary’ notion, belief is supposed to be, at least to some degree, consciously accessible to the agent who has it. For the time being, let us leave open the question whether this assumption is justifiable.

According to the storage model, one’s beliefs are determined by a set of sentences that are stored (in either some sort of a mental language or in one’s natural language) in one’s belief box. To believe that $P$ is to have a sentence saying that $P$ stored in one’s belief box. This is an approximation because no one actually claims that everything an agent believes is stored in his belief box. The sentence storage model distinguishes between explicit and implicit beliefs. Explicit beliefs are those that are stored in the belief box, while other beliefs, for example some obvious consequences of the explicit beliefs, are said to be believed only implicitly.

There are two kinds of relations that are important to the contents of the belief box. Firstly, there is the relation between the belief box and the external world (relation between beliefs and sentences), and secondly there are mutual relations between the items in the belief box (relation between sentences and entailments between beliefs). The relation between a belief box and the external world is complex because it includes not only an agent’s interactions with his physical surroundings but also his relations to other agents, their beliefs, and his conception thereof. Right now, let us focus on the mutual relations between the items in a belief box.

It is important to keep in mind the difference between the contents of a belief box (i.e., sentences of one or another language) and the content of the sentences in it, which is often identified with the propositions those sentences express.

In order to make some sense of the usefulness of the belief box, we need to characterise the content of the sentences in it, their semantic value. This is because, while the sentences are the explicit beliefs, it is what the sentences say, their content, that figures in belief attributions. In a sentence of the form ‘$x$ believes that $P$’, the $P$ is used rather than mentioned. A semantics for the language in which the sentences are stored, should tell us what ‘$x$ believes that $P$’ means, not in terms of the syntax of $P$, but in terms of the semantic
value of $P$. Thus even though to believe something explicitly is to store the appropriate sentence, just which sentence this is, is not necessarily clear from a particular belief attribution. When we say that $x$ explicitly believes that $P$, all we can conclude is that $x$ stores some sentence that says that $P$.

Also, just which entailments characterise the contents of a belief box depends on how we characterise the contents of the sentences in it. In doing that we have to balance two sets of considerations. Generally speaking, if we individuate the contents of sentences finely, there will be less equivalencies between sentences, which means that if we say that $x$ believes that $P$, there will be less sentences that could stand for $P$ (and be stored) than if we chose a more coarse-grained description. If the contents are individuated too finely, it will not be possible to bring out the similarities between different sentences stored in the belief box – sentences that play the same role in the cognitive economy of the agent who stores them.

If, on the other hand, we individuate the contents coarsely, e.g., by the sentences’ truth-conditions, we end up with a model that seems to predict something close to logical omniscience. In such a model, anyone who believes a necessary truth (e.g., a trivial tautology) believes by the same token all necessary truths. On this approach to the individuation of content, if I believe that all bachelors are unmarried, I believe something that is true in all possible worlds within a given domain, and that cannot be distinguished from anything else that is also true in all possible worlds in that domain. And if I believe a contradiction, then I should believe all its consequences, that is, anything. Advocates of this version of the storage model would say, however, that nothing they claimed so far implies that believers have to be able to recognise the logical consequences of their beliefs. We should realise that taking this step is tantamount to giving up on explaining the ‘ordinary’ conception of belief where we take it that agents are capable of recognising at least some consequences of their beliefs. Thus in responding to an obvious problem with a coarse-grained conception of belief, its advocates gave up on trying to explain how belief functions in real agents.

One may wonder what sorts of conditions should be met by the
contents of the belief box. At this stage, when we are interested in what goes on in the belief box rather than in determining what makes particular beliefs correct, it may seem that no conditions need be imposed on what goes into the belief box. This may well be true, but the question remains whether any principles should apply to the relations between the sentences in a belief box.

Some proponents of the sentence storage model argue that sentences in the belief box should meet at least some minimal standards of coherence. The suggestion is that if the contents of a belief box were a complete chaos, it would not count as a belief box and its owner would not count as an agent. Upon reflection we can see that an organisation of the sentences in the belief box would facilitate the creation of complex beliefs – they can be accessed without having to go through too much of the content of the belief box – as well as the creation of implicit beliefs. Perhaps then it would be plausible to adopt some restrictions on the contents of a belief box. However, what the restrictions should be is far from clear. Considerations of minimal rationality may require that one should believe some obvious consequences of the sentences stored in one’s belief box but it cannot be required that these consequences be stored. This is because obvious consequences of sentences that are in the belief box are just the kind of thing one should not have to store since they can always easily be inferred. Harman’s principle of clutter avoidance tells us not to overcrowd one’s own belief box with trivial consequences,\(^93\) and this is one of the cases where it seems to apply. Even if we considered an idealised agent whose storage capacities and deductive powers are limitless, we would have no reason to assume that her belief box is closed under deductive consequence because such an agent would find it very easy to always infer obvious consequences of her explicit beliefs.

We saw now that in the case of explicit belief, deductive omniscience is not plausible as a constraint on sentences stored in a belief box neither for real nor for idealised agents. Real agents have a limited storage capacity and should therefore avoid storing obvi-
ous consequences of their beliefs, and idealised agents do not have to store clear consequences of their beliefs since they can always easily infer them anew. It seems therefore, Stalnaker concludes,\textsuperscript{94} that a logic of explicit belief based on the sentence storage model would reveal nothing about the inferential powers of either real or idealised agents since it would deal only with the base from which the agents reason and not with the ways in which they do it. And if this is the case, the model misses out on an essential aspect of belief.

Let us turn our attention to a more promising topic now: the storage model’s conception of the implicit belief. Within the storage model of belief, we find at least two basic conceptions of implicit belief – a broad one, and a narrow one.

On the broad conception, implicit beliefs include all implicit consequences of the explicit beliefs that are stored in the belief box. This includes all deductive consequences of explicit belief. On the broad conception, then, assuming classical logic, belief is deductively closed. However, the proponents of the storage model would say that we have no licence to assume anything about the speaker’s ability to access the implicit beliefs. They do not claim that implicit belief is anything like belief in any ordinary sense. All they claim is that the notion described here is of some interest. On the broad notion, implicit belief is described by an ordinary modal logic. It is important to note that because implicit beliefs are not assumed to be accessible to the agent who supposedly has them, this notion of belief tells us no more about the inferential powers of a believer than the notion of explicit belief did.

On the narrow conception of implicit belief, something is believed only if it is ‘easily inferable from one’s explicit beliefs’.\textsuperscript{95} Easy inferences are supposed to include both some easy inductive and some obvious deductive consequences of the explicit beliefs. In order to clarify the narrow notion of implicit belief, one would then have to specify what counts as an easy inference, and that is far from easy. But let us suppose for a moment that we do have some definition of

\textsuperscript{94}Stalnaker, 1999c, 249.
\textsuperscript{95}Harman, 1973, 13.
easy inference. Would then the notion of implicit belief characterise belief in the ordinary sense? Not necessarily. On the one hand, implicit beliefs are presumed to be consequences of explicit beliefs, and in the storage model of belief there is no reason to suppose that even explicit beliefs are accessible to consciousness. Harman is quite clear about this. He says:

A belief can be explicitly represented in one’s mind, written down in Mentalese as it were, without necessarily being available to consciousness.\(^{96}\)

Harman’s example of inaccessibility is a Freudian one, where inaccessibility is explained by repression. But it may also be the case that an agent clearly entertains a belief but refrains from storing it in his belief box to avoid too much clutter. What Stalnaker objects against is the separation between the contents of the belief box and the role it plays, that is, between beliefs and their use.

On the storage model, one may then have an agent to whom his explicit beliefs are not accessible, and who reasons with beliefs that are not stored. This is why the model does not seem fit to describe anything like an ordinary notion of belief. Stalnaker sums up his main objection against this model of belief as follows:

Ordinary knowledge is a capacity, and ordinary belief a disposition.\((\ldots)\) But what is the capacity or disposition a capacity or disposition to do? The storage model has nothing to say about this, and so has little promise of clarifying the problem of logical omniscience.\(^{97}\)

This consideration leads Stalnaker to develop a different approach of belief all together. It is the ‘question-answer machine’ model that we shall describe once we have had a look at some background considerations about belief representation.

\(^{96}\)Harman, 1973, 14.

\(^{97}\)Stalnaker, 1999c, 251.
4.3.2 Belief Content and Belief Representation

As we just saw, Stalnaker rejects the sentence storage model of belief because it does not provide answers to some basic problems connected with belief. Distinguishing between explicit and implicit belief does not help us understand why it is that agents sometimes believe that $P$ and yet do not believe that $Q$ even when the contents of the two are identical. Stalnaker concludes that the sentence storage model does not even ask the right questions that would help us to better understand the ‘ordinary’ notion of belief for which the notion of accessibility of beliefs is crucial.

Having gone through Stalnaker’s criticism of the ‘received view’ of belief representation, we might expect that his next step will be to develop and defend a position that he finds satisfactory. Yet, this is a step Stalnaker refuses to take. His reasons for abstaining from developing an account of belief representation are, as we shall see now, a very important part of his philosophical enterprise.

We have noted on previous occasions that at the core of Stalnaker’s enterprise is the idea that speech is a kind of action, and that the way to account for the effect utterances have, is to look at what changes they cause in the epistemic alternatives the audience entertains. We also saw98 that, on Stalnaker’s account, truth or falsity of beliefs does not depend directly on the causal relation between an agent and his environment. The relation between the environment and the way it is represented by belief is one of counterfactual dependency.99 So for example, a belief that there is a moose here, tends to be caused by a moose. We are not always right, we may mistake a deer for a moose, but being wrong most of the time would prompt us to change our beliefs about moose. Therefore, we can say that usually our beliefs about moose depend on moose.100

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98 In section 3.3.5.
99 For example in Stalnaker, 1999a, 229 he says: ‘States of organisms,..., carry information when there exists a pattern of counterfactual dependencies between those states and corresponding states of the environment.’
100 We may still want to ask what sort of dependency on the states of environment is at play here. As I see it, my beliefs about the dodo are a result of my reading about it and looking at old pictures and new computer reconstructions
People express propositions because they hold certain beliefs and want to influence the beliefs of others. Many philosophers who investigate beliefs, knowledge, and language, seem to think that the next important question that should be answered is how we should represent beliefs, and what makes them true in particular cases. Advocates of causal theories, philosophers like Kripke, Kaplan, Lewis, Salmon and Evans, to name just a few, have spent lots of time and energy trying to defend the notions of singular proposition, direct reference, or haecceitism. What these notions have in common is that they are related to the representation and interpretation of certain classes of propositions. In Stalnaker’s case, we cannot tell what his position with respect to these notions is because, while he sometimes analyses their problematic consequences, he does not see the question of representation of belief as a part of his undertaking. He says that

...language is a device for achieving certain purposes, and we should separate, as best we can, questions about what language is used to do from questions about the means it provides for doing it.\(^{101}\)

In Stalnaker’s view, propositions carry information, and the exchange and gathering of information is what is crucial to our use of language. All we need to assume in order to use propositions in the ways Stalnaker does, is that beliefs, regardless of how they are stored, help the believer to tell apart the circumstances where the content of the belief holds from those where it does not. This is all Stalnaker claims to presuppose. He says that even the advocates of a more fine-grained approach to belief

...must admit that propositions, whatever they are, have truth-conditions, and that representation, whatever else it might be, distinguishes between possibilities. Even if there of the life and times of that unfortunate bird. Not much has changed in my physical environment with respect to the dodo since I was born since the bird, called ‘dodo’—meaning ‘stupid’ in Portuguese, because of its child-like trusting attitude has been extinct for centuries.

\(^{101}\)Stalnaker, 1999b, 2.
is some kind of fine-grained propositions that is essentially involved in representation, and that is useful for describing it, we can agree that anything with representational content has truth-conditional or informational content, and that we can begin by considering its role in the description and explanation of rational activities, including speech.\textsuperscript{102}

This is not intended as an argument against fine-grained approaches to propositions. It is rather a low-key defence of his own, coarse-grained approach. The claim he makes here is that even if it were the case that fine-grained propositions are involved in belief representation, a truth-conditional approach would still have a role to play.

Even if we agree to separate the question of truth-conditional content from the question of belief representation, one still should say something about the relation between the two. Stalnaker says that

\ldots the propositions believed, \ldots, are not components or constituents of a belief state; there need not be an internal representation of some kind corresponding to each proposition believed. Instead, propositions believed are properties of a belief state.\textsuperscript{103}

One wishes Stalnaker were a little more forthcoming on the subject of the relation between propositions and beliefs. However, any elaboration on that subject would almost inevitably lead him to speculations about the way beliefs are represented. He wants to keep focus on what propositions are good for. One may find our presentation of Stalnaker’s strategy rather surprising: it might seem that Stalnaker deals with the subject of belief in numerous articles,\textsuperscript{104} but on closer inspection, what he talks about is propositions and informational content, leaving the relation between belief in an ‘ordinary’ sense and informational content sketched only in very broad contours.

\textsuperscript{102}\textsuperscript{Stalnaker, 1999b, 4.}
\textsuperscript{103}\textsuperscript{Stalnaker, 1999a, 153.}
We have just looked at Stalnaker’s criticism of the sentence-storage model of belief. One of the points raised against that model was that it had little if anything to say about the ‘ordinary’ notion of belief. Now we see that Stalnaker himself cautiously avoids that topic as well. His position is coherent, to be sure, but it is with some surprise that we realise that he makes much fewer claims than would at first appear.

One might think that the propositions we express depend on what we believe, and that what we believe is intimately linked with how it is represented, with how it appears to us as agents. If this were the case, a separation between the form and the content of belief, such as Stalnaker proposes, would be indefensible. Stalnaker tries to deflect this line of criticism, saying that

\[\ldots\] one might be skeptical about the very idea that content can be separated conceptually from form and means – from the vehicles of speech and thought. Explanations of the semantic properties of expressions in terms of (\ldots) the conceptual roles or uses of expressions are examples of accounts that try to avoid contents as objects altogether. The attempt to do semantics without propositional content is motivated more by pessimism about the possibility of an adequate account of propositions than it is by optimism about the possibility of explaining phenomena without them. But I think the pessimism is properly directed against the idea of absolute, context-independent propositional concepts. If we think of propositions as functions from some given domain of relevant alternative possible situations to truth-values, we may be able to reconcile the conceptual distinction between form and content with the phenomena that motivate skepticism about propositions and possible worlds.\[105\]

Let us see now the model of belief Stalnaker advocates without taking a position on how belief is represented.

\[105\]Stalnaker, 1999b, 3-4.
4.3.3 Question-Answer Machine

The model of belief that Stalnaker proposes\textsuperscript{106} is driven by the idea that belief and knowledge are to be understood as dispositions and capacities to answer questions.\textsuperscript{107} Stalnaker urges us to discard the metaphor of storing sentences in a belief box, and proposes instead a hypothetical ‘question-answer machine’. There are important differences between these two approaches to belief. While the hypothetical question-answer machine needs – among other things – some facility to store information, just how it stores information is not relevant to what it knows or believes. All one needs to assume in the question-answer model, is that if an agent knows or believes that $P$, then the information (or misinformation) that $P$ is implicit in whatever way the information is stored. It is required, though, that the information that $P$ should be, at least in principle, available to the agent, meaning that she can access the information in order to answer a question that calls for the use of $P$. As we shall see, the notion of accessibility is pivotal to this proposal.

Accessibility of information is seen as a matter of degree, and a sharp distinction between explicit and implicit belief is avoided. Accessibility is also context-dependent. As Stalnaker puts it:

> Attribution of knowledge and belief are obviously highly context-dependent, and the line between what we already know and what we could come to know if we made the effort may be one thing determined somewhat arbitrarily in different ways in different situations.\textsuperscript{108}

In developing the question-answer model, the main task is to spell out accessibility conditions for information that is presumed to be believed. As we just noted, accessibility comes in shades and grades. One can answer some questions easily, quickly, and with little if any

\textsuperscript{106}My presentation of it is based on Stalnaker, 1999c, 251-254.

\textsuperscript{107}At least at this stage, Stalnaker is mainly interested in ‘knowledge that’, that is, propositional knowledge. In Stalnaker, 1999d he briefly mentions the problems of ‘knowledge how’ but does not attempt to incorporate it explicitly into his model.

\textsuperscript{108}Stalnaker, 1999c, 252.
hesitation, while coming up with answers to other questions can take considerable time and effort. While the answer to one question may come almost immediately, answering other questions may require numerous steps, and we may even be uncertain at the outset whether we shall arrive at the desired result at all. Just how easy must the search be if the answer is to count as something one already knows or believes rather than something one has the capacity to know or believe? What we know already, what we can derive with various degrees of ease, and what we do not know seems to be a matter of degree. There does not seem to be any natural way of drawing the line between these cases.\textsuperscript{109}

What is more problematic in this model is that one proposition can be the answer to different questions, and regardless of what standards of easy access we adopt, that proposition may be easily accessible in response to one question but not in response to another. For example,\textsuperscript{110} it would take most people a long time to answer the question ‘What are the prime factors of 1591?’ but much shorter time to answer the question ‘Is it the case that 43 and 37 are the prime factors of 1591?’ Yet answers to these two questions have the same content, even on a very fine account of content.\textsuperscript{111} Part of the problem is that the questions themselves can change what an agent knows – we all remember the Platonic dialogues where innocent boys are coaxed to give answers to questions they hardly even understood at first. Yet it is a fact, and not a problem, that questions can change what an agent knows. It only becomes a problem if we are trying to use agent’s question-answering abilities to get at what the agent could be said to know even if the questions were not asked. On this model, we seem unable to separate knowledge and belief from the use they are put to. Finally, Stalnaker says, “even if we had a satisfactory account of accessibility for the question and answer model, it would not be clear how to generalize it to an account of knowledge and belief in terms of capacities and dispositions to use

\textsuperscript{109}Stalnaker makes this point in Stalnaker, 1999a, 252, see also the quotation from Stalnaker, 1999a, 253 at the beginning of this paragraph.

\textsuperscript{110}This example is given in Stalnaker, 1999c, 253.

\textsuperscript{111}In both cases the answer is ‘43 and 37 are the prime factors of 1591’.
information (or misinformation) to guide not just one’s question answering behavior, but one’s rational actions generally.”

We have now introduced the basic ideas of Stalnaker’s question-answer model. Let us reiterate what they are. Stalnaker rejects the belief-box model of belief because, as he argues, it does not help us to understand the crucial function of beliefs – the way in which agents use the information they stored. Turning away from the problem of storing belief, Stalnaker emphasises that having a clearer notion of accessibility of belief is the most important task at hand. Accessibility turns out to be context-dependent and hard to separate from the goals of the agent. Stalnaker’s main dissatisfaction with the model he proposed is that having introduced belief and knowledge as dispositions and capacities, it seems very difficult to separate these notions from the particular contexts in which they are used. This problem becomes more urgent if we acknowledge that we may have beliefs that we do not express simply because we never need to. We may have beliefs where it is hard to imagine what they imply in terms of dispositions and capacities, as well as dispositions and capacities that do not translate into speech. Stalnaker treats belief as a disposition, speech as action, and even propositions do not have to be necessarily expressed verbally. Is there nothing special about speech? To those of us who have the suspicion that there is, Stalnaker owes at least a brief sketch of what distinguishes speech from other kinds of action.

4.4 Answering Our Problems

At first glance, and even a second one, I was puzzled as to why Stalnaker thinks that logical omniscience is a problem for his framework. Let me try to explain now where that sense of perplexity came from.

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112Stalnaker, 1999c, 253.
113I cannot give an example of such belief because then it would, by definition, become expressed and thus used.
114I may for example believe that there is a decimal number expression so long that to read it would take longer than my lifetime.
In this section we shall try to weave together several strands of Stalnaker’s work creating a somewhat speculative picture of the connections between his concept of a possible world, his Gricean inclinations, and the problem of logical omniscience. While aiming to remain true to the spirit of his work, some of the claims made here are not based on anything Stalnaker wrote. Some parts of the synthesis developed here are speculations about what Stalnaker should or might have said, rather than an observation of what he actually did say.

4.4.1 Preconditions of Omniscience

It would seem that for a problem of logical omniscience to be a cause of concern to a possible-world framework, a number of preconditions have to be in place. We shall now look at what they are. In doing so, we shall use observations we have gathered in previous chapters – that is why this section has a somewhat recapitulating flavour.

While the problem with logical omniscience arises, strictly speaking, as soon as we characterise belief content in a way that makes it impossible for us to distinguish between two beliefs as long as their contents are logically equivalent, there are several features the presence of which in a framework makes the problem more pressing.

Firstly, the problem of logical omniscience develops in a system where a connection is made between the contents of utterances and the contents of beliefs. We could imagine someone trying to avoid the problem by positing extensional propositions as contents of utterances and structured propositions as the contents of belief. This would be very counterintuitive but the problem would not arise. For the problem to arise, both the contents of beliefs and those of utterances have to be individuated in a suitably coarse-grained fashion. This is the point that seems to trouble Stalnaker the most. He tacitly assumes ordinary modal logic, and explicitly individuates propositions by the truth-values they take in the possible worlds of the relevant domain.

Secondly, the problem can become a source of concern only if we do not change the terms, that is, if we do not change the meaning of
‘belief’ in such a way that it becomes quite separate from an intuitive notion according to which a person who believes that \( P \) is likely to at least assent to \( P \) when confronted with it.

Thirdly, the extent to which the problem of logical omniscience develops depends on the kinds of necessity that characterise the individuals, relations, and states of affairs in the domain of interest. For example, if we build into our framework metaphysically necessary properties for individuals and natural kinds, the class of necessarily equivalent statements will be bigger than if we did not take that step. We saw that Kripke’s framework abounds in necessities, and because at least some of them are metaphysical, that is, independent of all epistemic considerations, the class of necessary statements in this framework is large and epistemically opaque. On the other hand, if we have a framework which does not enable quantification over sets of possible worlds with more than one member, the notion of necessity we can derive is much weaker. In fact, because in such a framework we cannot express the difference between what is actually the case and what is necessarily the case, identifying the cases of necessarily equivalent statements is difficult to say the least. This we saw to the case with Lewis’s framework. We have not yet dealt with Stalnaker’s approach to necessity, but it is safe to say that it will turn out to be very different from both Kripke’s and Lewis’s approach.

Finally, when quantifying over sets of possible worlds, provisions have to be made for quantifying over individuals. This is not really a separate problem, but rather a precondition of quantification over sets of possible worlds. We have seen that Stalnaker refuses to defend any particular position regarding the representation of beliefs, and indeed does not want to say anything about the metaphysics of propositions beyond identifying their information content. Yet since he clearly does quantify over sets of possible worlds, we can try to analyse the preconditions that have to be in place for that quantification to make sense. Presuppositions about identity of individuals

\[\text{115} \text{It needs to be stressed here that I do not intend my comments to be applied to mathematics. As I said before, considerations regarding mathematics can be, and often are, a separate part of a theorist’s framework.}\]
are among them, and they are connected to the question of rigid designation, direct reference, and singular propositions. We can try to infer something about the way in which the notions of rigid designation and direct reference are compatible with Stalnaker’s framework without claiming that Stalnaker intends to commit himself to either of these notions. This enterprise is facilitated by the fact that Stalnaker has not been silent on the topic of rigid designation. We saw in section 3.3.6 that he exerts himself considerably trying to account for some epistemically counterintuitive consequences of rigid designation. An analysis of the Mars - Venus problem\textsuperscript{116} inspired him to say that in some cases, the meaning of an assertion is to be identified with the diagonal of the propositional concept. On this basis as well as from various examples from his ‘Assertion’,\textsuperscript{117} we may conclude that Stalnaker is open to adopting rigid designation for proper names. However, just what the notion of rigid designation in Stalnaker’s framework amounts to depends on the way the domain over which we quantify at a given occasion is constructed. Closely connected with the notion of rigid designation and direct reference is the issue of essentialism and haecceitism. In section 3.2.11, we saw that rigid designation presupposes some version of essentialism and that direct reference is linked to an essentialist form of haecceitism. Stalnaker does not seem to adopt either haecceitism or essentialism, nor, as I shall try to show presently, does he have to choose between the two.\textsuperscript{118}

We have now had a little preview of the points one should look at when determining how the problem of logical omniscience expresses itself in a framework. In the following sections we shall have a closer look at Stalnaker’s framework from the perspective of these considerations. While we dealt with Stalnaker’s work in other sections and chapters, this is the time to a look at the fine print.

\textsuperscript{116}Stalnaker, 1987.
\textsuperscript{117}Stalnaker, 1978.
\textsuperscript{118}Putting it this way makes it seem as if Stalnaker could have his cake and eat it. This is no quite the case. We shall try to show that he does not have to make any metaphysical assumptions about individuals in order to preserve the rigidly designating behaviour of proper names.
4.4.2 Possible Worlds Under the Magnifying Glass

In order to interpret Stalnaker’s notion of a possible world correctly, one has to keep in mind the extent to which it is context-dependent. He expresses this view in numerous places, but it is the following passage where we find it stated most succinctly:\footnote{Most quotations occurring in this section have been used before, in section 3.3.1. It is in the interest of ease of reference that they be repeated here.} 119

I doubt that it is plausible to believe that there is, independent of context, a well-defined domain of absolutely maximally specific possible states of the world, but I do not think the proposed conception of propositional content requires a commitment to such a domain. The alternative possibilities used to define propositions must be exclusive alternatives which are maximally specific, relative to the distinctions that might be made in the context at hand. But one can make sense of this requirement even if there is no ultimate set of possibilities relative to which any possible distinctions might be made. One might think of possible worlds as something like the elements of a partition of a space, rather than as the points of the space. The space might be partitioned differently in different contexts, and there might be no maximally fine partition. (This is only a rough analogy. And the space itself may also vary from context to context.)\footnote{Stalnaker, 1981, 135.} 120

In other words, in Stalnaker’s framework one cannot use the notion of ‘all possible worlds’ without further qualification. There is no provision here for an absolute totality of possible worlds – there are always only sets of possible worlds relevant to the situation at hand. We need yet to get a better idea of how the context-given restrictions on sets of possible worlds function, but already we can predict that a contextualisation of the domain of possible worlds has some bearing on the problem of logical omniscience.

Because in Stalnaker’s framework belief content is expressed by coarse-grained propositions, a belief in a sentence that expresses a necessarily true proposition still implies belief in all necessarily true
sentences. However, many possible worlds are excluded from the agent’s consideration because they are not relevant to the situation she finds herself in. This influences the development of the problem of logical omniscience in two ways: On the one hand, because the number of possible worlds under consideration in a given situation will be relatively small, there will be more equivalences between propositions, which makes the problem worse. On the other hand, the possible worlds under consideration will be epistemically accessible, which makes the problem less pressing. It is important to note, though, that in Stalnaker’s framework, many of the propositions that turn out to be equivalent on for example Kripke’s framework, will be so only contingently.

The shift from metaphysical possibilities to epistemic possibilities changes somewhat the way the problem of logical omniscience expresses itself in a framework, but does not eliminate it. In Stalnaker’s framework, the problem could only be eliminated if the coarse-grained approach to propositions were abandoned, but this, as we know well, is a step Stalnaker will not take.

### 4.4.3 Shifty Propositions and Unstable Individuals

As we saw earlier, in section 3.3.3, the identity of a proposition depends on the domain over which it is defined. Therefore, once the domain shifts between one context and the next, propositions start shifting with it. As Stalnaker puts it:

If the alternative possibilities there are vary with the context, then so do the propositions which are, according to the conception of content I am sketching, just ways of distinguishing between the alternative possibilities. One can make sense of questions about identity and difference of the propositions expressed in different utterances or acts of thought only given a common context - a common set of possibilities that the propositions are understood to distinguish between. This yields a conception of proposition, which is less stable than, and very different from, the traditional conception, but
it is, I think, more adequate to the phenomena of speech and thought.\textsuperscript{121}

We see now that even though propositions are fully determined by the truth-values they take in a given domain of possible worlds, there is a catch to it. In Stalnaker’s framework, we cannot talk about the set of possible worlds because each situation creates a new context. And as the context changes, so does the set of possible worlds that are relevant to it, as well as the propositions that characterise agents’ attitudes. This point is not new but it is useful to remind ourselves of it here because it supports our line of argument, which is that Stalnaker’s framework has features that, when taken fully into account, make the problem of logical omniscience less pervasive that one might think at first sight.

The changes that propositions undergo between one context and the next have a bearing on the identity of individuals across possible worlds. We saw that in Kripke’s framework, what is and what is not possible was, in the end, determined by metaphysical necessity. Essences, that is, necessary properties, were adopted into the framework to help to deal with the identity of individuals in a way independent of any epistemological considerations. Necessary properties of individuals and of natural kinds facilitated quantification over individuals and natural kinds in all possible worlds. They also helped define the domain of Kripke’s possible worlds in virtue of telling ‘possible possible worlds’ apart from ‘impossible possible worlds’, to use a somewhat awkward idiom. These two functions of necessary properties were closely linked.

In Stalnaker’s framework, on the other hand, the domain of possible worlds depends on the context and is a function of epistemic alternatives entertained by agents at a given occasion. As a consequence, there is no inherent need here to provide for the reference of proper names in all metaphysically possible worlds. It is quite sufficient for proper names to refer only in the domain at hand. Given that the domain consists of epistemic alternatives, one does not need to provide a universal guide to the reference of proper names, and

\textsuperscript{121}Stalnaker, 1981, 135.
one need not to adopt here either haecceitism or essentialism. Rigid
designation demands that a designator refers to the same individual
in every possible world. If the domain of all possible worlds is spec-
ified as a domain of epistemic alternatives relevant to the situation
at hand, rigid designation does not have to be accompanied by any
metaphysical assumptions, as was the case in Kripke’s framework.
In Stalnaker’s framework, the notion of the same individual in every
possible world is determined by what the participating agents are
happy to consider to be the same individual in a given context, and
the question of essential properties is avoided.

We saw that in Kripke’s framework, essential properties were an
integral part of the system. They were also responsible for gener-
ating a class of potentially epistemically opaque necessary state-
ments. In Stalnaker’s framework, where metaphysical assumptions
are avoided, statements like ‘Heat is the motion of molecules’ or ‘Wa-
ter is H₂O’ are necessary only to the degree to which the agents think
they are. The necessity that can be attached to them is epistemic.
The class of metaphysically necessary statements has disappeared
and what we have in its stead are necessary statements that are per
definitionem epistemically accessible. Moreover, at any given point
we consider only those propositions that are defined over the do-
main that is contextually given. The class of necessary propositions
is profoundly different from the way we thought about it in Kripke’s
framework, and the difference helps limit the damage the problem
of logical omniscience can do.

The obvious objection to be raised against the use of epistemic
possible worlds is that there is no guarantee that even if agents agree
with each other, their conclusions are not off the mark. They may
all agree at some point that ‘this is an elm’ or that ‘the man in the
corner is drinking champagne’ and yet all be wrong. Stalnaker con-
siders these kinds of scenarios. It motivates his information-theoretic
account of content.¹²² The main idea behind that approach is that
content should be explained in terms of ‘counterfactual dependencies
that tend to hold, under normal conditions, between thinker’s states

¹²²We have dealt with that in section 3.3.5.
and their environment.\textsuperscript{123} The information theoretic account does not have a direct relevance to the problem of logical omniscience, but should be mentioned here to help us complete the picture of Stalnaker’s approach to foundational semantics.

### 4.4.4 Partial Worlds and Kindred Nightmares

One question that emerges from our considerations of Stalnaker’s approach to possible worlds and that is directly relevant to the problem of logical omniscience, is the question of completeness or partiality of possible worlds within his framework. We read in the quotation above that ‘[t]he alternative possibilities used to define propositions must be exclusive alternatives which are maximally specific, relative to the distinctions that might be made in the context at hand.’\textsuperscript{124} This is as far as one can get from Lewisian realism about possible worlds. Stalnaker does not follow Lewis in taking the step of making his worlds as real as the actual world is, and rendering them thereby unsuitable for reasoning about communication. His possible worlds are as specific as the situation requires but not any more than that. With respect to an intuitive concept of an actual world, seen here as the background source of the epistemic alternatives, they could be called partial. But that would be a misnomer. With respect to the situation they describe and the function they are supposed to fill, they are complete. One might say that with respect to, let us say, a discussion about the possible outcome of the war in Iraq, a proposition describing the belief that Manchester United is simply the best is undefined, but when someone expresses, in the middle of a discussion about Iraq, his views about Manchester United, that statement will shift the context of the discussion.

The context-dependent approach to possible worlds has repercussions for the role they can play in the modelling of linguistic competence. The other lesson of the football example above is that in Stalnaker’s framework, we would need a separate account of what it means to master a language. The conversation participants are

\textsuperscript{123}Stalnaker, 1990, 140.
\textsuperscript{124}Stalnaker, 1981, 135.
tacitly assumed to be competent speakers, and Stalnaker does not
give an account of what that means.

The situatedness of possible worlds, the way they are specific
relative to the situation at hand, changes the scope of logical omni-
science dramatically. An agent cannot be said to entertain a belief
$Q$ in virtue of entertaining belief $P$ unless both beliefs are equivalent
and relevant to the situation under consideration at that point. The
possibility of beliefs ‘running away’ with an agent is limited.

None of the above considerations removes the disadvantages of
individuating belief contents by truth-conditions completely. We
saw, however, that Stalnaker’s framework is less vulnerable to the
problems of logical omniscience than one would have thought. We
shall now look at some of the finer workings of the building of a con-
text. The extent to which Stalnaker can connect his thinking about
possible worlds with pragmatic considerations of context-building
helps determine the extent to which he can put some flesh on his
framework.

4.4.5 A Griceful Interlude

Stalnaker’s thinking about context has been inspired by his interest
in speech acts. Although Stalnaker does not mention the work of
Paul Grice often, its influence on his own work should not be under-
estimated. Stalnaker mentions Grice’s ideas in Stalnaker, 1978, and
then comes back to this topic over twenty years later, saying:

My initial concern was with speech, and my approach was
inspired and heavily influenced by the work of Paul Grice in
which it was argued that we should see speech as action to
be explained, like any other kind of action, in terms of the
beliefs and purposes of the agent. Language is a device for
achieving certain purposes, and we should separate, as best
we can, questions about what language is used to do from
questions about the means it provides for doing it.\textsuperscript{125}

\textsuperscript{125}Stalnaker, 1999b, 2.
Grice’s view of speech as action had a profound influence on Stalnaker. Seeing communication as a goal-oriented activity is also helpful once we start looking at the ways of describing and restricting context. In Grice’s work, the notion of context is treated only implicitly, by describing, so to say, the rules of the game of conversation. Stalnaker learnt Grice’s lesson, and used it to describe context in more formal terms. What Stalnaker and Grice share is the emphasis on information as the main vehicle through which language fulfils its function.

Grice\(^\text{126}\) suggests that conversation is ruled by certain maxims that can help us to analyse various ways in which conversations can be awkward, inefficient, misleading or strange, ways that have nothing to do with the truth or falsity of what is said. Conversation is seen, in Grice’s work, as a purposeful enterprise governed by the cooperative principle, which says: ‘Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged.’\(^\text{127}\) The principle divides into four categories of maxims, related to the quantity, quality, relation, and the manner of what is said. Let us look at them now, and then see what use Stalnaker made of them.\(^\text{128}\)

The category of quantity delivers the following maxims:\(^\text{129}\)

- Make your contribution as informative as is required (for the current purposes of the exchange).

- Do not make your contribution more informative than is required.

Under the category of quality falls a supermaxim saying ‘Try to make your contribution one that is true’, and two more specific maxims:

\(^\text{126}\)For example in Grice, 1975.
\(^\text{127}\)Grice, 1975, 45.
\(^\text{128}\)I assume that most readers are familiar with these maxims: it is for the purpose of comparison that I find it useful to repeat them here.
\(^\text{129}\)This and the immediately following overviews of maxims of conversation are taken from Grice, 1975, 45-47.
Do not say what you believe to be false.

Do not say that for which you lack adequate evidence.

Under the category of relation falls a single maxim, namely ‘Be relevant.’ Finally, the category of manner produces the a supermaxim ‘Be perspicuous’ and various maxims such as

Avoid obscurity of expression.

Avoid ambiguity.

Be brief (avoid unnecessary prolixity).\(^{130}\)

Be orderly.

These maxims outline the requirements an utterance should meet in order to function well as an assertion in rather general terms. The generality does not allow us to see what happens when a speaker violates one of these maxims (and such things happen, especially in spoken exchanges, frequently). We know that a competent speaker can, and does, carry out so to speak on-line repairs of what he hears. Stalnaker’s approach to the analysis of assertion (which uses propositional concepts) allows us to see in more detail just how things can go wrong and what speakers do to rectify faulty assertions. Stalnaker adapts Gricean maxims to his framework, using the notions of proposition, possible world, and context set in the following manner:

A proposition asserted is always true in some but not all of the possible worlds in the context set.

Any assertive utterance should always express a proposition, relative to each possible world in the context set, and that proposition should have a truth value in each possible world in the context set.

\(^{130}\)If having a problem understanding the wording of this particular maxim, I suggest the reader refers back, two lines up, to the first maxim of manner.
The same proposition is expressed relative to each possible world in the context set.\footnote{Stalnaker, 1978, 325.}

Stalnaker does not claim that every assertion actually meets the requirements listed above – he says only that if an assertion is to function properly, it should meet these requirements. Should any of them be violated, the speaker may still be understood but the conversational exchange will be less than optimal.

Let us now have a look now at how this definition of assertion maps onto the Gricean maxims. The first requirement tells us not to say things that are trivial, that we should contribute information. We can relate it back to the category of quantity. The second requirement relates to the category of relation, telling the speaker to say things that are relevant. The last item of the definition is related to the category of manner. The point is that a speaker who is ambiguous is at danger of being misunderstood. The category of quality is very important to information exchange. We can relate it to the first condition on assertion but only with qualifications because Stalnaker’s description of assertion deals with changes in beliefs, not with whatever makes beliefs true.

The definition of assertion helps Stalnaker to shift the focus from describing speech acts to a more structured analysis of information exchange. The Gricean heritage is still very visible here, but Stalnaker focuses on the level of changes in the information states of agents, which are characterised by their propositional content.

In Grice, Stalnaker found an ally in a study of conversation from the viewpoint of information exchange. The emphasis of his work is in describing how language is used to change agents’ beliefs. That is why he takes so seriously the danger of epistemically undesirable consequences of the apparatus he uses. If logical omniscience were indeed pervasive throughout his framework, it would undermine its primary goal. However, I hope to have shown that at least on my somewhat speculative (yet textually supported) interpretation of his work, Stalnaker should not worry so much.
4.4.6 Stalnaker’s Limits

We have now traced the problem of logical omniscience through Stalnaker’s work. This helped us understand the intended use of possible worlds in Stalnaker’s framework as well as some of the less-obvious properties Stalnaker’s possible worlds exhibit. We saw that while the problem itself does not disappear, it changes and shifts. In the end, however, the only way in which it could be removed would be by adopting a notion of proposition that is more finely-grained, closer to language. Stalnaker seems well aware of this, and it is a consequence of his views that he would be willing to accept. In his defence of the coarse-grained notion, he points to the strengths of his framework, and reminds us that a lot of the advantages would be lost if a more fine-grained approach to propositions were adopted.

A comparison between Stalnaker and Kripke helped us understand the extent to which the aims of the two authors differ. With its consistent emphasis on the situatedness of communication, the main strength of Stalnaker’s framework is in the areas of foundational semantics and semantics of modal statements. With respect to descriptive semantics, he seems to adopt a broadly Kripkean picture, as we could see for example in his attempt to develop an intuitively plausible account of making necessarily false assertions (the Mars - Venus example, in section 3.3.6). Descriptive semantics, however, does not seem to be in the central to his work. If it were, he would investigate more closely the changes that would be brought into a Kripkean descriptive semantics once Stalnaker’s possible-world framework is adopted. Stalnaker does not intend to say much about language competence or about belief representation in general. There are theories that he is happy to argue with, as we saw in his criticism of the sentence storage model of belief, but his disagreement with those theories has not prompted him to develop a theory that he would want to defend.
4.5 Conclusion

In this chapter, we focused on the notion of proposition, the conditions that have to be in place if we are to make a good sense of it in a framework, e.g., the notion of a transworld individual and the kind of necessity that characterises a given framework. We saw that in Lewis’s framework, propositions have a limited application. This seems to be an inevitable consequence of the absence of any kind of essentialism in that framework. Indeed, it seems that the very notion of worldbound individuals does not capture the way speakers use counterfactual statements, and some kind of essentialist commitment may be necessary if a framework is to capture the way language is used. In Kripke’s work, we found propositions in their most characteristic form with all of its disadvantages. The problems seem to stem, at least to a large degree, from the externalism present in Kripke’s framework. In Stalnaker’s work, the concept of proposition changes and some of the problematic consequences which we saw in Kripke’s framework are mitigated. In this part of the chapter, we focused on the connection between the kind of possible-world framework, its essentialist commitments, and the kind of necessity it implies.

In connection with our investigation of the notion of proposition in Kripke’s work, we looked at the Pierre puzzle and some of the variety of responses it elicited. In connection with Stalnaker’s work, we focused on the problem of believing necessary propositions and concluded that while the situation is in this respect better than in Kripke’s framework, the main problem, logical equivalence of necessary propositions, is still present.

In the next chapter, we shall propose an approach to the descriptive semantics of proper names that builds on the lessons learned here.