Modal Thought and Modal Knowledge

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The candidate confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others.

Abstract

This thesis is concerned with the epistemology of absolute alethic necessity. The thesis begins with a characterisation of absolute alethic necessity and its distinctive epistemology. The challenge of explaining the *reliability* of belief in necessity is identified as the primary goal of the thesis and four broad forms of response to that challenge are identified. Of the four strategies, two are dismissed as prima facie inapplicable to the case of necessity. The two remaining options are identified as Modal Anti-Realism and Non-Standard Realism. In chapter 2, it is suggested that the field can be narrowed further, in light of Anna Sherratt's (2010) Transparency Objection to Modal Anti-Realism. From chapter 3 onwards, the thesis aims to close in on a suitable variety of Non-Standard Realism by drawing upon a number of further, foundational, issues concerning modal thought. It is suggested that a type of normativity concerning *content stability* (or loss of content) offers the prospects of progress on these foundational questions. It is suggested that notions of normativity of this type are found in, both, the work of Christopher Peacocke (1999) and John Divers and Jose Edgar Gonzalez-Varela (2012). It is suggested that by combining elements of these two works we can make progress on the foundational questions. However, in order to develop the account into a response to the Reliability Challenge, the central remaining task is to articulate the nature and epistemology of the notion of content stability. In chapter 7, a specific notion of content stability is identified as "proper deployment". It is also suggested that in order to meet the Reliability Challenge, we require a notion of proper deployment that maintains a minimal degree of objectivity. In particular, there must be *facts* concerning the proper deployment of content. Chapter 7 also indicates the significant sceptical attack that threatens the required factuality of judgements of this type. It is suggested that the objectivity of proper deployment required for a response to the Reliability Challenge can be maintained on a *non-reductive* account of proper deployment. It is highlighted,

however, that the non-reductive account still faces the task of explaining the epistemology of proper deployment. It is at this point, I suggest, that anti-realism has significant explanatory work to do in the epistemology of modality, but that such work directly concerns the nature and objectivity of content, not modality, itself. In chapters 8 and 9, a constitutive account of proper deployment is proposed and integrated with the responses to the foundational questions concerning modal thought and knowledge.

Chapters

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Chapter 1

Project Outline

This thesis is concerned with the epistemology of absolute alethic necessity. More specifically, the thesis focuses on the following question: how can we know or justifiably believe statements of absolute alethic necessity? In this chapter, I set up the project of addressing this question in more detail. Specifically, (ii) I outline a number of the distinctive characteristics of the epistemology of absolute alethic necessity and (ii) I identify a range of potential strategies for addressing those epistemological challenges. However, I begin by highlighting the characteristic features of absolute alethic modality.

1.1. Absolute *Alethic* Necessity

Before getting to the epistemological issues concerning absolute alethic necessity, I want to begin by getting some grip on the notion of *absolute alethic necessity*, itself. This is important because there are a number of different notions of necessity, not all of which are *absolute* and *alethic*. To clarify the notion of absolute alethic necessity we can proceed in two steps. The first step is to get some grip on the notion of *alethic* necessity. The second step is to get a grip on the notion of *absolute* alethic necessity. In this section, I take the first step and identify those features that distinguish *alethic* necessity from other varieties of necessity.

Modal notions concern *necessity* and *possibility* and they show up in natural language when the following paradigmatically modal terms are used: “can”, “could”, “might”, and “must”. Alethic modality is one species of modality. However, it is one species of

modality among many. So, although alethic modality can be expressed in terms of what *can*, *could*, *might* and *must* be the case, care needs to be taken to distinguish alethic modality from other types of modality that can also be expressed using the same terminology. For instance, the following examples make use of paradigmatic modal terminology, but *do not* concern alethic modality:

(O) You *must* go to the meeting.

(P) You *can* take my car.

(B) I believe that if you set off now, you *might* still make it on time.

Each case is concerned with modality, but (O), (P) and (B) concern modals that are not alethic. A natural reading of examples (O) and (P) would take them to concern *obligation* and *permission*. For instance, it seems natural to read example (O) as concerning an *obligation* to attend the meeting. Whereas (P) seems to concern *permission*. When somebody states "You can take my car", typically, they would be seen as providing you with *permission* to drive their car. Alethic modality is not concerned with obligation and permission in this way. Instead, examples (O) and (P) are examples of *deontic* modality – which does concern obligation and permission. Similarly, (B) also concerns a type of modality, but again the type of modality is distinct from alethic modality. (B) expresses a type of *doxastic* modality concerning *belief*. The idea expressed in (B) is that: you might still make it on time, *given what I believe*. Alethic modality is not concerned with belief in this way. So, although alethic modality is presented in the same modal terms as these deontic and doxastic modals, it has significant differences that require drawing out. We can draw out the differences between alethic modality and the deontic and doxastic modals by highlighting two distinctive features of alethic modality.

Firstly, it is a central mark of alethic modality that we can validly infer P from P's being necessary. Secondly, it is also a central mark of alethic modality that we can validly infer P's possibility from P. So we can identify inferences of the following form as valid in the case of *alethic* necessity and possibility.

(a) $\Box A \rightarrow A$

(b) $A \rightarrow \Diamond A$

The validity of these inferences is sufficient to distinguish *alethic* modality from the deontic and doxastic modals just noted. For instance, in the doxastic case some P are doxastically necessary but not true. For instance, take the case where X believes that Cardiff is north of Edinburgh. In such a case, it is doxastically necessary, given X's beliefs, that Cardiff is north of Edinburgh, yet it is not true that Cardiff is north of Edinburgh. In the deontic case, some P are true but not deontically (for instance legally, morally etc) possible (i.e. permissible) - for instance, it is true that large sums of money were stolen in a train robbery in 1963, but it wasn't legally permissible. Given this, the inferences (a) and (b) highlight features of *alethic* modality that are sufficient to distinguish it from the deontic and doxastic modals.

Although the validity of (a) and (b) can serve as a primary test that is sufficient to distinguish alethic modality from doxastic and deontic modality, there remains a significant modality that passes the test but is *not* alethic. Specifically, *epistemic* modals, concerning what we *know*, will pass this initial test. Epistemic modality is concerned with what we *know* rather than merely believe (as in the case of doxastic modality). However, knowledge is factive, in that anything that we know, is also true. However, given that knowledge is factive epistemic modality will validate the inferences (a) and (b). For instance, any P that is epistemically necessary (given what I know), is a P that is known and therefore (due to the factivity of knowledge) is true. Thus epistemic modality validates (a). Furthermore, what is true is not ruled out by anything that I truly know: as no truth is inconsistent with any other. Due to this, epistemic modality passes the initial test for alethic modality. The challenge then is to identify a point at which the alethic and epistemic modals come apart.

The best illustration of the distinction between alethic and epistemic modality comes through the combination of i) our knowledge that some propositions are non-contingent and ii) our ignorance of whether they are true. For instance, take Goldbach's conjecture:

> GOLDBACH: Every even integer greater than 2 can be expressed as the sum of two primes.

It is epistemically possible (given what I know) that GOLDBACH is true. Furthermore, it is epistemically possible (given what I know) that GOLDBACH is false. However, GOLDBACH and its negation are not both *alethically* possible. If GOLDBACH is true, then it is necessarily true and if GOLDBACH is false, then it is necessarily false. This provides a point of contrast between alethic and epistemic modals. GOLDBACH is epistemically possible, but alethically non-contingent. The focus of this thesis is on a notion of alethic necessity that can distinguished from other modals (such as the deontic, doxastic and epistemic modals) in the ways just indicated. From now on talk of necessity will be focused upon althetic necessity in the sense just outlined. With the notion of alethic necessity characterised to this extent, I now want to turn to the characterisation of *absolute* alethic necessity.

1.2. *Absolute* Alethic Necessity

We can get some grip on the notion of *absolute* alethic modality via the observation that alethic modalities come in different *strengths*. The idea that alethic modalities come in different strengths can be informally characterized in terms of alethic possibilities being co-tenable with a given body of statements. For instance, we might characterise *physical* possibility with those statements that are co-tenable with the physical laws.[1] Similarly, we might characterise *technological* possibility with those statements co-tenable with

[1] Hale and Hoffman (2010: 3-4) discuss the characterisation of absolute alethic necessity. Hale (2012) also provides a useful discussion of the characterisation of absolute alethic necessity.

certain technological facts. Likewise, the possibility of personal convenience might be characterized as those statements co-tenable with my preferences. We can capture these relations of co-tenability in counterfactual conditionals of the following form:

(C1) If it were the case that X, then it might yet be the case that P.

(C2) If X, then it would have been the case that P.

We can characterise *absolute* alethic modality as the notional limit to this hierarchy. The idea is that in the case of absolute alethic necessity (that P), no matter which X we stipulate, (C1) and (C2) are true. If P is absolutely alethically necessary then P might still be case, regardless of whatever else is the case. If P is absolutely alethically necessary, then P would be the case, no matter what else was true.

1.3. De Dicto and De Re

An interesting feature of absolute alethic necessity is that it can be found in both *de dicto* and *de re* occurrences. The de dicto application takes the following form:

It is necessary that P.

In contrast, the de re application of necessity takes the following shape:

x is necessarily F.

The distinction and relation between the de dicto and de re cases has been prominent throughout the (relatively recent) literature on modality.[2] However, considerable controversy surrounds the distinction and the distinction has been characterised in a wide

[2] The de dicto / de re distinction has been equally prominent within the (again, relatively) recent literature on the propositional attitudes.

variety of ways. It is possible, though, to get some grip on the intuitive idea underlying the distinction.[3] The intuitive idea is that in the de dicto case our modalising is about (the truth of) a *proposition*, whereas in the de re case our modalising is about an *object*.[4] For instance, the intuitive idea is that in the de dicto case above, necessity is attached to the proposition, P. Whereas, the intuitive idea in the de re case is that it is the object, x, to which F is necessarily attached. Beyond this intuitive characterisation, it is difficult to provide a more precise and uncontroversial articulation of the distinction. However, it seems that the general idea can be elucidated syntactically. Drawing the distinction syntactically using the syntax of modal logic, we can take a de re modal sentence to be one in which there is a variable within the scope of a modal operator and that variable is bound by a quantifier outside the scope of that operator. For instance, (DD) provides an example of the de dicto case and (DR) provides an example of the de re case:

(DD) $\Box\forall x Ax$

(DR) $\forall x \Box Ax$

In natural language, that distinction can be found in the following examples:

(DD) It is necessary that everything is located in space.

(DR) Everything is necessarily located in space.

[3] Central points of controversy surrounding the de dicto / de re distinction include: (1) how to characterise the distinction and (2) scepticism towards modalising de re. On the issue of characterising the distinction one point in that debate which is particularly prominent in the present case concerns how the proper names of natural language fit into the characterisation. For instance, sometimes the distinction is drawn in such a way that any occurrence of a proper name within the scope of a modal operator will generate a de re statement. Notable sceptics to de re modalising include Quine (1951 and 1953) and Carnap (1947).

[4] To stretch the intuitive idea a little further, de re modalising need not be restricted to objects. It might be that de re modalising also covers (for instance) modalising about natural kinds.

The first example is a prime example of de dicto necessity and the second is a prime example of de re necessity. Although, the distinction still requires clarification, I take it to be sufficiently clear to make a start on the epistemological challenges of modality.

1.4. Test Cases

There are a number of points that remain unsettled after the characterisation of absolute alethic necessity just given. Firstly, for all that has been said so far, it remains to be seen whether any proposition has the status of absolute necessity. It is perfectly consistent with the characterisation just given that no proposition achieves the status of being absolutely necessary. Similarly, the characterisation does not tell us which propositions are necessary, if any are. Furthermore, it remains to be seen whether the category of absolute modality can be articulated further into sub-cases, such as logical, analytic, mathematical or metaphysical necessity and whether such sub-cases are exclusive or exhaustive. Although these are all issues that deserve attention, for present purposes I take it that the intended notion of alethic modality is clear enough to work with. I will, however, take as a working hypothesis a broadly Kripkean account of the extent, and prominent cases, of absolute necessity.[5] This seems to be methodologically appropriate for a number of reasons. Firstly, the Kripkean sensibility takes there to be many cases of absolute necessity. As a consequence, attempting to account for the Kripkean cases is a particularly demanding epistemological challenge. More specifically, I take it as a working hypothesis that there are both cases where *it is necessary that P* is a priori and others where *it is necessary that P* is a posteriori. With Kripke, and as a source of examples, I take the former cases to include the logical, the analytic and the mathematical. Thus we can take the following as test cases:

[5] Much (though certainly not all) of the contemporary literature on the epistemology of modality aims to address the Kripkean cases. The primary source for the Kripkean sensibility is Kripke's (1971) *Identity and Necessity* and (1980) *Naming and Necessity*.

1. Necessarily, ¬ (P & ¬P).
2. Necessarily, all vixens are female foxes.
3. Necessarily, 2+2=4.

Again, I do not presuppose any account of how these cases relate to each other. Also, with Kripke, and as a source of examples, I take the a posteriori cases to include certain "metaphysical" necessities. These "metaphysical" cases concern matters of identity, natural kind membership and biological origin. As test cases, I will take the following classic examples:

4. Necessarily, Hesperus is Phosphorus.
5. Necessarily, Water is H2O.
6. Necessarily, Socrates is human.

Throughout the thesis, I shall take the examples 1-6 to provide a useful characterisation of the distinctive epistemology of necessity.[6] However, at this point, I do not *assume* any specific account of the motivations for accepting 1-6 as necessary.

1.5. The Reliability Challenge

With the notion of absolute alethic necessity characterised and with a number of test cases in hand, we can identify an initial and primary epistemological challenge. The central epistemological challenge concerning absolute alethic necessity arises from the observation that *we tend to form beliefs in necessity that are true*. That is, not only are 1-6 taken to be examples of necessity, 1 – 6 are also examples of necessities that are *known* to be true.[7] A central challenge then, is to *explain* how such knowledge is acquired. I

[6] Throughout the thesis, I shall refer back to these examples by number. Unless context indicates otherwise, talk of the "test cases 1 – 6" will refer to the six examples indicated here.

[7] Obviously, this claim may be resisted at (at least) two points. Firstly, some varieties of general modal scepticism are going to resist the idea that *knowledge* of absolute necessity is ever attained.

shall refer to the challenge of *explaining* this covariance between belief in necessity and necessity itself as *The Reliability Challenge*.[8] Although at its broadest the thesis is concerned with the question of how we come to know, or justifiably believe, statements of absolute necessity, it is this Reliability Challenge that serves as the primary target of the thesis.[9] In addressing the challenge of explaining the reliability of belief in necessity, I hope to make some progress on more general issues concerning our justification and knowledge of necessity.

The remainder of this chapter is devoted to sketching the Reliability Challenge in a little more detail. Specifically, in the following section I very briefly indicate a number of lines of thought that are relevant to the Reliability Challenge. More specifically, four general forms of explanation are outlined as general strategies of response to the challenge. In section 1.8. the Reliability Challenge is situated in context between three foundational questions concerning modal thought. It is suggested that each of these questions may be used to inform our answer to the other.

1.6. Four Strategies

The Reliability Challenge arises in any area of epistemological enquiry in which there is co-variance between belief and fact. For instance, notable versions of the Reliability Challenge arise for the domains of logic, mathematics, morality, the past, meaning and

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Such accounts might take a number of forms. For instance, it might be thought that although there are facts of absolute alethic necessity, they are beyond our ken. Or it might be thought that our modalising practices are not even in the business of stating facts or attaining knowledge. And then, even a theorist that grants that our modal practices are in the business of stating facts and that knowledge of necessity is attainable, might disagree about the specific cases identified here.

[8] The Reliability Challenge outlined in this chapter is closely related to challenges posed by Benacerraf (1973) and Field (1989) concerning the epistemology of mathematics and the (more general) Integration Challenge outlined by Peacocke (1998). Vaidya (2006: 257 – 258) also highlights the significance of the challenge in the case of modality.

[9] Throughout the thesis I will use the term "statement" loosely. For instance, it will not be restricted to linguistic statements. I will take it to cover propositional "statements", also.

content.[10] In each case, it seems that subjects tend to form beliefs that are true and in each case the challenge arises of explaining how this co-variance occurs. It is possible to identify a range of potential lines of response to the Reliability Challenge that emerge regardless of the specific domain that is under consideration. What is more, of the lines of response one seems to occupy the *standard*, *default* or *go-to* form of explanation. By considering this default form of explanation it is possible to see more clearly the variety of ways in which we can respond to the Reliability Challenge. This "standard" form of explanation is outlined in the following section.

Strategy 1: The Standard Form of Explanation

With a particular epistemological domain identified and with the Reliability Challenge in need of addressing, the standard strategy for addressing the reliability challenge might be usefully seen as proceeding in two steps.[11] Firstly, standard explanations tend to postulate a relation of *dependence* between the facts of the relevant domain and the subject's co-varying doxastic states; with the doxastic states being dependent upon the relevant range of facts (rather than vice-versa). So for instance, if we consider our beliefs about medium sized objects in our environment, we will again be faced with a case of covariance between (a suitably qualified set of) our beliefs and the facts concerning objects in our environment. The standard first step in explaining this covariance is to suggest that our beliefs about the objects in our immediate environment depend on the facts about the objects in our environment. For instance, given that I have the requisite conceptual

[10] Peacocke's Integration Challenge is very similar to the Reliability Challenge. Peacocke (1999) considers how the integration challenge plays out in the cases of our knowledge of the past, necessity, self-knowledge and freedom. The Benaceraf-Field dilemma was first discussed in relation to the domain of mathematics. Peacocke's work is directly relevant to the present project in a number of ways and is discussed in greater detail in chapter 8.

[11] The response identified here as "The Standard Strategy" is (roughly) the position *assumed* by Benaceraff (1973) in his presentation of the difficulties facing an account of the semantics and epistemology of mathematics. That is, Benaceraff sets his challenge up for mathematics with the requirement that a satisfactory account of the semantics and epistemology of mathematics would have to be in line with (what I am referring to here as) "The Standard Strategy"; that is, with a *causal* notion of dependence.

resources, normally functioning perceptual equipment, and I am free from doubt about the functioning of my perceptual capacities, I tend to form the belief that there is a car in front of me when there is a car in front of me and I form this belief *as a result of there being a car in front of me*.

Secondly, standard explanations then tend to proceed to make the further claim that the relevant type of dependency is (some form of) *causal* or *counterfactual* dependency. For instance, in the case of medium sized objects in my immediate environment, it might be the *causal connection* between the car and my senses that prompts the formation of the belief *there's a car in front of me*. In the case of medium sized objects in our immediate environment, we might suggest that our doxastic states co-vary with the object-facts because the object-facts *cause* our doxastic states. Or, similarly, we might attempt to articulate the relevant type of dependence in counterfactual terms. Such an explanation may proceed by suggesting that the X-facts co-vary with the Y-facts because *had the Y facts been different the X facts would have been different*. For instance, we might suggest that had there not been a car in my immediate environment, then I would not have judged there to be a car in my immediate environment. So, again, we might attempt to explain the co-variance between our beliefs and the medium sized objects in our immediate environment by suggesting that those beliefs co-vary with those facts because had it been the case that different objects were in front of the subject, the subject would not have formed the believe that there was a car in front of them. What I am referring to as "The Standard Strategy" then, appeals to either a causal notion of dependence or a counterfactual notion of dependence (or some combination of both) along these lines.

We can isolate the steps that underwrite this standard form of explanation as follows. Where X can be replaced by a specification of a set of beliefs and Y can be replaced with a corresponding set of facts.

The Standard Explanation

Covariance

Step 1: X co-varies with Y

Order of Dependence

Step 2: because X depends upon Y

Type of Dependence

Step 3: The dependence between X and Y is causal-counterfactual

Explanations fitting this (broad) form may work in many cases, however, it seems that there are a range of cases where such an explanation is going to face difficulties. In particular, the range of problematic cases will include those domains of thought where the subject matter is i) non-causally connected and is ii) non-contingent. In cases where the subject matter is non-causally connected then a causal explanation is going to be unavailable. Similarly, in cases where the subject matter is non-contingent a counterfactual based explanation will be unavailable. If both of these notions of dependence are inapplicable for a given domain, then the standard form of explanation will be inapplicable for that domain. The epistemology of modality is particularly pressing because the subject matter of modality seems to be of just this problematic kind and as a result it appears that an explanation fitting the standard form is unavailable. This is one of the initial distinguishing characteristics of the epistemology of modality.

Although the standard form of explanation is unpromising in the case of modality, by adjusting the two parameters (of Order of Dependence and Type of Dependence) deployed in that standard explanation we can highlight a further three strategies for addressing the Reliability Challenge. I turn to those strategies in the following three sections.

Strategy 2: Reversing the Order of Dependence

Working with the two parameters of Order of Dependence and Type of Dependence, one strategy would be to modify the standard explanation by merely reversing the order of dependence between the doxastic states and the modal facts. That is, to take there to be i) a relation of causal/counterfactual dependence between our doxastic states and the modal facts and to take ii) the modal facts to be causally/counterfactually dependent on our doxastic states. That is:

Covariance

Step 1: X co-varies with Y

Order of Dependence

Step 2: *because Y depends upon X*

Type of Dependence

Step 3: The dependence between X and Y is causal-counterfactual

Modifying the standard explanation in this way, however, is of little help. It seems that the reasons for the inapplicability of the standard explanation in the case of necessity also face any account that merely reverses the order of dependence. The reason that the standard explanation seems unpromising in the case of necessity is that the subject matter is non-contingent and non-connected. The non-contingency of the subject matter made the prospects of a counterfactual-based explanation unpromising. Likewise, as the subject matter is non-connected it seems that a causal notion of dependence is going to be unpromising, also. These concerns are not allayed by *merely* reversing the order of dependence. As a result, the second strategy is as inapplicable as the first. That leaves us with two further lines of response.

Strategy 3: Modal Anti-Realism

A third strategy would be to take the standard form of explanation and both reverse the order of dependence and abandon the causal-counterfactual notion of dependence. That would give us the following explanation:

	Covariance
Step 1:	X co-varies with Y
	Order of Dependence
Step 2:	*because Y depends upon X*
	Type of Dependence
Step 3:	The dependence between X and Y is *not* causal-counterfactual

The primary way of developing Strategy 3 is by taking the doxastic states to *determine* the facts of the relevant domain. In the modal case, this would amount to the claim that the modal facts are determined by facts about the modaliser.[12] The distinction between Strategy 3 and Strategy 4 can be highlighted by considering the dilemma from Plato's *Euthyphro*.[13] In Plato's dialogue, Socrates and Euthyphro discuss the nature of the pious. The central point of agreement between Socrates and Euthyphro is that the pious acts are all and only those approved by the gods. That is, in the terms we have been working in, Socrates and Euthyphro agree that there is a relation of covariance between an act's being pious and the god's approval. However, Socrates and Euthyphro disagree (at least initially) about the order of dependence. Euthyphro thinks that certain acts are pious

[12] The position referred to here as "Modal Anti-Realism" uses the term "anti-realism" in a more focused sense than it is sometimes used. For instance, the variety of anti-realism considered here does not cover non-cognitivist and error-theoretic positions with respect to absolute necessity. The notion of anti-realism appealed to here is along the lines of that identified by Crispin Wright (1992).

[13] Although, "Euthyphronism" is a reference to Plato's text, Wright's work on the "Euthyphro contrast" has played a significant role in reintroducing this type of terminology.

because the gods approve of them. In which case, whether or not an act is pious depends on the approval of the gods. In contrast, Socrates thinks that the order of dependence runs in the other direction; the gods approve of certain acts *because* those acts are pious. In this case, the thought is that the god's approval depends on the piety facts.

Strategy 3 attempts to explain the covariance between our modal beliefs and the modal facts in a broadly Euthyphronic way. Taking the order of dependence to run from thinker to fact; rather than vice versa. Unlike strategies 1 and 2, strategy 3 does not run into immediate difficulties as a result of the (apparent) non-connectedness and non-contingent nature of the modal facts. For this reason alone, Strategy 3 is prima facie tempting in the case of absolute necessity. This strategy, then, is not immediately ruled out and remains a potential line of response to the Reliability Challenge.

Strategy 4: Non-Standard Realism[14]

Modal anti-realism, however, isn't the only remaining option. There also remains the following form of explanation, that I shall refer to as "Non-Standard Realism":

	Covariance
Step 1:	X co-varies with Y
	Order of Dependence
Step 2:	because X depends upon Y
	Type of Dependence
Step 3:	The dependence between X and Y is *not* causal-counterfactual

[14] Kit Fine (2005) uses the label "non-standard realism" in his discussion of tense. Fine, however, uses "non-standard realism" in a very different context and to identify a significantly different notion of realism to that identified here.

Strategy 4 takes up the Socratic position. A central component of strategy 4 is that it does not appeal to causal/counterfactual dependence. Instead, this strategy takes there to be an alternative connection between belief and modal fact. The challenge facing strategy 4 is to identify what that connection is. For instance, instances of Strategy 4 might address the Reliability Challenge by highlighting *logical* or *conceptual* relations between belief in necessity and the facts of necessity.[15]

It is worth noting, that in referring to the fourth strategy as "Non-Standard" Realism I merely intend to mark a divide between the two realist strategies presented here. The position is taken to be a "non-standard" variety of realism in the sense that it is not the default of go-to form of epistemological explanation. The terminology is not intended to reflect the range of application of the two strategies. For instance, it is not part of the characterisation of the standard explanation that it is applicable in a wider range of cases or to a range of more central cases. For all the present characterisation commits us to, it may turn out that the standard form of explanation is applicable in fewer domains than the non-standard explanation.

1.7. Responding to the Reliability Challenge

The most widely discussed response to the Reliability Challenge suggests that it is by *conceiving* or *imagining* that we do (as a matter of fact) come to form our modal beliefs. Prime examples of such conceivability-based accounts are provided by Yablo (1993), Menzies (1998) and Chalmers (2002). On such accounts, it is suggested that we form the belief that P is possible after we have conceived or imagined that P. Conceivability-based accounts face a number immediate challenges. For instance, what is it to conceive that P? And what explains the connection between conceivability and possibility? With

[15] Issues relating to strategy 4 are discussed by Lewis (1986), particularly in Chapter 2 section 2.4. Strategy 4 is considered in detail in Peacocke's (1999) *Being Known*.

respect to the *Reliability Challenge*, conceivability-based theories face a range of immediate challenges. Conceivability-based accounts articulated in terms of imagination are the focus of chapter 3, with the interaction of imagination-based accounts and the *Mechanisms* and *Reliability* of modal belief discussed in chapter 3. A recurring theme throughout the thesis concerns this project of articulating the mechanisms involved in conceiving.

A second response to the Reliability Challenge suggests that our capacity to form modal beliefs can be explained by our capacity for counterfactual thought. Williamson (2005, 2007a, 2007b), Hill (2006), Kroedel (2012), and Kment (2014) all provide counterfactual-based accounts of modal epistemology. A common motivation for a counterfactual-based response to the Reliability Challenge is that it allows us to explain the epistemology of modality without appeal to a distinctive faculty for determining modal truth. Such approaches might be initially motivated by the aim of providing a reductive epistemology; with the epistemological challenges of modality reduced to the epistemological challenges of the epistemology of counterfactuals. Such ambitions are based upon the logical relations that obtain between modal statements and counterfactual statements. Accounts of this general type are considered in chapter 4.

A third form of response to the Reliability Challenge takes the requirements imposed by the possession of the modal concepts to explain what is involved in the acquisition of modal belief. This is the route taken by Peacocke's (1999) Principle-Based Account. The idea on this account is that a satisfactory account of the individuation of the modal concepts will draw together the conditions for understanding those concepts and the factors that determine the application conditions of propositions composed from those concepts. I consider Peacocke's account in chapter 6.

A fourth response to the Reliability Challenge takes belief in absolute necessity to be acquired via essentialist knowledge. This approach is adopted by Lowe (2008, 2012) and Hale (2013). Issues relating essentialist knowledge and the Reliability Challenge appear

at a number of points throughout the thesis. However, I take a thorough and additional assessment of the epistemology of essence to be a project beyond the scope of the present work. I note, however, the significance of the task of explaining the relationship between constitutive knowledge and modal knowledge.

It is worth noting at this point that the positions just outlined are difficult to adequately categorise. For instance, following the recent literature,[16] it is tempting to categorise work on the Reliability Challenge as follows:

1. Conceivability-based theories
2. Counterfactual-based theories
3. Understanding-based theories
4. Essence-based theories

However, it is worth emphasising that the proposed categories are not mutually exclusive. For instance, Chalmer's account is a prime example of a conceivability-based theory and Williamson's account is a prime example of a counterfactual-based theory. Yet, counterfactuals play a very significant role in Chalmers's articulation of the notion of conceivability and Williamson accepts links between imagination and modal knowledge. Similarly, on the categorisation provided above, Peacocke's account is taken to be an *understanding-based account*, while Lowe's account is perhaps best classified as an *essence-based account*. However, Peacocke's account places significant emphasis on the constitutive properties of objects and concepts and Lowe's account places significant emphasis on the understanding to explain our epistemic access to essential properties. It is safe to say that there is considerable overlap between the positions defended in the recent literature and there is currently no simple and fully satisfactory classification of the epistemological theories on offer. I suspect that the labels just outlined primarily function to highlight points of emphasis on each of the theories considered, however, it

[16] This categorisation is used by Vaidya (2007). Roca-Royes (2010: 336) notes that such a categorisation is not exclusive.

is worth keeping in mind that the categories considered so far are not mutually exclusive or collectively exhaustive. A central idea running throughout the thesis that a satisfactory account of modal thought will cross the boundaries implied by the above classification.

1.8. Reliability in Context

The Reliability Challenge is situated between a number of further challenges concerning modal thought and knowledge. A central theme of the current project is that the relationship between these challenges can be drawn upon in constructing a response to the Reliability Challenge. The project also rests upon a number of assumptions. Specifically, it is assumed that our modal thought and talk is truth-apt and that subjects genuinely form *beliefs* in necessity and possibility. Consequently, the project rules out non-cognitivist accounts of our modalising. Given these starting assumptions we can identify a set of interrelated questions that are going to be relevant to a broader account of modal thought:

> ***Mechanism***: What is the primary mechanism deployed in the acquisition of belief in necessity?
>
> ***Belief***: How does that mechanism produce *belief in necessity*?
>
> ***Reliability***: How does that mechanism tend to produce beliefs that are *true*?
>
> ***Role***: What is the *role* of beliefs acquired via that mechanism?

The challenges indicated here have not been addressed evenly in the literature on modal thought and modal knowledge. In some cases, the challenges are run together and in some cases the connections between the challenges are not addressed at all. One of the aims of the thesis is to take seriously the distinction between these challenges whilst also drawing

upon the connections between them. Throughout the thesis a number of the most prominent responses to the challenges of Mechanism, Belief, Reliability and Role are considered.

An answer to Mechanism requires us to provide an account of the mechanism deployed in the acquisition of modal belief. The philosophical literature on modal thought has more to say about the mechanism challenge than any of the other challenges. Given the structural relationship between the challenges the Mechanism Challenge has received the most attention in the philosophical literature (unsurprisingly, given that answering Belief, Reliability and (potentially) Role all require an attendant response to the prior challenge posed by Mechanism). In the literature the Mechanism and Reliability challenges are often addressed together, each placing a constraint on the other.[17] I take the four questions to be interconnected in a variety of ways and I suggest that our answer to any one of the questions will have implications for our answers to the others.

An initial note on the Mechanism Challenge. It may be objected that the current formulation of the Mechanism Challenge is misguided in that it assumes that there is *a single* mechanism that is deployed in the acquisition of belief in necessity, where in fact beliefs in necessity are acquired in a wide variety of ways. For instance, there may be general varieties of belief acquisition that are not unique to, or characteristic of, the acquisition of belief in necessity but which thinkers do in fact deploy. For instance, thinkers may acquire belief in necessity via testimony. The Mechanism Challenge, then, is perhaps best directed towards that mechanism which is the primary or best method of acquiring belief in necessity.[18]

[17] This is particularly explicit in Peacocke (1999), Chalmers (2002) and Williamson (2007). Here, theorising about the mechanism's involved in the acquisition of belief in necessity is constrained by concerns of reliability. Similarly, the projects are not merely in the business of identifying a reliable connection between *some* mechanism and modality, but rather, the accounts aim to identify a mechanism that we actually use.

[18] This formulation of the mechanism challenge is similar to the challenge taken up by Divers and Gonzalez-Varela (2012). The Divers and Gonzalez-Varela account is considered in chapter 5.

My primary focus is on Mechanism and Reliability. In particular, if we have ruled out non-cognitivist and error-theoretic accounts of our modalising then the tasks of answering Mechanism and Reliability will be intimately related in the following way. Reliability will impose an adequacy condition on our response to Mechanism. That is, on the assumption that we tend to form beliefs in necessity that are true, we will have failed to have adequately identified the mechanism deployed in the production of our modal beliefs, if the proposed mechanism does not match the pattern of belief indicated in the test cases 1 – 6. With the test cases identified it is crucial to keep in mind the somewhat subtle difference between the challenges of Mechanism and Reliability. The Mechanism challenge asks us to identify the canonical method of acquiring belief in necessity. In the present context, given the test cases assumed, that will require the identification of a mechanism that produces beliefs in the pattern identified by 1 – 6. The Mechanism challenge, taken in isolation, is consistent with views on which belief in necessity is acquired but does not tend to be true. In contrast, the Reliability Challenge is more demanding in that it requires that we *explain how* that mechanism produces beliefs that tend to be true. Given our starting assumptions, the Mechanism and Reliability Challenges come very close together. If those starting assumptions were dropped, then the distance between the challenges would be more apparent.

Similarly, I take Mechanism and Reliability to be informed by Belief and Role. Also, in highlighting the differences between the questions I hope to render the overall explanatory challenge more transparent. The questions of Mechanism, Belief, and Reliability all are framed under the assumption that we do form beliefs in necessity. However, the questions of Mechanism and Belief do not rest upon assumptions concerning the truth or justificatory status of the beliefs formed via the mechanism identified. Such assumptions do, however, underlie the Reliability Challenge. The interplay between these questions frames a number of general issues facing epistemological accounts. For instance, it is interesting to note the conditions in which each of the requirements are met. For instance, the Reliability Challenge will be met if the mechanism is specified trivially as that mechanism that tends to produce beliefs in

necessity that are true. This, however, will not provide a satisfying response to the Mechanism Challenge. There is, then, a pull between on the one hand (i) providing an illuminating answer to the Mechanism Challenge and (ii) meeting the Reliability Challenge.

The Role challenge asks us to identify the function of belief in necessity. In doing so, the aim is to provide some insight into our interest in identifying certain propositions as necessary. What is more, the Role Challenge asks us to account for the role of beliefs acquired via that mechanism which is taken to be a response on the Mechanism Challenge. Given this relationship it is possible to use our response to the Role Challenge to inform our response to the Mechanism Challenge. The two answers must fit together in a way that makes sense of the fact that belief acquired via *that* mechanism have *that* role (and vice versa).

1.9. Overview

So far the aim has been to set up the project. The notion of absolute necessity has been characterized and test cases have been identified. A number of assumptions have been highlighted: including, the rejection of error theoretic and non-cognitivist positions. The Reliability Challenge has been set up and situated between the three questions of Mechanism, Belief and Role. With regard to the Reliability Challenge, a space of theoretical options have been mapped by taking the "standard form" of epistemological explanation and crossing the parameters of *order* of dependence and *type* of dependence. The space of options consisted of four broad types of strategy. Of these, strategies 1 and 2 appealed to causal/counterfactual notions of dependence and as a result were considered to be inapplicable in the case of necessity. This leaves strategies 3 and 4 as the focus for the rest of the thesis. Strategy 3 is a variety of Modal Anti-Realism which abandons causal/counterfactual dependence and reverses the order of dependence between thinker and modal fact. Strategy 3 is the focus of chapter 2 where significant obstacles to the

development of an anti-realist account of modality are presented. With strategies 1, 2 and 3 put to one side, the remaining chapters of the thesis focus upon the development of strategy 4, Non-Standard Realism, as a response to The Reliability Challenge and the outlined cluster of attendant challenges to a satisfactory account of modal thought and knowledge. In chapters 3 and 4 I close in on the notion of supposition. More specifically, it is suggested that by taking into account the fundamental norms governing supposition we have a basis on which to address the foundational questions of Mechanism, Belief, Reliability and Role. It is suggested that the work on supposition undertaken by Divers's and Gonzalez-Varela (2012) might be fruitfully combined with a number of ideas captured in Peacocke's (1999) Principle-based account of necessity. At the end of chapter 7 it suggested that in order develop these ideas into a response to the Reliability Challenge we need to articulate the notion of "loss of content" that underlies both accounts. It is suggested that in order to achieved this we need an account of the epistemology of content; an account that also preserves the factuality of our judgements concerning the norms governing content. Chapters 7 and 8 attempt to meet these requirements. Specifically, it is suggested that an antirealist or "Euthyphronic" account of content offers the prospects of meeting those challenges. In the final chapter, the central argument of the thesis is summarised and the positive account is laid out and compared to competing accounts.

Chapter 2

Modality and Anti-Realism

Modal Anti-Realism offers a prima facie attractive solution to the Reliability Challenge. This chapter sets up the Modal Anti-Realist position and highlights a number of significant objections to the position. One of the most explicit formulations of Modal Anti-Realism has been provided by Menzies. Following Sherratt (2010), it is argued that a conceivability-based modal anti-realism is going to be unsuccessful as such accounts generate controversial "transparency" results. The primary concern is that modal anti-realism rests upon controversial varieties of *global anti-realism*. A number of potential modifications to the anti-realist's position are considered. However, each of the modifications are found to lead to equally problematic results. The overall conclusion, for the purposes of this thesis, is that a response to the Reliability Challenge is best sought within the territory of strategy 4: Non-Standard Realism.

2.1. Modal Anti-Realism

Anti-realist accounts of modality come in a variety of forms, not all of which are applicable to the Reliability Challenge. For instance, we can draw a dividing line between those varieties of anti-realism on which there are non-trivial modal truths (such as, there could have been more species) and those on which there are not. In the latter case, we have various forms of *non-cognitivism* and of *error theory*. However, the non-cognitivist and the error theorist deny the phenomena that initiates the Reliability Challenge. The error theorist accepts that we form belief in necessity, but thinks that those beliefs do not tend to be true. The non-cognitivist thinks that our modalising

practices aren't even in the business of belief and truth.[19] Consequently, neither non-cognitivist nor error theoretic varieties of modal antirealism are applicable to the Reliability Challenge. In this chapter I will be concerned with a variety of antirealism that accommodates the truth of modal statements and closely connects that truth to facts concerning the modalising subject. On this variety of modal antirealism, modal truth is explained by reference to our cognitive capacities but it does not consist in the exercise of those capacities. The type of modal antirealism that I will be concerned with in this chapter is sometimes referred to as a *response dependent* or *Euthyphronic* variety of antirealism. I begin by articulating this variety of modal antirealism in more detail.

2.1.1. The Euthyphro Contrast

As highlighted in the previous chapter, Euthyphronic varieties of anti-realism arise out of an intuitive distinction. The intuitive distinction appeared in Plato's Euthyphro when Socrates and Euthyphro discussed the nature of piety. Both Socrates and Euthyphro agreed that the god's love all and only those acts which are pious. The intuitive contrast between the Socratic and Euthyphronic positions can be highlighted with the following questions:

(S) Are the pious acts loved by the god's because they're pious?

or

(E) Are those acts pious because they are loved by the gods?

Socrates gave defence for the view that the god's approved of the pious acts because they were pious. In contrast, Euthyphro (at least initially) took up the position that the pious are pious because they are approved by the gods. A positive answer to (S) gives us a

[19] These distinctions are blurred by Simon Blackburn's (1993) Quasi-Realism. As Blackburn sees it, an expressivist treatment of a domain of discourse may "earn" propositional structure.

Socratic account of the relationship. On the Socratic position, the approval of the God's *folllows* or *tracks* piety. In contrast a positive answer to (E) gives us a Euthyphronic account of the relationship. On the Euthyphronic interpretation, it is the response of the God's (specifically, their loving) that *constitutes* or *determines* the fact that a given act is pious. Going forward, I'll use the term "Euthyphronic" to capture one side of this *intuitive* divide and "Socratic" to capture the other side.[20]

The questions raised by the Euthyphro Contrast will re-emerge, and be particularly pressing, in those areas where there is coordination between a subject's response and a range of facts. For instance, questions analogous to (S) and (E) can be asked in the case of humour.

(S1) Do people find *The Simpsons* funny because it is funny?

Or

(E1) Is *The Simpsons* funny because people find it funny?

Once the intuitive distinction between the two positions has been acknowledged, it still remains to settle the debate one way or the other in specific cases. For instance, in the case of humour, we can identify the questions (S1) and (E1), but it is further task to answer them. A significant challenge, then, is to provide a way of articulating the intuitive distinction between the Socratic and Euthyphronic positions in a way that will allow us to answer questions such as (S), (E), (S1) and (E1).

2.1.2. Response Dependence

[20] Again, the terminology of "Euthyphronism" is derived from Wright's (1992) discussion of anti-realism. However, I do not intend the terminology of "Euthyphronism" to solely refer to Wright's specific characterisation of the distinction.

The intuitive distinction between the Euthyphronic and Socratic positions offers an interesting point of contrast between realist and anti-realist positions. However, it is a significant task to render the distinction operational. Once it has been agreed that there is covariance, how are we supposed to move the discussion forward and settle the debate in favour of either the Socratic or Euthyphronic interpretations? On this front, it is possible to draw upon a number of sources that articulate the distinction in more detail. For instance, prominent varieties of response-dependence have been discussed and developed by Mark Johnson (1989, 1993), Crispin Wright (1992) and Phillip Petit (1990, 1991, 1992).[21] Each develop the position in different ways and apply it to different subject matters. However, despite the variety of forms that response-dependence accounts have taken, a number of core components tend to be present in each formulation of the position. For instance, most formulations require the following components:

(i) a specification of the type of *response* (that plays the determining role).
(ii) a specification of the *subject* (that has the response that plays the determining role).
(iii) a specification of the *conditions* in which the subject's response plays a determining role.

For instance, in the case of humour the relevant response might be *finding funny* or laughing. The subject and conditions might be a typical human, that is awake, free from distraction and paying attention to the issue at hand. Once these components have been specified, they are combined in a "biconditional"[22] such as the following:

[21] It is the variety of response-dependence found in Wright (1993) that draws directly on the Euthyphro Contrast.

[22] I shall use the phrase "biconditional" loosely to capture the variety of constructions made by proponents of response-dependence. However, it should be noted that in many cases proponents of response-dependence appeal to constructions were biconditionals take a narrower scope. For instance, in Wright's formulation of the response-dependent framework biconditionals are nested within conditionals. In chapter 8 the distinction between the various constructions is highlighted in more detail.

(Funny) x is funny $\leftrightarrow$ (C $\rightarrow$ s finds x funny)

Here, C specifies the conditions just outlined. With a biconditional such as (funny) highlighted it is suggested that the biconditional is best interpreted Euthyphronically if the biconditional is *apriori* and *non-trivial*. It is then suggested that if the biconditional is *apriori* and *non-trivial*, then that highlights a relation of *conceptual* dependence between the two sides of the biconditional.[23]

The conditions of apriority and non-triviality play two roles. On the one hand, the conditions ensure that the distinction is operational in so far as they allow us to go on and *test* whether a subject matter is best interpreted Socratically or Euthyphronically. On the other hand, the conditions refine the intuitive distinction between the Socratic and Euthyphronic positions and ensure that there is a genuine distinction to be made between those positions. The motivation for the apriority condition is that if a range of facts conceptually depend upon a subject's response, then this should be knowable apriori by mere grasp of the relevant concepts. However, if we allow trivial biconditionals, then it will be possible to construct apriori biconditionals for (almost) any domain. For instance, with no constraint on triviality, it is possible to construct apriori biconditionals concerning (for instance) the rocks at the bottom of the sea:

> X is a rock at the bottom of the sea if and only if a subject in perfect conditions, with the relevant cognitive capacities and with the ability to

[23] Non-Triviality and A Priority are typically taken to be required to motivate an Euthyphronic interpretation of a given biconditional. In addition to the Non-Triviality and Apriority conditions, there have been further requirements proposed. Most notably, Wright has proposed *Extremal* and *Independence* conditions in addition to the Non-Trviality and A priority conditions. Satisfaction of the Extremal Condition requires that there be no better explanation of the covariance captured in the biconditional than that provided by an Euthyphronic interpretation of the biconditional. The Independence Condition requires that the conditions of the relevant response can be specified independently from the facts which they (are being assessed to) determine. These conditions are discussed in greater detail in chapter 7. The issues facing modal anti-realism that are highlighted in this chapter can be highlighted without the additional requirements being in place. Given this, the further requirements are put to one side in this chapter and are taken back up in chapter 7.

> execute the appropriate methods of investigation, would judge that X is a rock at the bottom of the sea.

If the only requirement for a Euthyphronic interpretation of a biconditional was apriority, then we could conclude that the facts about the rocks at the bottom of the sea are response dependent. If our articulation of the Euthyphro contrast returned such results, then it would no longer function to capture the intuitive divide between the Socratic and Euthyphronic positions. The non-triviality condition is intended to block such cases and to maintain the distinction between the Socratic and Euthyphronic positions.

Accounts that offer Euthyphronic interpretations of subject matters are often referred to as *response-dependent* accounts; as it is the response of the individual that is taken to *determine* or *constitute* the facts of the relevant subject matter – the facts of the relevant domain are taken to *depend* upon the subject's response. Given that it is often *judgement* that is taken to be the relevant constitutive factor, accounts along these lines are also often referred to as *judgement-dependent* accounts. Throughout the thesis I will alternate between these labels, but primarily using the terminology of response-dependence. Again, I shall use "Euthyphronic" to capture one side of the initial *intuitive* divide just indicated.

2.1.3. Initial Motivations for Response-Dependence

A response-dependent account of a given subject matter offers a number of prima facie advantages. As noted, a response-dependent account steers a middle course between non-cognitivism and strong forms of realism. For instance, consider varieties of projectivism about colour. The non-cognitivist may lose the propositional structure and fact stating nature of the particular area of discourse. In contrast, the response-dependent theorist maintains both the propositional structure and fact stating nature of the discourse. Response-dependent accounts offer an interesting epistemological position. Given that it

is our response (whether it is judgement, belief, finding funny, etc) that plays a determining role, response-dependent accounts offer a tempting epistemological position on which the essential epistemological problems concern, not an independently constituted set of facts, but instead the subject's responses.

Given the covariance of belief in necessity and modal truth not only is the Euthyphro Contrast a natural next question, it also offers a number of prima facie attractive explanatory features. What is more, these features are particularly attractive in the modal case, given the challenges that characterise that domain. In particular, the response-dependence *explains* the connection between belief and fact. The thinker's response plays a role in determining the facts. Additionally, the relevant notion of determination or dependence is conceptual and not causal. Given the causal isolation of the facts of necessity, Euthyphronism offers a prima facie appealing line of response to the Reliability Challenge.

2.1.4. Response-Dependence and Modality

As noted, the Euthyphro contrast will be pressing in those domains where the facts of that domain tend to coincide with a response made by subjects. Peter Menzies's (1998) suggests that there is a close connection of just this type in the case of modality. Specifically, Menzies's suggests that there is a *constitutive* connection between our ability to *conceive* that P (in certain conditions), and P's possibility. What's more, Menzies suggests that the biconditional can be known a priori and can be specified without triviality. On Menzies's account, in line with Euthyphronism, on the question of the order of determination the order is taken to run from facts concerning conceivability to facts concerning possibility, rather than vice versa. In this, and the following three sections, I outline Menzies's account in a little more detail.

2.1.5. (Ideal) Conceivability

The first component in Menzies's account is a link between conceivability and possibility. Menzies states:

> It is uncontroversial that the primary criterion we use in applying modal concepts to things is the imaginability or conceivability of those things. In everyday reasoning it is assumed that if something can be imagined or conceived to be the case, that is a reason for thinking that it is possible; and equally, if something cannot be conceived to be the case, that is a reason for thinking that it is impossible.[24] Menzies's (1998: 264)

Here, Menzies suggests, firstly, that we do (as a matter of fact) use tests of conceivability as our primary means of determining whether or not something is possible. Furthermore, and more specifically, Menzies suggests that there are two types of conceivability test. In the first case conceivability tests are taken to be the primary criterion used when acquiring beliefs in possibility. The idea is, for example, that if I can conceive that England win the world cup, then this gives me reason to think that England could win the world cup. Or, if I can conceive that bats have slightly bigger wings, then this gives me reason to believe it possible that bats have slightly bigger wings. Secondly, Menzies endorses a link between inconceivability and impossibility. In this second case the idea is that if something is found to be inconceivable, then it will be concluded that it is impossible. For instance, if I cannot conceive that squares are circular, then that gives me good reason to think that it is impossible for squares to be circular. Or, if I cannot conceive that 2+2=5, then that provides reason to think that it is impossible that 2+2=5. This, Menzies's suggests, is just how our everyday practices of conceiving take place and how we do (as a matter of fact) acquire belief in possibility and necessity.

[24] Here, the notions of imaginably and conceivability are run together.

Menzies's suggests that just as it is part of our everyday practice of conceiving to move from conceiving that P to the belief that P is possible, it is also part of our everyday practice to *discount* certain acts of conceiving; specifically, those acts of conceiving where the subject is suffering from some form of cognitive limitation. For instance, cases of conception might be discounted if the thinker is not paying attention to the issue at hand or is under the influence of drugs. Menzies suggests that once such cognitive limitations are taken into account, it is possible to construct a biconditional connecting *ideal* conceivability and possibility; where ideal conceivability is just that conceivability enjoyed by a conceiver free from the cognitive limitations that are used to discount acts of conceiving. Menzies (ibid: 269) suggests that P is possible if and only if an ideal conceiver can conceive that P. Menzies central claim can be captured as follows:[25]

$$\text{IC: } \Diamond P \leftrightarrow \text{ICP}^{26}$$

This is similar to the move made by the proponents of Euthyphronism of other subject matters. For instance, if a Euthyphronic account of humour is to be successful, then it seems that the responses specified in the biconditional must be made by a subject that is paying attention to the issue at hand. Someone sitting in front of a television playing The Simpson's won't laugh if they're distracted by the gas bill.

2.2. Setting Issues to One Side

A number of objections might be raised to the response-dependent account as it has been presented so far. Some of those objections can be isolated as objections that arise due to details of the specific formulation of the ideal conceiver response-dependent account of modality. Some objections, however, strike at the heart of Euthyphronic accounts of

[25] In order to facilitate the discussion in section 3, I follow Sherratt (2012) in rewriting and relabelling the biconditional at the heart of Menzies's account.

[26] Taking possibility and necessity to be interrelated, Menzies (ibid.) also suggests that "it is necessary that P if and only if an ideal conceiver could not conceive that not-p".

modality in general. In this section the primary objections that are specific to Menzies account are identified and put to one side. In the following sections, a number of more general problems concerning Modal Euthyphronism are highlighted.

Firstly, it might be objected that the notion of conceivability used in IC is insufficiently clear to do serious explanatory work. That is, to provide a fully satisfactory response-dependent account of modality, we would need to provide a better account of what imagination or conception is. The current presentation has only very briefly sketched the notion of conceiving and a full development of the position would require the notion of conceivability to be developed in more detail. The nature of conceiving is considered in greater detail in chapter 3.[27] For the purpose of this chapter it is assumed that the notion of conceiving is sufficiently clear to indicate the general shape of the response-dependent account; and it is the general response-dependent position that is the focus of this chapter.

Secondly, even if we grant that the notion of conceivability is sufficiently clear to work with, it might be objected that the outlined notion of idealisation is problematic. Menzies formulates the response-dependent account using the notion of *an ideal conceiver*. However, it might be thought that the response-dependent position is best constructed with a different account of idealisation. One reason for this is that it might be thought that the very notion of *an* ideal conceiver is incoherent. For instance, Chalmers's (2002: 148) suggests:

> One trouble is that it is not obvious that an ideal reasoner is possible or coherent. For example, it may be that for every possible reasoner, there is a more sophisticated possible reasoner.

[27] Furthermore, chapters 4 and 5 and the positive account developed throughout the second half of the thesis may all be seen as an investigation into the nature of *conceiving*; when *conceiving* is interpreted in its broadest sense.

If the notion of an ideal conceiver is incoherent, then that incoherence would infect Menzies's proposed biconditional. This, however, does not threaten the primary ideas underlying Modal Euthyphronism. For instance, the proponent of response-dependence might formulate the relevant notion of idealisation in some other way. For instance, one alternative articulation of the relevant notion of idealisation for conceiving is provided by Chalmers's (ibid):

> "Alternatively, one can dispense with the notion of an ideal reasoner, and simply invoke the notion of undefeatability by better reasoning."

On such an approach P is ideally conceivable when the reasoning involved in the act of conceiving that P cannot be defeated by better reasoning. It seems then, if the notion of an ideal conceiver is found to be incoherent, then the notion of ideal conceivability can be developed in other ways. However, because this point is orthogonal to the main argument of this chapter, for ease of exposition I shall stick with Menzies's notion of an ideal conceiver.

Thirdly, even if we grant the coherence of IC it might be objected that (for all that has been said so far) it is not true. For instance, for all that has been said so far, it is unclear that an ideal conceiver will find the negations of necessary a posteriori truths inconceivable. Take the examples from chapter 1:

4. Necessarily, Hesperus is Phosphorus
5. Necessarily, Socrates is Human
6. Necessarily, Water is H2O

It seems that there is a sense in which it is conceivable that Hesperus is not Phosphorus. For instance, prior to the discovery that Hesperus is Phosphorus it would seem that people imagined that Hesperus and Phosphorus were distinct. Similarly, prior to the discovery that Water is H2O it seems that thinkers conceived of water being other than H2O. It

would seem then, that in order to avoid such objections the notion of "conceiving" would require further articulation. Although, the notion of conceiving is left somewhat underspecified by Menzies, one point of particular significance is raised in relation to this issue. More specifically, to handle the relationship between conceiving and cases of the necessary a posteriori Menzies introduces *the fixity principle*. Menzies characterises the fixity principle as follows:

> In supposing some imaginary scenario obtains, we hold fixed the identity of the constitutive objects, properties, and relations as far as they are known to us. For example, in conceiving whether there could be a talking donkey we hold fixed the properties of talking and being a donkey, as they are known to us, and ask whether they can be combined together in imaginative thought. On the basis of a commonsense understanding of them, it is reasonable to conclude that they can be combined together in the imagination. (Menzies 1998: 274)

A full development of Menzies's account would require an epistemological story to accompany this principle. However, given that the focus of this chapter is on modal antirealism in general, and not the details of Menzies's account, I think this issue can be put to one side for now.

A final prima facie worry might be that Menzies' account is viciously circular because modal notions feature on both sides of the bi-conditional. It is worth nothing that this would be a genuine problem if the account was intended to provide a reductive analysis of possibility. However, this is not Menzies's intention. The purpose of the bi-conditional, according to Menzies (1998: 262 - 263) is merely to highlight the conceptual relations between ideal conceivability and possibility. It is not intended to provide a reductive account of modality.

With a number of initial issues flagged, the next section moves on to consider problems that face Menzies's account but which also extend to any response-dependent account of modality that is constructed in the way that has been indicated. That is, with A priori, Non-Trivial biconditionals.

2.3. Transparency

With the foregoing issues put to one side, the following sections concern problems that generalise to any Euthyphronic account of modality. Sherratt (2010) outlines two objections to Menzies ideal conceivability account and then shows how they generalise to other varieties of modal anti-realism.[28] I refer to the objections raised by Sherratt as the *Metaphysical* Transparency Objection and the *Epistemological* Transparency Objection. Section 2.3.2. outlines The Epistemological Transparency objection. Section 2.3.1. outlines how the problems generalise to Euthyphronic accounts in general. However, in the next section the Metaphysical Transparency Objection is presented.

2.3.1. Metaphysical Transparency

As Sherratt (157) highlights, Menzies's proposed biconditional immediately generates a contentious result. The controversial result is that Menzies's account commits us to the claim that every true proposition is ideally conceivable. We arrive at this conclusion as follows. Firstly, take the biconditional IC that lies at the heart of the response-dependent account:

$$IC: \Diamond p \leftrightarrow ICp$$

[28] All references to Sherratt's work are to Sherratt (2010*) The Reality of Modality*.

Secondly, take the following principle, T:

$$T: p \rightarrow \Diamond p$$

T states that if P is true, then P is possible. Recall, that principle T was used in chapter 1 to *characterize* alethic modality. That is, it is a distinctive feature of alethic modality that T is valid.[29] As a result, in the present context T is uncontroversial. However, if we take T together with the response-dependent biconditional IC, then we will be committed to the following principle, TT:

$$TT: p \rightarrow ICp$$

TT states that if P is true, then P is ideally conceivable. I shall follow Sherratt in referring to TT as "The Transparency Thesis". Sherratt (156) refers to TT as the "Transparency Thesis". The idea is that TT ensures that the facts of the actual do not go beyond what we can conceive in ideal condition and in this sense are "*transparent* to our idealized abilities to conceive".

The problem for the response-dependent account is that this is far from obvious. There seems to be little support – independent from considerations within the epistemology of modality – for the claim that the actual world is transparent in this way. For instance, as Sherratt (157) highlights, it seems that there could be strange quantum facts that do not lend themselves to human comprehension. It is difficult enough to conceive of a particle being in two places at the same time, but there is no guarantee that the world does not get more peculiar the further down we go. For all we know, there are some facts that are so strange that they cannot be comprehended. This isn't to say that we know that TT is false,

[29] Although, the claim that T is a distinctive characteristic of alethic modality is not explicitly part of Sherratt's presentation of this objection, Sherratt (156, 158) takes T to be "uncontroversially true". Sherratt (158) suggests that: "T is surely a priori too: merely by reflecting on the relevant concepts, I can find out that every true proposition is possible."

it is merely to highlight that TT is a significant commitment with little independent support.

One tempting move is to suggest that a thinker free from cognitive limitation – an *ideal* conceiver – would be capable of conceiving every fact. The thought might be that if conceivability is sufficiently idealised then, every actual fact will be conceivable. Characterising ideal conceivability in such a way, however, would trivialise the biconditional IC. However, if IC is intended to be interpreted response-dependently, then (following the usual line of reasoning) the biconditional must be substantial. However, if the notion of conceivability is characterised in such a way as to *ensure* that ideal conceivers can conceive every fact, then we run the risk of (i) trivialising the biconditional or (ii) rendering the relevant notion of ideal conceivability as unattainable for *human* conceivers.

The issue is not that such anti-transparency claims are true. The issue is that they are theoretical possibilities. An immediate result then, against the response-dependent account is that it brings with it a commitment to a form of transparency that it is far from clear that we enjoy. Although it may turn out that the world is so transparent, it is a significant theoretical commitment to endorse without independent motivation. The first problem, then, is that a response-dependent account such as Menzies's is a hostage to fortune. There is, however, another, more pressing, problem that faces response-dependent accounts of modality.

2.3.2. Epistemological Transparency

Sherratt (158 - 160) proposes a more troubling argument for response-dependent accounts of modality. To distinguish this second objection from the Metaphysical Objection, I

shall refer to it as The *Epistemological* Transparency Objection.[30] The Epistemological Transparency Objection is particularly pressing because it does not rest upon the truth or falsity of TT. Recall that the anti-realist makes the case for an euthyphronic interpretation of a concept by showing the relevant biconditional to be a priori. So, if we take the candidate biconditional proposed by Menzies connecting possibility and ideal conceivability:

$$IC: \Diamond p \leftrightarrow ICp$$

In order to make the case for a Euthyphronic account of IC, we need to make the stronger claim that IC is priori. So let's assume that IC is apriori and represent that idea in the following way:

$$1.\ AP(\Diamond p \leftrightarrow ICp)$$

I follow Sherratt in using AP for "it is a priori that". Recall that the second step in the Metaphysical Transparency objection was T, the second step in the Epistemological transparency objection is the claim that T is a priori. We can write that as follows:

$$2.\ AP(p \rightarrow \Diamond p)$$

In support of this idea, I highlight again that $p \rightarrow \Diamond p$ was used in the characterisation of alethic necessity and the characterisation was not arrived at after empirical investigation.[31] It seems more plausible that $p \rightarrow \Diamond p$ is a conceptual *a priori* truth; which is just what is expressed by 2 above. However, as Sherratt (159) suggests if we also accept that a priori knowledge is closed under a priori deduction, then, from 1 and 2, we get 3:

[30] This presentation of the argument, differs slightly from Sherratt's in the assumed motivations for the apriority of IC.

[31] Again, Sherratt does not provide precisely this support for the apriority of T.

3. AP (p → ICp)

That is, 3 claims that the *controversial* conclusion of the Metaphysical Transparency Objection is *a priori*. 3 claims not merely that TT is true but that TT is a priori. However, the very point of the previous section was that it is far from obvious that TT is even true. It seems that we do not even know TT, never mind know TT a priori.

One line of response would be to suggest that although we currently do not know TT, it is nevertheless *knowable* a priori. In which case, our ignorance of TT is just equivalent to (for instance) an unknown, but knowable mathematical fact; a mathematical fact that can be known via a priori means.

The problem, however, is that to know whether p → ICp is true we would have to know that every actual fact is ideally conceivable. But this is precisely what we cannot know a priori as it would require us to know what the actual facts are; and this cannot be achieved a priori. Knowing the actual facts cannot be achieved by purely a priori means; it would require a posteriori investigation to establish the facts of the actual world. Given that, and as suggested by Sherratt (ibid. ?), there is no "conceptual link" that gives us 3 a priori. So, given this, Sherratt takes the following as an additional premiss:

4. ¬AP (p→ICp)

This, however, is to deny the a priority of one half of the response-dependent biconditonal - which is enough to ensure that the entire biconditional, IC, is not knowable a priori.

An argument of this form can be rerun for Euthyphronic accounts of modality in general. In each case, positing an a priori biconditional connection between the subject (whether the subject's conceiving, judgements or linguistic conventions etc) leads to controversial varieties of *global* anti-realism. In each case, because we do not know all the facts of

the actual world, we cannot know whether the biconditional is true. Furthermore, in each case, because we cannot know all the facts of the actual world without empirical investigation, we cannot know apriori that the biconditional holds. The significance of the Transparency Objection, then, is that it threatens Euthyphronic accounts in general, not just the specific formulation provided by Menzies.

2.4. Responding to Transparency

What routes of response are open to the modal anti-realist?[32] In this section, a number of potential lines of response are considered and shown to face their own problems. The components of Sherratt's argument:

1. AP ($\Diamond p \leftrightarrow IC p$)	Assumption for RAA
2. AP ($p \rightarrow \Diamond p$)	Premiss
3. AP ($p \rightarrow IC p$)	1, 2
4. $\neg$AP ($p \rightarrow IC p$)	Premiss
5. $\neg$AP ($\Diamond p \leftrightarrow IC p$)	1, 3, 4, by RAA.

Sections 2.4.1 – 2.4.3 highlight three possible responses open to the modal anti-realist. The first two responses concern ways in which the modal anti-realist might attempt to adjust their position so as to abandon 1. The third countermove highlighted concerns the rejection of 2. Each countermove, however, brings a new set of problems.

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[32] In addition to the moves considered here, Sherratt (160 – 163) also considers whether a variety of Modal Disjunctivism could salvage the benefits of the initial Modal Anti-Realist position. Rather than accepting the biconditional connection between ideal conceivability and possibility captured in IC, the Modal Disjunctivist accepts the following biconditional:

$\Diamond P \leftrightarrow ICP \vee P$

Although Modal Disjunctivism is an interesting position, ultimately, the theory runs into a similar set of issues as those facing the initial variety of modal anti-realism.

2.4.1. Abandoning Apriority

One way to avoid the Epistemological Transparency objection is to abandon the claim that the biconditional is a priori. That is, the modal anti-realist might attempt to maintain the idea that there is a bi-conditional connection between (for instance) ideal conceivability and possibility, but reject the claim that the bi-conditional is knowable a priori. That is, maintain:

$$\Diamond P \leftrightarrow ICP$$

But abandon

$$AP(\Diamond P \leftrightarrow ICP)$$

This would obviously prevent the generation of the unwanted transparency result. In particular, by abandoning the apriority of the bi-conditional the modal anti-realist would not be committed to the implausible:

$$AP(p \rightarrow ICp)$$

However, recall the role that apriority is typically intended to play on response-dependent accounts. As Sherratt (165 – 166) notes, it was the apriority of the bi-conditional that was intended to distinguish between response-dependent and non-response-dependent subject matters. Without appeal to a priority it is unclear that the distinction between response-dependent and non-response dependent subject matters would be operational. A primary component used when making the case for Euthyphronism would be removed. The very content of the Euthyphro distinct would be threatened. Thus, abandoning the apriority of the biconditional is tantamount to abandoning a response-dependent account

entirely. Abandoning the apriority of the biconditional would be to abandon modal anti-realism.

2.4.2. Abandoning the Bi-conditional

So far I have only considered the anti-realist position that accepts the truth of a biconditional which connects the thinker and the modal. One line of response for the proponent of Euthyphronism would be to abandon that biconditional and take up the following, weaker, claim:

$$IC*: ICp \rightarrow \Diamond p.$$

The modal anti-realist might then argue that IC* is not just true, but that it also meets the substantiality and apriority conditions. If this much were achieved, then the proponent of Euthyphronism might propose that there is a constitutive connection between ideal conceivability and possibility. With such an adjustment made to the response-dependent account, it would be possible to avoid both the Metaphysical and Epistemological Transparency Objections, as the inference from p's possibility to the ideal conceivability of p was required to generate the controversial TT (and this is exactly what has been abandoned by this countermove).

The concern, however, is that abandoning the biconditional would also result in the abandonment of the initial motivations for a Euthyphronic account of modality. The problem is that on IC* all truths which are ideally conceivable are possible. It is consistent with IC* that there are possibilities that are not ideally conceivable. This, however, threatens to undermine some of the initial motivation for an Euthyphronic account of modality. Recall that modal anti-realism was initially attractive because it promised to provide a metaphysical and ontological account of modality merely in terms of the response of subjects. However, on IC* we are left without any metaphysical or

ontological explanation of the truth of ◊p when ◊p and ¬ICp. Consequently, to fill out the metaphysical and ontological picture, we would have to appeal to some further resources to provide an account of ◊p in cases where p is not ideally conceivable. However, it seems that the only available type of explanation in such cases will be realist. And if we require a realist explanation of some cases, then we will have abandoned a thorough going modal anti-realism.

2.4.3. Abandoning T

A final line of defence for the proponent of response-dependence would be to abandon T.[33] That is:

$$T: p \rightarrow \Diamond p$$

Someone thoroughly in the grip of an anti-realist account of modality might be initially tempted by such a move. Rejecting T may be prima facie tempting as doing so would avoid both the Metaphysical and Epistemological transparency objections. In the case of the Metaphysical objection, it was T that got us from:

$$IC: \Diamond p \leftrightarrow ICp$$

To the controversial TT:

$$TT: p \rightarrow ICp$$

Consequently, rejecting T would allow the anti-realist to avoid commitment to TT. Also, rejecting T would amount to rejecting the *a priority* of T. Which would be to reject the second step in the *Epistemological* Transparency argument. The problem, however, is

[33] In conversation, Sonia Roca-Royes highlighted that the most extreme proponents of anti-realism might attempt to abandon T in order to avoid the transparency objection.

that this move would be tantamount to the complete abandonment of absolute *alethic* modality. Recall that it was the following inferences that were taken to distinguish *alethic* modality from other modalities (such as the deontic and doxastic modalities).

(a) $\Box A \rightarrow A$

(b) $A \rightarrow \Diamond A$

Recall, in the deontic case, there are examples of some P being true but not deontically (for instance legally, morally etc) possible; for instance, the great train robbery. It is true that large sums of money were stolen in a train robbery in 1963, but it wasn't legally permissible. That is, in the deontic case, $A \rightarrow \Diamond A$ is not valid. However, it is a distinctive feature of *alethic* modality that $A \rightarrow \Diamond A$ is valid. With the alethic modality, it is perfectly safe to reason from the fact that a train robbery took place to the conclusion that it is possible for a train robbery to have taken place. Consequently, to reject T would be to abandon the project of providing a constitutive or epistemological account of *alethic* modality. We would, instead, be considering an entirely different species of modality.[34]

2.4.4. Euthyphronism and The Reliability Challenge

It was proposed in chapter 1 that four broad strategies of response can be found to the Reliability Challenge in general – that is, the reliability challenge for any domain - by crossing the parameters of *order* of dependence and *type* of dependence (specifically, causal-counterfactual dependence). The causal isolation and counterfactual invariance of the modal facts, however, made causal-counterfactual accounts of dependence prima facie unpromising as a to response to the Reliability Challenge for the specific case of modality. That left two approaches: Modal Anti-Realism and Non-Standard Realism.

[34] This abandonment would have ramifications throughout the range of challenges indicated in chapter 1. To abandon T would be to undermine our account of the Mechanism, Belief, Reliability and Role challenges. In each case we would miss the mark.

Sherratt's Transparency Objection, however, brings to the fore a range of problems facing a development of Modal Anti-Realism. In particular, the reliance of modal anti-realism upon a more general and controversial, global anti-realism about truth. In light of this, going forward the focus will be placed upon potential lines of development for Non-Standard Realism.

2.5. Conclusion

The upshot of this chapter is that Euthyphronic accounts of modality are pinned into a very problematic position with no clear route of escape. In the first case, if the Euthyphronic account is constructed along the usual lines, with an a priori bi-conditional connection between thinker and modality, then the account will generate implausible transparency results. What is more, if we attempt to adjust the Euthyphronic account in a way that will prevent the generation of the transparency theses, then we will either (1) have given up on the project of *Euthyphonism* and resorted to a realist account of modality or (2) we will have rendered the distinction between the Euthyphronic and Socratic positions non-operational or (3) we will have given up the project of providing an epistemological account of absolute *alethic* necessity. As a result of this, it is proposed that the Euthyphronic strategy 3 should be put to one side and an answer to the Reliability Challenge should be sought amongst the variants of strategy 4.

Chapter 3

Conceivability and Imagination

Historically, in the literature on the epistemology of modality, notions of *conceivability* and *imagination* have taken centre stage. I think answers to the Mechanism and Reliability challenges can be found in a broadly conceivability-based epistemology, however, I take the best development of the approach to deviate significantly from some of the most prominent developments of the conceivability-based approach. Although, the upshot of chapter 2 was that Euthyphronic accounts of modality face substantial difficulties (whether developed in terms of conceiving or not), it remains to be seen whether a conceivability-based response to the challenges is viable when removed from the Euthyphronic approach. The chapter considers the notion of conceivability in more detail and independently from the project of providing an Euthyphronic account of modal thought. The chapter outlines a number of initial issues facing a conceivability-based account of modal thought. Central among those issues is the challenge of identifying a notion of conceivability that is reliably connected to modality, but which is also accessible.

3.1. Conceivability, Imagination and Possibility

Belief in necessity might be acquired in a variety of ways. For instance, it seems that we could acquire modal beliefs via testimony. However, even if modal belief can be acquired via testimony, it seems that this is not the *primary* route to modal knowledge. It seems that there must be some better way of acquiring model knowledge than via such – seemingly secondary - methods. The Mechanism Challenge asks us to identify the

primary or canonical mechanism deployed in the acquisition of modal belief. In response to this challenge, historically, notions of *imagination* and *conception* have taken centre stage. The details of this general approach can be filled out in a variety of ways, but one of the most widely discussed ideas in this tradition takes imaginability or conceivability to be a guide to possibility. In particular, the following *Conceivability Thesis* has received considerable attention:

$$\text{CT:} \quad \text{CP} \rightarrow \Diamond \text{P}$$

Where CP is taken to mean that P is conceivable. The general idea is that P's conceivability is a guide to P's being possible. The sense in which conceivability is taken to be a "guide" to possibility may also be refined in a variety of ways. For instance, it might be thought that P's conceivability (in some sense) *entails* ◊P, in other cases P's conceivability is (merely) taken to provide evidence for ◊P.[35] Significant ideas of this type can be traced back to Descartes and Hume. For instance, Hume states:

> 'Tis an established maxim in metaphysics, *That whatever the mind clearly conceives includes the idea of possible existence*, or in other words, *that nothing we imagine is absolutely impossible*.[36]

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[35]. This is a central point of difference between the conceivability-based accounts proposed by Yablo (1993) and Chalmers (2002). Where Yablo argues that conceivability provides *evidence* for possibility, Chalmers takes there to be a relation of *a priori entailment* between conceivability and possibility.

[36] Interestingly, given the focus of this project, Descartes and Hume take up contrasting positions with respect to the realist/anti-realist credentials of modal judgement. Hume (Treatise, Book I. Part iii. Section 14; NN 112:23) indicates a mind-dependent account of necessity: "Thus as the necessity, which makes two times two equal to four, or three angles of a triangle equal to two right ones lies only in the act of the understanding, by which we consider and compare these ideas; in like manner the necessity or power, which unites causes and effects, lies in the determination of the mind to pass from the one to the other." Although, Hume's anti-realism concerning necessity has been most thoroughly discussed with respect to causal-necessity, the passage just cited (and in particular the reference to arithmetical and geometric examples), suggests that Hume endorses a form of anti-realism of necessity that is broader than causal-necessity.

Hume (*Treatise*, Book I, Part ii, Section 2)

More recently, influential developments of the conceivability-based approach have been pursued by Stephen Yablo (1993, 2006), David Chalmers (1996, 2002, 2010: Chapter 6) and, obviously, Peter Menzies (1998).[37] The central idea on such approaches is that we form belief in P's possibility by first establishing that P is conceivable and we establish that P is conceivable by conceiving that P.[38] In the previous chapter the notion of conceivability was considered merely in passing and primary focus was placed upon the prospects of an anti-realist account of modality. The upshot of the previous chapter was that a response-dependent account of modality faces significant obstacles. However, it remains to be seen whether a conceivability-based account of modal thought and modal knowledge can be developed in line with strategy 4, Non-Standard Realism. It is the development of a conceivability-based account of this type that is the focus of this chapter.

It is worth noting an issue that immediately strikes the conceivability-based approach. A conceivability-based account of modal knowledge, utilising CT or some variant on CT, might appear to be immediately hopeless because conceivability is itself a modal notion. For instance, claim 1 can be recast as claim 2:

(1) P is conceivable
(2) It is possible to conceive that P

A prima facie objection then, to conceivability-based theories is that we cannot explain our modal knowledge by appealing to our knowledge of conceivability because our

[37] For further development of broadly conceivability-based approaches see Kung (2010, 2016), Geirson (2005).

[38] Here, I present the position in terms of *propositional* conceiving with thinkers conceiving *that P*. We might, however, also want to acknowledge cases of imagination or conception that is not propositional. For instance, perhaps when we imagine *a unicorn* we imagine *objectually*.

knowledge of conceivability *just is* a variety of modal knowledge. Such an objection undermines the hopes of providing a fully reductive epistemology of modality purely in terms of conceivability.[39] However, a conceivability-based account without the ambition of providing a fully reductive epistemology of modality may still make epistemological progress in so far as it (i) explains our knowledge of a broad range of modal facts in terms of our knowledge of a subset of those facts and (ii) there is an adequate account of our epistemological access to the subset of facts. Conceivability-based accounts of modal thought are attractive to the extent that they satisfy (i) and (ii).

This also highlights (part of) the initial motivation for the conceivability-based approach. It seems that an initial motivation for an epistemology of modality based upon CT is the idea that thinkers have relativity little difficulty in acquiring knowledge about conceivability. That is, part of the prima facie appeal of a conceivability-based account of modal knowledge is that it seems (ii) will be satisfied in the case of conceivability. It would seem that the primary way of discovering whether P is conceivable, is to actually go ahead and conceive that P.[40] A natural and intuitive idea is that thinkers have a particularly secure access to their imagination.[41] For instance, when someone claims that they are imagining a unicorn, or winning the lottery, or Russell with a giant beard we typically take it for granted that they are imagining such things. In general, it is assumed that thinkers are capable of identifying that they have (or have not) imagined (or conceived) that P. That is, more specifically, thinkers can identify that they *conceived* that P as opposed to, say, *judged that P or believed*, P. A prima facie attraction to an epistemology based upon CT is that thinkers can identify when they are conceiving and (given CT) are thus in a position to appropriately draw beliefs in possibility on the back

[39] I saw "*purely* in terms of conceivability" because it might be thought that conceivability tests do play a role in the acquisition of modal belief, but that role is not foundational. For instance, it might be thought that our conceivability knowledge is reducible to some other type of (non-modal) knowledge, yet conceivability tests are used to expand upon that base modal knowledge.
[40] As opposed to, say, asking someone whether or not P is conceivable.
[41] I take this idea to be part of the way that we typically talk about imagination outside of philosophy. Within philosophy, specifically, within the epistemology of modality the intuitive notion of imagination is largely abandoned in the pursuit of various philosophical ends. This is a primary point pursued throughout this chapter.

of their conceivings. Similarly, the thought is, that thinkers can accurately identify *what they conceive*. That is, they can identify the content of their imagination. In conceiving that P, the thinker can identify that it is indeed, *P*, as opposed to say Q, that they are conceiving. For instance, the intuitive idea is captured by Wittgenstein:

> Someone says, he imagines King's college is on fire. We ask him: How do you know that it's King's college you imagine on fire? Couldn't it be a different building very much like it. In fact, is your imagination so absolutely exact that there might not be a dozen buildings whose representation your image could be? – and still you say: "there's no doubt I imagine King's College and no other building". (Wittgenstein: 1958 /1965, 39)

When someone claims that they are imagining King's college we would typically take it for granted that they are imagining King's college. We wouldn't, for instance, ask them to check whether they are merely imagining a King's college façade. An initial motivation for the consideration of conceivability-based accounts of modal thought and modal knowledge, is that we seem to have a particularly secure form of access to our imagination. If this intuition can be upheld and CT is true, then we have a promising route to modal knowledge.

Although, I think ideas in this vicinity are on the right track to addressing the challenges indicated in chapter 1, the aim of this chapter is to highlight a number of initial difficulties for the development of the conceivability-based approach in line with the Conceivability Thesis. The aim of this chapter is to identify a number of foundational issues in the development of the approach. Sections 3.2.1. and 3.2.2 outline a number of initial constraints on the development of a conceivability-based account. Section 3.3. outlines three of the most widely discussed distinctions in the relatively recent literature. Section 3.4. outlines a number of issues that remain after those distinctions have been taken into account.

3.1.1. Articulating Conceivability: Informative and Non-Trivial

Although imagination and conceivability have been at the centre of modal epistemology, those notions are only going to do serious epistemological work, if we can provide some account of conceiving itself. We can get some grip on the notion of conception by considering the following characterisation provided by Gendler and Hawthorne:

> We have, it seems, a capacity that enables us to represent scenarios to ourselves using words or concepts or sensory images, scenarios that purport to involve actual or non-actual things in actual or non-actual configurations. There is a natural way of using the term 'conceive' that refers to this activity in its broadest sense. When we engage in such conceivings, the things we depict to ourselves frequently present themselves as possible, and we have an associated tendency to judge that they are possible. Indeed, when invited to consider whether something is possible, we often engage in a deliberate effort to conceive of it; upon finding ourselves able to do so, we conclude that it is.
>
> (Gendler and Hawthorne: 2002: 1)

For instance, a quick gloss on our conceiving practices might present us as taking our ability to conceive of a scenario in which London is buried in 20 feet of snow or that Germany won the second world war and take us to then go on to conclude that such events are possible. Similarly, a quick gloss on our conceiving practices might present us as taking our *inability* to conceive of married bachelors and round squares as a basis on which we draw the conclusion that such things are *not possible*. However, despite the significance of the notion of conceivability within the literature on modal thought, there remains considerable ambiguity about what, exactly, *conceiving* is.[42] In the philosophical

[42] Gendler and Hawthorne (2002: 7-8) and Vaidya (2006: 245) both highlight the ambiguity in the notion of *conceiving*. Yablo (1993), Tidman (1994) and Chalmers (2002) all consider ways in which CT might be refined. Despite this, there is still little consensus on what conceiving is.

literature, the notion of conceivability is typically interpreted *broadly* to cover a significant variety of mental processes. For instance, although Gendler and Hawthorne (2002: 7) provide a basic gloss on our conceiving practices they also outline the following list of mental activities, each of which is arguably a candidate explication of the notion of conceiving:

> Rationally intuiting that it is possible that P
> Realizing that not-P is not necessary
> Imagining (that) P
> Supposing (that) P
> Conjecturing that P
> Accepting that P for the sake of argument
> Describing to oneself a scenario where P obtains
> Telling oneself a coherent story in which P obtains
> Pretending that P
> Make-believing that P
> Understanding the proposition that P
> Entertaining (that) P
> Mentally simulating P's obtaining
> Engaging in off-line processing concerning P

When the notion is used this way it functions to pick out any one of a large set of distinct cognitive processes.[43] If the basic and *broad* gloss on conceiving is to be developed into an informative response to The Mechanism Challenge, then the relationship between that broad gloss and the underlying mental activities requires articulation. This task of articulation also requires that some care is taken to distinguish between notions of conceivability that are implemented at different levels of explanation. For instance, on a

[43] For instance, the examples of Descartes and Hume that have just be given are typically acknowledged as providing conceivability theories, however, the notion of conceivability extracted from Descartes is more closely related to *understanding*, whereas Hume's notion of conceivability is more closely related to *imagination*.

narrow interpretation of conceivability, conceiving might be identified as a distinctive cognitive mechanism in its own right; a mechanism that is to be implemented at a similar level of explanation as the cognitive activities indicated above. However, in some cases the notion of conceivability is used in a slightly different way. On some occasions the notion of conceivability is not simply used broadly to pick out any one of a variety of underlying cognitive processes and it is also not identified as a specific cognitive mechanism. In some cases, the notion of conceivability is implemented as a *place holder* concept designed to capture whichever process is involved in the formation of beliefs in necessity and possibility.[44] Treating the notion of conceivability in this way, however, is tantamount to the following characterisation of the cognitive mechanism of conceiving:

> Assuming we have modal knowledge and that there is some cognitive mechanism implicated in our acquisition of that modal knowledge; whatever the nature of that cognitive mechanism turns out to be, that mechanism is *conceiving*.

The difference between this notion of conceivability and a broad notion of conceivability is that the place holder notion characterises conceivability in terms of its relation to the acquisition of modal belief. On this reading, although it is harmless to assume that conceiving is the cognitive mechanism deployed in the acquisition of modal belief, such a notion of conceivability will be *uninformative* and *trivial* when it comes to the Mechanism and Reliability challenges. Specifically, such a notion of conceivability will be uninformative and trivial in the following senses. If we deploy the notion of

[44] Gendler and Hawthorne use the phrase "place holder concept" to pick out one way in which the notion of *conceiving* is used. Vaidya (2006: 146) highlights a notion of conceivability along just these lines and suggests that the conceivability thesis is *generally* understood in this sense:

> As there is currently no such account available, we have no alternative but to continue to use 'conceivability', pretending that there is a consensus among those who invoke it in connection with the conceivability thesis. In any event, the way theorists generally understand the thesis is as saying that conceivability (broadly understood) is a good guide to metaphysical possibility.

conceivability as a place holder concept, then we will have fallen short of providing an *informative* characterisation of those mechanisms through which modal belief is acquired. We would be left in the dark as to whether conceiving consisted in imaging, supposing, entertaining, or finding believable etc. In this respect we would have failed to address the Mechanism Challenge. Furthermore, on such a characterisation it will be trivially true (given the assumption that we do, in fact, possess modal knowledge) that conceiving is a reliable means of acquiring modal beliefs, however, we will have done little to *explain* that reliability. Rather, reliability would be ensured *trivially* via the place-holder characterisation of conceivability. Such triviality and the resulting failure to provide an explanation of the reliability of belief in necessity is to fall short of meeting The Reliability Challenge. The result is that a place-holder notion of conceivability is useful at a high level of generality, but it is not particularly useful in addressing our target questions. Thus, providing a more specific account of what is involved in conceiving is essential if we are to address the challenges outlined in chapter 1. This will be the case whether we interpret the notion of conceivability broadly, as a concept that picks out any one of a number of underlying cognitive processes (e.g. supposing, finding believable etc) or if we interpret the notion more narrowly as The point raised then, is that it is not enough to appeal simply to the notion of conceiving or imagining in our response to the Mechanism and Reliability Challenges. The notion of conceivability needs to be developed in more detail in order to ensure that the notion of conceivability is articulated in a way that is informative and non-trivial in the senses just indicated. This chapter focuses on notions of conceivability or imagination in the *narrow* sense.

3.1.2. Conceivability and Reliability

The notion of conceivability, then, requires more careful articulation. A number of prima facie plausible characterisations of the notion of conceivability, however, are found to be inadequate responses to the Mechanism and Reliability Challenges. For instance, if we attempt to characterise the conceivability of a proposition in terms of the *believability* of

that proposition, then it seems that beliefs in possibility and necessity formed via that mechanism would not match the pattern of belief identified in chapter 1. That is, even if we set aside the challenge of explaining *how* that mechanism provides reliable access to the modal facts, such characterisations fail to capture the pattern of belief captured in 1 – 6. It seems, for instance, that someone could believe that there is a set of all sets.[45] Similarly, it seems that there is some sense in which I understand *2+2=5*, despite it being impossible that *2+2=5*. Prior to a more specific articulation of the notion of conceivability, it seems that some sense can be found for the claim that a number of the test cases identified in chapter 1 are conceivable. If this is so, then those cases would provide counterexamples to the Conceivability Thesis. Recall CT:

CT. $CP \rightarrow \Diamond P$

The "Standard Objection" to CT is that our ability to conceive that P is not sufficient for P's being possible.[46] The objection is supported by the following examples:

(3) Hesperus is not Phosphorus
(4) Water is not H2O
(5) It is not the case that GOLDBACH

Each of these examples seems to be (in some sense) conceivable. Let's take each case in turn. For instance, it seems that without further articulation of the notion of conceivability, we can find some sense in which the following are both true:

(6) It is conceivable that Water is H2O
(7) It is conceivable that Water is not H2O

[45] Even here the notion of believability and understandability require further articulation.
[46] I follow the literature in referring to this as "The Standard Objection" to conceivability-based accounts. For instance, Bruekner (2001) and Worley (2003) and Roca-Royes (2010) refer the issue in this way.

For instance, take the case of a thinker conceiving prior to the discovery that water is H2O. There would seem to be some sense in which it is conceivable to such a thinker that water is H2O and there would also seem to be a sense in which it is conceivable that water is not H2O. They may find it conceivable (in some sense) that water is some other chemical compound, XYZ. Similarly, without refining the notion of conceivability, it would seem that the ancient Babylonians could conceive (in some sense) that Hesperus is Phosphorus and they could also (in some sense) conceive that Hesperus is not Phosphorus. It would seem that the Ancient Babylonian's believed that Hesperus and Phosphorus were distinct.[47] Finally, it would seem that we can identify a sense of conceivability on which the following is conceivable:

> GOLDBACH: Every even integer greater than 2 can be expressed as the sum of two primes.

For instance, I know neither Goldbach nor ¬Goldbach. Yet there might be a sense in which I conceive that it is true. Similarly, there seems to be a sense in which I conceive that GOLDBACH is false.

So although the general notion of conceiving might be articulated in a variety of ways, one way is in terms of a specific notion of imagination. On such an approach, the hope is that the more specific notion of imagination is informative, in the sense that it provides some account of what conceiving is, it is non-trivial, in the sense that it does not trivialise the reliability of the method and that it is reliable.

3.2. Refining Conceivability

[47] Interestingly, despite Kripke taking there to be necessities that can be known apriori and necessities that can only be known a posteriori, Kripke still appeals to a link between conceivability and possibility.

The development of a conceivability-based account is required (i) to provide an *informative* account of the mechanisms involved in the acquisition of modal belief and (ii) to ensure that the link between conceivability and possibility is not *trivialised* and (iii) to provide a notion of conceivability that is *reliably* connected to possibility. In this section I want to highlight a number of points at which CT might be refined. The refinements focused upon here are those highlighted by Chalmers (2002).[48] Chalmers's characterisation of conceivability makes use of three pairs of distinctions that (according to Chalmers) can be used to identify a specific notion of conceivability that is reliably connected to possibility. The three general distinctions between notions of conceivability are the following:

Prima Facie Vs Idealised
Primary Vs Secondary
Positive Vs Negative

These three distinctions mark jumping off points for a variety of issues in the development of a broadly conceivability-based articulation of non-standard realism. The following sections present the distinctions in turn.

3.2.1. Non-idealised Vs Idealised

Idealisation provides one dimension along which variants of the conceivability-based approach might differ. For instance, we might distinguish between those conceivability-based accounts that suggest (i) that CT holds for anyone that can conceive at all, regardless of their cognitive capacities and (ii) that CT holds for a thinker that is in possession of all concepts, all non-modal knowledge, and is reasoning perfectly. These

[48] The "refinements" emphasised in this chapter are from Chalmers (2002) account. Of the three motivations just indicated, Chalmers uses the third issue (restoring reliability) as the primary motivation for his account.

two positions will address the Reliability Challenge in considerably different ways. For instance, it seems that accepting the first approach would seriously threaten the reliability of modal beliefs acquired via conceivability. It seems that there could be thinkers that lack relevant concepts and thus fail to identify various possibilities. For instance, a thinker that lacks the concept *bachelor* will be unable to imagine that all bachelors are male. Also, it seems that a thinker that reasons badly, might find conceivable things that are not possible. Variants of the conceivability-based approach might differ on the resources that require idealisation. Also, they might differ on the extent to which those resources require idealisation.

One distinction highlighted by Chalmers (ibid: 147 - 149) is that between prima facie, secunda facie and ideal conceivability. Prima facie conceivability concerns what a thinker will find conceivable initially, given limited reflection. Secunda facie conceivability concerns what a thinker will find conceivable given further reflection, but still less than ideal reflection. Ideal conceivability concerns what a thinker will find conceivable given ideal reflection. By appealing to a notion of ideal conceivability, we remove a number of potential sources of counterexample to CT. For instance, it might be prima facie conceivable that there is a barber that shares the head of everyone that does not shave their own. However, given ideal reflection, such cases are revealed to be incoherent.

3.2.2. Primary and Secondary Conceivability

A second distinction highlighted by Chalmers (2002: 157) is between "primary" and "secondary" conceivability. Chalmers's notions of primary and secondary conceivability are based on the idea that statements can be assessed in two different ways. We can consider a statement *as actual* or *as counterfactual*. When we consider a statement as actual we consider it as an epistemic possibility *as a way the actual world might be*. In contrast, when we consider a statement counterfactually we *consider a way the world*

might have been. Chalmers proposal is that these two ways of thinking amount to two types of conceivability. Chalmers's proposal is that with the distinction between these two types of conceivability acknowledged, we can account for a number of counterexamples to the link between conceivability and possibility. Specifically, Chalmers's takes the distinction between the two types of conceivability to explain the apparent conceivability of the Kripkean a posteriori necessities.

4. Necessarily, Hesperus is Phosphorus
5. Necessarily, Water is H2O
6. Necessarily, Socrates is human

Each of 4 – 6, is true. However, it seems that some sense can be found for the claims that that it is conceivable that Hesperus is not Phosphorus, that water is not H2O, and Socrates is not human. Chalmers's proposal is that there is a sense in which it is conceivable that Hesperus is not Phosphorus, that water is not H2O, and that Socrates is not human. Chalmers's takes each of these scenarios to be conceivable in the *primary* sense of conceivable. Each scenario is conceivable in an epistemic sense when we consider the ways that actual world might be. Chalmers (ibid) takes the notion of primary conceivability to be "grounded in the idea that, for all we know a priori, there are many ways the world might be" and for all we know a priori Hesperus might not be Phosphorus, Water might not be H2O and Socrates might not be human. However, according to Chalmers, considering these scenarios *as counterfactual* will leave them inconceivable. Considering the notion of secondary conceivability Chalmers states:

> Secondary conceivability works quite differently. It is grounded in the idea that we can conceive of many counterfactual ways that the world might have been but is not. (2002: 158)

When we consider 4 – 6 *counterfactually*, they are not counterfactually / secondarily conceivable.[49] Secondary conceivability is not purely a priori. Rather, what a thinker finds counterfactually conceivable will depend upon their beliefs about the actual world. For instance, the idea is that upon discovering that water is H2O a thinker will no longer find it (counterfactually / secondarily) conceivable that water is not H2O (and likewise for the other a posteriori necessities). The distinction between these two types of conceivability then is intended to deflect the apparent counterexamples to CT provided by the a posteriori necessities.

It is worth noting that the distinction between the epistemic and counterfactual ways of considering a scenario is quite general and it is prevalent in the epistemology of modality. Chalmers's account is distinctive, however, in that he takes the divide between these two ways of thinking to mark a divide between two types of *conceivability* and two types of *possibility*. Throughout this chapter, I will adopt Chalmers's terminology referring to these distinctions.

3.3.3. Positive Vs Negative

A third distinction highlighted by Chalmers's (ibid: 149 - 156) is between notions of *positive* conceivability and *negative* conceivability. The notion of negative conceivability concerns a propositions *not being ruled out*. The general idea is that P is negatively conceivable (with respect to a given set of constraints), if P is not ruled out (by those constraints). Chalmers suggests:

[49] Chalmers commitments go well beyond an appeal to the intuitive distinction between indicative and counterfactual thought. Chalmers is also committed to the specific semantic theory of Epistemic Two-Dimensionalism (E2D). The central points that I wish to make concerning conceivability-based accounts of modal thought are not levelled at the details of the E2D semantic theory.

> The central sort of negative conceivability holds that S is negatively conceivable when S is not ruled out a priori, or when there is no (apparent) contradiction in S.

Chalmers's contrasts this notion of negative conceivability with a notion of positive conceivability. Chalmers, building upon Yablo's work on imagination, suggests the following:

> …to positively conceive of a situation is to in some sense imagine a specific configuration of objects and properties. It is common to imagine situations in considerable detail, and this imagination is often accompanied by interpretation and reasoning. When one imagines a situation and reasons about it, the object of one's imagination is often revealed as a situation in which S is the case, for some S. When this is the case, we can say that the imagined situation *verifies S*, and that one has imagined that S. Overall, we can say that *S is positively conceivable when one can imagine that S: that is, when one can imagine a situation that verifies S.*

Chalmers suggests that we can recover distinct notions of positive conceivability for each notion of imagining. For instance, we can imagine in a *perceptual* sense, in which we imagine with mental images. In this sense, we might perceptually imagine a golden mountain by forming a mental image of a golden mountain. The image we form, presumably, would be similar to that which we would form if we were genuinely looking at a golden mountain. However, although it may be the case that we perform acts of perceptual imagination in this way, it seems that this notion of imagination is going to have limited use as a response to the Reliability Challenge. For instance, it seems that we will struggle to image, via mental images, a significant variety of situations that we deem to be possible. For instance, it is unclear whether we can imagine, equipped only with mental images, that 2+2=4, or that all bachelors are male, or (perhaps) England

winning the World Cup. The success of this approach then, requires finding a notion of imagination that is more closely related to possibility.

On this front, Chalmers's appeals to a notion of "modal imagination".[50] This notion of imagination is not restricted to imagination via mental images. With this notion of imagination we can imagine that 2+2=4, that all bachelors, and that England won the world cup. Chalmers's (ibid: 153) suggests that the notion of "modal imagination" is intended to capture "a certain sort of familiar mental act". It is also intended to identify a notion of imagination that has two distinctive features. Firstly, it is *objectual*. The idea, here, is that modal imagination involves "an attitude to an intermediate mental object (here, an imagined situation)" (ibid: 150). Secondly, it is a significant feature of the notion of positive conceivability articulated in terms of the notion of modal imagination, is that it involves *verification*. The notion of verification can (roughly) be equated with an epistemic relation of entailment between statements. Crucially, the notion of verification is taken to be "stronger than a mere evidential relation" and "if it is coherent to suppose that the situation obtains without S being the case, then the situation does not verify S" (ibid: 153).

With this notion of positive conceivability in hand, we have a potential line of response to some of the initial counterexamples to the conceivability thesis. For instance, it might be thought that when we imagine GOLDBACH, by imaging mathematicians celebrating a proof, we do not imagine a situation that *verifies* GOLDBACH. Instead, we merely imagine a situation that provides evidence for GOLDBACH.

3.3.4. Refining CT

[50] Chalmers's draws heavily from Yablo (1993) in characterising the notion of modal imagination.

With the distinctions in place, we can identify a range of more thoroughly articulated variants on CT. For instance, consider the following principles:[51]

(8) Prima facie primary positive conceivability entails primary possibility

(9) Secunda facie primary positive conceivability entails primary possibility

(10) Ideal primary positive conceivability entails primary possibility

Similarly, if we take secondary positive conceivability and merely adjust the degree of idealisation, then we get the following three principles

(11) Prima facie secondary positive conceivability entails secondary possibility

(12) Secunda facie secondary positive conceivability entails secondary possibility

(13) Ideal secondary positive conceivability entails secondary possibility

With the distinctions in place, we go some way to identifying a notion of conceivability that overcomes the initial concerns about reliability. Chalmers (ibid) suggests that (10) provides the strongest connection conceivability and possibility. However, (10) is a connection between conceivability and *primary* possibility. The notion of primary possibility, however, is an epistemic modal, not absolute. Given this, whether or not (10) yields a reliable connection between ideal, primary positive conceivability and possibility, (10) is not going to provide the most relevant response to the reliability

[51] Chalmers does discuss a number of these principles in detail. In particular, the principle connecting ideal primary positive conceivability and primary possibility. The labels used here differ from those used by Chalmers.

challenge concerning absolute alethic necessity. However, working with the three distinctions outlined, the most promising link to absolute alethic necessity is provided by (13). That is, a link between ideal secondary positive conceivability and secondary possibility. With (13) in hand, I want to turn to a number of challenges that still face a proponent of CT.

3.4. Additional Challenges to Conceivability

With the notion of conceivability refined and with the distinctions between prima facie and ideal conceivability, positive and negative conceivability and primary and secondary conceivability, Chalmers goes some way to identifying a reliable connection between conceivability and possibility. However, in considering the refinement presented so far, it is possible to extract a number of general issues that face the development of a conceivability-based explanation. A series of issues are highlighted in the following sections. The first two issues concern the accessibility of the conceivability-facts given the proposed refinements to CT. Recall, part of the reason that conceivability-based accounts of modal knowledge are prima facie attractive is that thinkers have access to the conceivability-facts. Not only that, but it seems to be part of our ordinary understanding of imagination (and its cognates) that thinkers have a particular secure access to their imagination. The distinctions just outlined, attempt to identify a reliable notion of conceivability, however, in doing so they threaten to undermine these initial motivations for a conceivability-based epistemology of modality. The third issue concerns the relationship between CT and a variety of global anti-realism about truth. The fourth issue concerns the prospects of response to the Belief, role and Reliability challenges with a narrow notion of conceivability.

3.4.1. Idealisation and Access

Given the understanding of conceiving gestured at so far, if we refine the conceivability thesis in terms of either prima facie or secunda facie conceivability then conceivability will be only a limited guide to possibility. For instance, it might be prima facie (secunda facie) conceivable that there is a set of all sets, or that there is a barber that shaves everyone's head that doesn't shave their own. However, such scenarios are not possible and upon closer scrutiny they are revealed to be incoherent. As a result, P's being prima facie (secunda facie) conceivable is not sufficient for P's being possible.[52] It is ideal conceivability, then, that offers the prospects of a reliable connection to possibility.

However, appealing to an idealised notion of conceivability threatens to undermine one of the initial motivations for a conceivability-based account of modal thought. Recall, one of the initial advantages of the conceivability-based approach was that subjects were taken to have a particularly secure type of access to the conceivability-facts. Thinkers seem to have a particularly secure access to the facts concerning their imagination. They can identify instances of imagination and they can identify the content of that imagination. However, the transparency of the conceivability-facts will vary depending upon the degree of idealisation appealed to in the articulation of CT. For instance, in the case of prima facie conceivability it seems relatively unproblematic for a thinker to identify when they have succeeded in *prima facie* conceiving that P. Similarly, it seems unproblematic for a thinker to successfully identify when their conceiving amounts to *secunda facie* conceiving. However, the conceivability facts will not be so accessible if we appeal to a notion of ideal conceivability that is characterised as conceiving that cannot be defeated by further reasoning. The problem, is that for all that has been said so far, there is no reason to think that a human subject will be able to identify when their conceiving meets this condition. For a thinker to know this, they would need to know, prior to carrying out the (seemingly required) further reasoning, that further reasoning would *not* reveal the imagined scenario to be incoherent. Now, rather than thinkers having particularly secure access to the conceivability facts, subjects are faced with a particularly demanding

[52] Although insufficient for P's possibility, prima facie or secunda facie conceivability might still be thought to provide evidence for P's being possible.

epistemological challenge when attempting to work out whether or not a proposition is *conceivable*. This epistemological challenge is distinct and prior to the further challenge of identifying whether a proposition is *possible*.

The problem is even more apparent when we consider Chalmers's notion of ideal secondary conceivability. Chalmers' main focus is on the link between primary conceivability and primary possibility and the main points of idealisation concern the idealisation of our cognitive capacities. However, when we consider the link between secondary conceivability and secondary possibility, the requirements of idealisation will be more varied and more demanding. In particular, in the case of secondary conceivability idealisation will also include the idealisation of non-modal knowledge. Chalmers's characterises ideal secondary conceivability as follows:

> One might say that a subject prima facie secondarily conceives of S when the subject imagines a situation and judges that if that situation had obtained, S would have been the case. One can say that S is ideally secondarily conceivable if S is prima facie secondarily conceivable, and if the secondary conceivability is *not defeatable by idealized rational reflection and complete empirical knowledge*. (Chalmers 2002: 159)

The requirements of ideal secondary conceivability are even more demanding than ideal primary conceivability and, as of yet, we have no reason to think that thinkers can access the facts of this type of conceivability-fact. On the notion of conceiving indicated so far, then, there is a tension between (i) identifying a notion of conceivability that serves as a reliable connection to possibility and (ii) identifying a notion of conceivability that is *transparent*.[53] This problem is quite general and can be abstracted from the details of Chalmers's account. An additional requirement then, for an adequate response to the Reliability Challenge is that the identified mechanism is accessible to typical human subjects. That is, that there is reason to believe that the degree of idealisation required

[53] This issue is discussed by Worley (2003) and Roca-Royes (2010).

for reliability, is a state of idealisation that typical human modalisers frequently occupy. Without this, we will fail to explain how human thinkers tend to form modal beliefs that are true – and that is what the Reliability Challenge demands.

I want to leave this issue here, for now, but I take it as a constraint on the successful development of any conceivability-based account of modal thought. The issue is returned to in the final chapters of the thesis.

3.4.2. Modal Imagination and Illusions of Possibility

The transparency of conceivability is also threatened by another move to block counterexamples to The Conceivability Thesis. The Conceivability Thesis, CT, faced a number of apparent counterexamples. The notion of conceivability that has been sketched provides a number of lines of response to the apparent counterexamples to CT. The notion of positive conceivability might be thought to provide one line of response to a number of problematic cases. For instance, consider a thinker that imagines mathematicians celebrating the construction of a proof of a mathematical proposition, M (a mathematical conjecture which outside of the imagination is actually, currently, unproven and which is actually false).[54] If the thinker succeeds in conceiving that M, then we have a potential source of counterexample to CT. The thinker will have conceived that M, yet M is false and necessarily false. It might be thought that the notion of positive conceivability can be used at this point to defend CT. For instance, in considering such a case, Chalmers suggests:

> Note that the mathematical case is a case in which the subject has coherently imagined a situation, but in which the imagined situation does not verify S on

[54] This type of problem is pressed by van Inwagen (1998). Van Inwagen uses such cases to present a sceptical attack on our epistemic capacities to handle *unusual* modal claims.

> reflection, while the Grim Reaper and impossible object cases are cases in which a situation has not been coherently imagined. (Chalmers: 2002, 154)

More specifically, Chalmers suggests that in the mathematical case:

> […] reflection reveals the situation as one in which one has evidence that M, but not clearly as a situation in which M. So these cases will be prima facie positively conceivable under only the most superficial of reasoning processes. (ibid)

However, let's take a look at one of the initial factors that motivated the conceivability-based approach.

> Someone says, he imagines King's college is on fire. We ask him: How do you know that it's King's college you imagine on fire? Couldn't it be a different building very much like it. In fact, is your imagination so absolutely exact that there might not be a dozen buildings whose representation your image could be? – and still you say: "there's no doubt I imagine King's College and no other building". (Wittgenstein: 1958 /1965, 39)

This seems to be part of the way that imagination works. We do not need to check whether we have imagined P, or merely a scenario in which there is evidence for P. Roughly speaking, it seems that we can *stipulate* that we do imagine King's college and that we do imagine a naturally purple cow and that we do imagine M.[55] What we cannot do (it seems) is stipulate that the imagined scenario *is possible*.

There are a number of issues that can be extracted from this. Firstly, in order to handle the problematic cases (naturally purple cow, M etc) the notion of conceivability that has

[55] Such notions of stipulation were used by Kripke (1971) in response to the problem of Transworld Identification.

been sketched (again) threatens to split with any intuitive understanding of the notion of imagination. However, perhaps, the proponent of CT is willing to concede that the notion of imagination that underwrites CT does diverge from our intuitive understanding of the notion. However, even if this divergence is conceded, the more troubling issue remains that by articulating CT in this way we threaten to undermine one of the initial sources of motivation for a conceivability-based epistemology of modality. Again, the apparent ease with which thinkers access the content of their imagination was taken to be a motivating factor in the consideration of a conceivability-based epistemology. This, however, is threatened by the cases outlined. Perhaps, however, the proponent of CT is also willing to abandon (or deny that there ever was) this motivation for a conceivability-based epistemology.[56]

3.4.3. Conceivability and Global Anti-Realism

As Chalmers suggests, we can imagine all sorts of things. We can imagine Germany winning the war, the oceans freezing over and Russell with a beard. It is also accepted by Chalmers that many impossibilities are prima facie conceivable (if they weren't we would have no need for idealisation). For instance, Chalmers accepts that the following cases are examples of prima facie conceivability and secunda facie conceivability. For instance, Chalmers considers the Grim Reaper paradox as a potential case of prima facie conceivability. Similarly, Chalmers identifies Frege's Set Paradox as a potential example of secunda facie positive conceivability. The idea is that in both of these cases we succeed in imagining, however we fail to *coherently* imagine. The coherence of the imagining would not be sustained if our imagining were idealised. It is the incoherence that is found when cognitive capacities and processes are idealised that ensures that such cases do not amount to counterexamples to the link between conceivability and possibility. As a

[56] There is a residual problem even once this further concession has been made. What guarantee do we have that all (or a significant number) of our acts of imagination are not merely cases of merely evidential imagination? This type of issue is pressed in van Inwagen (1996).

result, in order for (13) (or any of the principles outlined) to provide reliable access to the modal facts it will have to be assumed that such incoherence will always be found when our reasoning is idealised. The problem, however, is that it is far from obvious that this true. It seems, in fact, to assume a controversial variety of global anti-realism about truth.

It is significant that Chalmers's characterisation of conceivability appeals to a notion of *coherent* modal imagination. In reference to a number of cases that threaten to undermine the reliability of the connection between conceivability and possibility Chalmers suggests:

> To avoid cases like these, one can isolate a notion of *coherent modal imagination*. In this sense, S is positively conceivable when one can *coherently* modally imagine a situation that verifies S. A situation is coherently imagined when it is possible to fill in arbitrary details in the imagined situation such that no contradiction reveals itself. To coherently imagine a situation that verifies S, one must be able to coherently imagine a situation such that reasoning about the imagined situation reveals it as a situation that verifies S. This notion is our core notion of positive conceivability: I will henceforth say that S is positively conceivable when it is coherently modally imaginable. (Chalmers: 2002, 153)

Recall also that it was important that the notion of idealisation appealed to is such that it concerns the idealisation of our *actual human capacities*. Without such a characterisation, idealisation threatens to bring epistemological problems. In particular, we would be constructing an epistemology that misses the mark of explaining *human* modal knowledge. However, if we accept that we are dealing with the idealisation of our actual human capacities and we take CT to be articulated in terms of coherent modal imagination, then we will be left with an account that rests upon a variety of global anti-realism about truth. To see this, consider the following crucial point in Chalmers' characterisation:

> A situation is coherently imagined when it is possible to fill in arbitrary details in the imagined situation such that no contradiction reveals itself.

Now, there are two ways of reading this. Firstly, concerning what is *revealed* to the subject attempting to conceive that P. Secondly, concerning the coherence of P itself. If these two readings do not match up, then there is a problem for the proposed link between conceivability and possibility. If P merely seems coherent, but is not, then our judgements in P's possibility will be led astray. However, ensuring that the two matchup is to be committed to a variety of global anti-realism of truth. It is to accept that such incoherence is always revealed to ideal *human* conceivers. As a result, then, P's conceivability is only going to be a reliable to guide to P's possibility if idealised human reflection always reveals any incoherence in a proposition. However, it may be, for instance, that idealised human reflection fails to reveal any incoherence in the following proposition:

> *Goldbach*: Any even integer can be expressed as the sum of two primes.

However, it may be that *Golbach* is impossible, despite any limitations in human cognitive capacities.

Of course, one way to ensure that *ideal* imagining does *not* generate counterexamples to the link between conceivability and possibility, would be to characterise ideal conceiving as just that conceiving that does not generate the type of counterexample outlined. This, however, would trivialise the link between conceivability and possibility. This would generate triviality just like that indicated earlier to face place-holder notions of conceiving. Again, this would lead to uninformativeness in a number of respects. Firstly, the notion of conceiving would go unarticulated (and the *mechanism* challenge would go unanswered). Secondly, we would lack an informative explanation of the *connection* between conceivability and possibility (and the Reliability challenge would go unanswered).

The notion of positive conceivability outlined, then, relies upon a variety of global anti-realism. Just as modal anti-realism was found to be committed to controversial transparency theses, conceivability theories developed along the lines indicated in this chapter also rely on controversial "transparency" theses. In particular, it rests upon the idea that our human capacities of reason are sufficient to reveal *any* incoherence in any proposition we might (even begin to) imagine. Without the additional assumption that *truth* in general is accessible in this way, the notion of positive conceivability will return cases of impossibilities that are positively conceivable. The general point is this: taking P's conceivability to be sufficient for P's being possible, runs into a dilemma. On the first horn of the dilemma, the relevant notion of idealised conceivability is inapplicable to *human* thinkers. On the second horn of the dilemma, it commits us to a controversial variety of global anti-realism about truth.

3.4.4. Conceivability: *Belief, Role and Reliability*

The issues highlighted in this chapter characterise a number of initial challenges facing the development of a conceivability-based account of modal thought and modal knowledge. Of the four challenges (Mechanism, Belief, Reliability and Role) the foregoing discussion of conceivability primarily speaks to the Mechanism Challenge and only partially to the Reliability Challenge. Obviously, The Standard Objection threatens a conceivability-based response to the Reliability Challenge and the subsequent moves to restore Reliability are relevant to the Reliability Challenge. However, even if the notion of conceivability were refined in such a way that it avoided the range of potential counterexamples highlighted in this chapter more would still need to be done to address the Reliability Challenge. The reasons for this is that the Reliability Challenge also requires that an *explanation* is provided for the connection between modal belief and

modal fact.[57] For all that has been said in this chapter, even with the notion of conceivability articulated in terms of modal imagination it remains a further challenge to *explain* the reliability of modal imagination.[58]

It is also worth noting that appealing to a narrow notion of conceivability, a distinctive capacity of conceiving (for instance, a notion of modal imagination) does little to explain the *role* of belief in possibility and necessity. Perhaps the primary reason for this is that it is not at all obvious how a capacity for modal imagination integrates with more thoroughly understood attitudes, such as belief. Beyond merely generating true beliefs in possibility, what does a distinctive faculty of modal imagination have to do with our intellectual lives more generally? A similar issue arises if we suggest that mathematical knowledge is acquired via a distinctive faculty of mathematical intuition. Even if we assume that a notion of mathematical intuition is capable of providing reliable access to the mathematical facts, it would be a further challenge to explain the role of beliefs acquired via *that* mechanism. More would need to be done to explain how beliefs formed via that mechanism go on to play a particular role once formed.

In the case of conceivability, one role that is sometimes attributed to imagination or conceivability is the role of *tabling a hypothesis* or putting it forward as a candidate for truth. The idea is that in order to even consider a proposition, P, as a candidate for truth, we need to be able to (in some sense) imagine or conceive that P. This role for conceiving is highlighted by Williamson (2007: 135) "[c]onceivng a hypothesis is getting it onto the table, putting it up for serious consideration as a candidate for truth. The inconceivable never even gets that far." If this is how conceiving is to be understood then marking a proposition as conceivable would play a significant role in our cognitive lives, in taking

[57] This is similar to the "connection question" highlighted by Vaidya (2007) to face conceivability-based accounts.

[58] It seems that the notion of modal imagination might be sufficient to *explain* the connection between ideal, primary, positive conceivability and primary possibility. Primary possibility is characterised epistemically as is the notion of modal imagination. However, it is less obvious how secondary conceivability is connected to *absolute* necessity.

a proposition to be conceivable we would be marking it as remaining candidate for truth. Similarly, finding a proposition to be inconceivable would be to rule out P as a candidate for truth. This approach, however, faces two initial challenges.

Firstly, it seems far too easy to put a proposition forward as a candidate for truth. For instance, surely mathematicians succeed in putting *Goldbach* forward as a *candidate* for truth – surely the hypothesis gets that far. *Goldbach* might not have been shown to be true, but the idea has at least been tabled. But getting *Goldbach* that far, getting it on the table, doesn't show that *Goldbach* is possible. So tabling an idea in this sense is no guide to possibility. Secondly, it seems that finding the limits of what we can imagine (or of what we can put forward as a candidate for truth) is something to do with us. Identifying that *we can put a proposition forward* as a candidate for truth might well play a useful role in highlighting the limits of our ability to consider a proposition as a candidate for truth, but without further explanation such limits seem to concern us, not something about the proposition itself.[59] It might be that knowing such limits is useful, perhaps even integral to certain ways of thinking. Just as knowing the limits of my climbing abilities is useful when climbing tall trees, it might even be integral to being a good climber that I have a good grasp of these limitations. Such knowledge, however, primarily concerns me and my abilities and although it would be useful to identify a set of trees that I can climb, it seems such an identification should not be taken beyond that. A conceivability-based response to the challenge of identifying the role of belief in necessity would need to address this issue. It would need to show how a belief with *a role like that* amounted to *belief in necessity* (rather than mere belief in conceivability). This, then, is one point at which the challenges of Belief and Role interact to places constraints on our account of modal thought.

In the coming chapters, it is suggested that there is hope for a conceivability-based response to these challenges. However, it is when conceivability is construed *broadly*, and articulated in terms that do not appeal to distinctive capacities of modal conception,

[59] Blackburn (1993: 60) provides a fascinating discussion of this issue.

that a response to these foundational challenge can be found. Specifically, I think answers to these challenges can be found by articulating the (broad) notion of conceivability in terms of the more specific notion of *supposition*. More specifically still, I think that the notion of counterfactual supposition offers the best line of response to these challenges. Much of the discussion in the coming chapters concerns the development of this "supposition-based approach". That is the direction taken in the next chapter.

3.5. Conclusion

The notion of conceivability is used in a variety of ways. Some of those ways are not fit for the task of explaining the mechanisms involved in the acquisition of belief in necessity. If the notion of conceivability is used broadly or as a place-holder concept (for whatever mechanism is involved in the acquisition of modal belief) then the notion of conceivability will not provide informative responses to the challenges of Mechanism and Reliability. A brief consideration of one of the most thoroughly developed narrow notions of conceivability highlights a number of general issues that should be kept in mind on any development of the conceivability-based approach. In particular, that there is a potential source of conflict between providing a link between conceivability and modality that is both accessible and reliable. What's more, the investigated variety of conceivability, threatens to bring with it a commitment to a variety of global-anti-realism about truth. Additionally, for all that has been said so far concerning conceivability, we are still lacking an *explanation* of the relation between conceivability and possibility. Similarly, we are still lacking an account of the role of belief in necessity. Much of the discussion going forward, however, is consistent with a broadly conceivability-based approach or can be viewed as a specific articulation of that approach.

Chapter 4

Counterfactuals

This chapter looks at the initial motivations for an account of modal thought based upon counterfactual supposition. The general shape and motivations for a counterfactual-based response to the challenges of Mechanism, Reliability and Role are indicated. With the initial motivations for such an account outlined, primary focus is placed upon Timothy Williamson's (2005, 2007a, 2007b) counterfactual-based account of modal epistemology in order to highlight a number of initial challenges for the approach. The upshot of the chapter is that although the development of counterfactual supposition offers the beginning of a response to the Mechanism Challenge, in order to more fully address the Reliability Challenge, the nature of counterfactual supposition will have to be more thoroughly understood.

4.2.1. Initial Motivations

Recall the interrelated set of Challenges from chapter 1.

> ***Mechanism***
> What is the primary mechanism deployed in the acquisition of belief in necessity?
>
> ***Belief***
> How does *that mechanism* produce *belief* in necessity?
>
> ***Reliability***
> How does *that mechanism* tend to produce beliefs that are *true*?

Role

What is the *role* of beliefs acquired via *that mechanism*?

There are at least two lines of thought that push the present project towards the epistemology of counterfactuals. The first line of thought arises from the idea that statements of necessity are logically equivalent to generalisations over counterfactuals. In some cases, this relationship between necessity and counterfactuals has been thought sufficient to provide a *reduction* of the epistemology of modality to the epistemology of counterfactuals. Such a reduction combined with an account of our reliability of counterfactual judgement, has been taken to underwrite an explanation of the reliability of belief in necessity. Which would be to address the Reliability Challenge. This is the type of explanation that was not forthcoming the discussion of conceivability-based accounts in the previous chapter. A prominent proponent of the counterfactual-based approach is Timothy Williamson.[60] This chapter focuses upon the way in which Williamson proposes to build an epistemology of modality on the back of the relationship between modal and counterfactual statements.

A second line of investigation also connects accounts of modal and counterfactual thought. Specifically, the challenge of explaining the role of belief in necessity also pushes the present project towards the epistemology of counterfactuals. In the previous chapter it was suggested that if we construe the notion of conceivability narrowly, in terms of a distinctive cognitive capacity of conception or imagination, then it will be under clear what the role of beliefs formed via that mechanism could be. One line of investigation in the recent literature on modal thought suggests that we can gain a better understanding of the role of belief in necessity by considering the relationship between

[60] Williamson provides one of the most explicit and widely discussed "counterfactual-based" epistemologies of modality. However, other counterfactual-based accounts of modal thought can be found in Hill (2006), Kroedel (2012), and Kment (2006a, 2006b, 2014).

belief in necessity and counterfactual thought. The general idea on this line of thought can be captured, roughly, as follows:

> A thinker is taken to treat a proposition as necessary by being prepared to hold that proposition available as a premise when reasoning from any counterfactual supposition whatsoever.

Ideas of roughly this type can be found in McFetridge (1990), Hale (1999), Divers and Elstein (2012) and Divers and Gonzalez-Varela (2013).[61] Although each of these accounts differ in the details of the approach and its precise range of application, they all offer the prospects of explaining the significance of belief in necessity.[62] On this line of thought it is because certain propositions play this distinctive role in counterfactual reasoning that we are interested in identifying them and forming belief in necessity. Developing this line of thought further, it is at least natural to attempt to provide a comprehensive account of necessity in terms of counterfactuals. Providing such a comprehensive account would include an account of the epistemology of necessity in terms of counterfactuals. Over the course of this chapter and the next, I consider these two strands of thought in more detail. The following chapter focuses primarily on the second motivation. This chapter focuses primarily on the first.

4.2.2. Characterising Counterfactuals

We frequently engage in counterfactual thought and talk and this engagement often amounts to counterfactual knowledge. For instance, when I drive over a smashed bottle and get a flat tyre, I might make the following counterfactual judgement:

[61] The idea is also briefly mentioned by Peacocke (1999) and Wright (2002: 657-658).

[62] For instance, McFetridge is concerned with logical necessity, whereas Divers and Elstein and Divers and Gonzalez-Varela are concerned with absolute necessity.

(TYRE) If I hadn't drove over the glass, I wouldn't have a flat tyre.

It seems that such a judgement is true and I know that *if I hadn't drove over the glass, I wouldn't have a flat tyre*. Such thought and talk is an everyday occurrence. Conditionals like this are often referred to as "counterfactual" conditionals because the scenario captured in the antecedent is often one that does not (actually) obtain and in this sense is *counter* to (actual) fact. For instance, in (TYRE) the antecedent concerns a scenario in which I didn't drive over some glass, when (by hypothesis) in fact I did. Such counterfactual conditionals are often contrasted with indicative conditionals. The contrast between the two types of conditional can be roughly captured by the following pair of conditionals.

(IND) If Shakespeare didn't write Hamlet, someone else did.

(CF) If Shakespeare hadn't written Hamlet, someone else would have.

The contrast between the two types of conditionals is captured in the fact that (IND) is (very likely) true, whereas (CF) is (very likely) false. This is an intuitive distinction that appears in natural language, typically indicated by the use of indicative and subjunctive moods. It is also the same distinction that was used in the previous chapter to indicate the distinction between primary and secondary conceivability and possibility on Chalmers' account. It is worth noting, however, that the intuitive distinction can be acknowledged without taking it to mark a distinction between two types of conceivability or two types of possibility.

4.2.3. The Logical Relations

One line of thought acknowledges the distinctions just outlined and draws attention to certain logical relations that obtain between counterfactuals and modality in order to provide an account of modal thought. The relevant logical relations, include:[63]

$$(1)\ \Box p \equiv \forall q(q \mathrel{\Box\!\!\rightarrow} p).$$

In (1) quantification is over propositions. The relationship between necessity and counterfactuals captured in (1) provides a natural way of informally explaining what necessity is. The idea captured by (1) is that p is necessary if and only if p would be true come what may. Or phrased slightly differently, p is necessary if and only if p would be true no matter what else was the case. (1), then, captures a natural characterisation of necessity. This natural characterisation of necessity also supports a second proposed logical relation:

$$(2)\ \Box p \equiv \neg p \mathrel{\Box\!\!\rightarrow} p.$$

The idea here is that p is necessary if and only if p would (still) be the case (even) if p were not the case. If we accept the intuitive characterisation of necessity as truth come what may, then P's necessity will ensure that P is true *even when* ¬P is true. Similarly, it seems that the scenario in which ¬P is true is the "worst case scenario" for P's being true. The idea captured in (2) is that if P would be true even in this "worst case scenario" (i.e. the scenario where ¬P is true), then P will be true come what may i.e. P will be true in all better scenarios (such as the scenario where Q is true). We might appeal to the following relation, also:

$$(3)\ \Box p \equiv \neg p \mathrel{\Box\!\!\rightarrow} \bot.$$

[63] Lewis (1973) and Stalnaker (1968) both characterise necessity in terms of counterfactuals.

In (3) the idea is that p is necessary if and only if a contradiction would be the case if p were not the case.[64] Again, if being necessary is a matter of being true in all scenarios, then P's necessity will ensure that P is true in the scenario's where ¬P is true, in which case P and ¬P will be true, which is a contradiction.

At its most general, one line of thought suggests these logical relations are sufficient to underwrite a counterfactual-based epistemology of modality. In broad outline the idea is that if we grant that we have counterfactual knowledge and we grant that statements of necessity are logically equivalent to counterfactuals, then a natural way to explain knowledge of necessity is via the epistemology of counterfactuals.

4.2.4. Epistemological Reduction

Williamson suggests that none of the characterisations provides a more accurate analysis of necessity than another. However, Williamson focuses upon the equivalences captured in (2) and (3). Williamson's suggests that by focusing upon (2) and (3) rather than (1) we can avoid any complications arising from the appeal to quantification of propositions.

A number of counterfactual-based accounts of the epistemology of modality suggest that the logical relations between counterfactuals and necessity (possibility) provide a basis on which to build an *epistemological* account of modality. For instance, Williamson writes:

> *Given that the equivalences […] are logically true, metaphysically modal thinking is logically equivalent to a special case of counterfactual thinking,*

[64] Similarly, we might attempt to define possibility in terms of the following three equivalences: Firstly: $\Diamond p \equiv \neg(p \mathrel{\Box\!\!\rightarrow} \bot)$. Secondly: $\Diamond p \equiv \neg(p \mathrel{\Box\!\!\rightarrow} \neg p)$. Thirdly: $\Diamond p \equiv \exists q \neg(q \mathrel{\Box\!\!\rightarrow} \neg p)$.

> *and the epistemology of the former is tantamount to a special case of the epistemology of the latter.* Williamson (2007a: 106)

Williamson thinks that the relations between modal and counterfactual claims are sufficient to *reduce* the epistemology of modality to the epistemology of counterfactuals. If Williamson is right about this then a response to the reliability challenge will be found in an account of counterfactual knowledge. There are, however, a number of issues that need to kept in mind at this point.

4.2.5. Synonymy and Cognitive Economy

It is important to note that logical equivalence does not amount to synonymy. For instance, the equivalences (1) – (3) do not imply equivalences of meaning between counterfactuals and necessity. Given this, and as highlighted by Jenkins (2008: 697), we might question whether the logical relations are sufficient for epistemological reduction. With respect to this issue, Williamson states:

> That detracts little from their philosophical significance, for a failure of strict synonymy does not imply failure of logical equivalence. The main philosophical concerns about possibility and necessity apply equally to anything logically equivalent to possibility or necessity. (Williamson 2007a: 106)

Williamson accepts that synonymy and logical equivalence come apart. In particular, two statements may be logically equivalent but not synonymous. However, according to Williamson the failure of synonymy does not undermine the project of providing a reductive epistemology of modality in terms of counterfactuals. However, Jenkins (2008: 695) states:

> […] it definitely does not follow from the fact that modal claims are logically equivalent to certain counterfactual claims that the main philosophical concerns about modality reduce to concerns about counterfactuals. […] it does not follow from the equivalences that modal epistemology is tantamount to a special case of counterfactual epistemology.

Jenkins takes the failure of synonymy to put the project of epistemic reduction into question. Where Williamson sees the logical relations as a sufficient basis for epistemological reduction, Jenkins thinks that additional argument would need to be provided to justify such a reduction. Jenkins suggests that further justification would be required as counterexamples to strategies of epistemological reduction based upon logical equivalence can be found. For instance, Jenkins suggests that it does not follow from the fact that disjunctive propositions A v B are logically equivalent to negated conjunctive propositions ¬(¬A & ¬B) that the epistemology of disjunctive propositions is a special case of the epistemology of negated propositions. Similarly, it does not follow from the fact that atomic propositions A are logically equivalent to conjunctive propositions A & A that the epistemology of atomic propositions is a special case of the epistemology of conjunctive propositions.

Jenkin's counterexamples, however, are not particularly persuasive. For instance, take the logical equivalence of A and A & A. In what circumstance is the epistemology of A & A going to differ from that of A? What is the additional or distinct epistemological story to be told about A & A in comparison to the story told for A? Perhaps the most obvious condition is where the epistemology of A is going to be insufficient for the epistemology of A & A, is when the thinker, x, is conceptually impoverished in that they lack the concept of conjunction. The epistemological explanation of x's knowledge that A would not amount to an epistemological explanation of x's knowledge that A & A - because x would not believe and would not know that A & A. However, what about the case where x possesses the conceptual resources required for belief that A and for belief that A & A? In such a case, when x is not conceptually impoverished, it may well be that

the central epistemological problems are shared by the two cases. Similarly, in the case of the logical equivalence of A v B and ¬(¬A & B). A thinker equipped with the conceptual resources for atomic and conjunctive thought (in the first case) will have the cognitive capacities to acquire knowledge that A & A and they will be able to do so via knowledge that A. Similarly, it might be suggested, a thinker equipped with the conceptual resources for counterfactual and modal thought will have the cognitive capacities to acquire modal knowledge and they will be able to do so via counterfactual knowledge. The point is that with conceptual impoverishment removed from the equation, it is less clear that logical equivalence is insufficient for epistemological reduction.

Jenkins's central concern, however, seems well founded. Specifically, Jenkin's appears to be correct in saying that the equivalences cited by Williamson "cannot by themselves establish that knowing certain counterfactuals is *the* way, or even our *usual* way, of knowing modal facts". Jenkins suggests that "at most, they might be taken to suggest that knowing the relevant counterfactuals gives us *a* way of coming to know modal facts". It is entirely correct that the equivalences do not rule out possibility that thinkers use some other, entirely different, method of acquiring modal knowledge. The equivalences alone do not entail that thinkers actually acquire modal knowledge via those equivalences. Williamson, however, suggests the following:

> Despite the non-synonymy of the two sides, our cognitive capacity to evaluate counterfactual conditionals gives us exactly what we need to evaluate the corresponding modal claims too. The idea that nevertheless we evaluate them by some quite different means is highly fanciful, since it indicates a bizarre lack of cognitive economy and has no plausible explanation of where the alternative cognitive resources might come from.
>
> Williamson (2007: 162)

The appeal to cognitive economy, however, will only hold any weight if we can provide an account of the mechanisms underlying counterfactual judgement and show that those mechanisms are sufficient to capture our modal knowledge. A remaining challenge, then, is to provide a cogent account of counterfactual thought and to show how that relates to the acquisition of belief in necessity.

4.3.1. A General Capacity to Handle Counterfactuals

Williamson (2007: 136) thinks that we have a "capacity to handle counterfactuals". There is a sense in which this is uncontroversially true.[65] We do engage in counterfactual thought and it is relatively uncontroversial to say that in doing so we frequently succeed in acquiring knowledge of counterfactual statements. For instance, I do so when I reason that if I had not driven over the glass, then I would not have got a puncture. What is more, given the fact that I do engage in such reasoning, there is a sense in which it is uncontroversial to suggest that I have a *general capacity* for doing so. This is uncontroversial because, in this sense of "general capacity", it is possible to identify a general capacity for *any* activity that I engage in. For instance, given that I do travel to work, we might suggest that I have a general capacity for doing so. Working with such a notion of general capacity seems uncontroversial and it might even play, at some level, a minimal explanatory role. For instance, we might construct explanations of the following shape: I succeeded in getting to work *because* I have a general capacity for getting to work. Similarly, in the case of counterfactuals, we might find use for explanations such as the following: I successfully judged that if I had not driven over the glass, then I would not have got a puncture *because* I have a general capacity for counterfactual thought. Although the role and nature of such explanations is not entirely obvious,[66] it is quite clear that such explanations are consistent with *further levels* of

[65] That is, if we exclude extreme varieties of scepticism towards counterfactual knowledge.

[66] For instance, as Malmgren (2011: 309) highlights would such explanations be intended to be causal explanations?

explanation.[67] Specifically, explanations in terms of such general capacities are consistent with more detailed explanations concerning the way in which that general capacity is implemented. For instance, my general capacity to get to work is consistent with explanations concerning my ability to drive, walk, get a train, bus or taxi. What is more, it is this further sort of explanation that is required by both the Mechanism and Reliability challenges. Given this, the observation that we have a general capacity – in the sense just indicated - for counterfactual thought, does little to address our central challenges.[68]

What is more, in the case of counterfactual thought, it may be that there is not one, *single*, mechanism in play. Rather, for all that has been said so far, counterfactual thought may consist in the deployment of a heterogeneous set of distinct mechanisms. Just as a more detailed account of my general capacity for getting to work might involve an account of the processes involved in driving my car and an account of my ability to interpret train timetables. These processes may differ considerably and yet still both constitute instances of the deployment of my general capacity to get to work. Similarly, in the case of counterfactuals, it is a further and significant claim to suggest that there is one, single, mechanism in play in the formation of judgements concerning counterfactuals. Williamson, in fact, stops short of this bold claim and suggests that "[t]here is no uniform epistemology of counterfactuals" (ibid. 152), instead, "[i]n general, our capacity to evaluate counterfactuals recruits all our cognitive capacities to evaluate sentences" (ibid. 152). If, however, such a large range of cognitive capacities can be appealed to explain our knowledge of counterfactuals, then the claim of cognitive economy becomes a relatively weak claim. It becomes the claim that we should explain knowledge of counterfactuals reductively, in terms of some other cognitive capacities that we possess.

[67] This is highlighted by Malmgren (2011: 309).

[68] It is perhaps worth noting that there is a challenge in the vicinity that is more directly addressed by the acknowledgement of our general capacity for counterfactual thought. Specifically, it might be enough to disarm certain varieties of scepticism towards necessity by noting the logical connection between counterfactuals and necessity and acknowledging our general capacity for counterfactual thought. However, for the most extreme sceptics, the connection between counterfactuals and necessity merely shows that the two fall together.

Such reductive ambitions, however, are consistent with Jenkins' point that the mere existence of the logical equivalences does not show that we do, as a matter of fact, acquire belief in necessity via those equivalences. Although the equivalences indicate a way in which belief in necessity might be reliably acquired, we still face the challenge of explaining how belief in necessity *is* acquired.

On this front, Williamson sketches the beginnings of an answer. Williamson claims that we can identify a process that is *distinctive* of our evaluation of counterfactuals; distinctive in the sense that it is a process that is most useful in the assessment of counterfactual statements, as opposed to non-counterfactual statements. For instance, whereas "reasoning, perception, and testimony are not generally more useful for counterfactuals than for non-counterfactual contents" (ibid. 152), Williamson thinks that there is a process of "imaginative simulation" that is particularly useful in the assessment of counterfactuals and, as such, is distinctive of the epistemology of counterfactuals in Williamson's intended sense.

The next section looks a little more closely at Williamson's notion of imaginative simulation, but prior to that it is worth noting a couple of initial points. Firstly, being a process *distinctive* – in Williamson's sense – of the assessment of counterfactuals, does not guarantee that an account of *that* process will treat the range of test cases that are distinctive of the present project. We have, at this stage, no reason to think (for instance) that processes *equally* useful – and thus not distinctive - in the assessment of counterfactual and non-counterfactual contents are what explain our knowledge of any counterfactuals implicated in the acquisition of belief in any of 1-6. If this is the case, then an account of the distinctive processes involved in the assessment of counterfactuals would miss the mark at which we are aiming.

Similarly, if we drop the requirement of *distinctiveness* and instead aim to capture the *typical* mechanism deployed in the assessment of counterfactuals, then, again we have no reason, at this point, to assume that an account of *that* process will successfully cover the

range of cases with which we are concerned. That is, it remains to be seen whether an account of the most commonly used methods of assessing counterfactual contents successfully accounts for the test cases 1-6. What is more, the concern that the *usual* method of assessing counterfactuals might not be sufficient to explain cases 1-6 is strengthened by the fact that, outside of philosophy, cases such as 1-6 (or any corresponding claims concerning counterfactuals) are rarely considered.

There is another reason in the vicinity to be concerned with the project of epistemological reduction. The content of the belief: necessarily, P is equivalent to: For all S, were S the case, P would still be the case. That is, discovering that if it were the case that Q, then it would be the case that P, is not equivalent to belief in necessity. The content of belief in necessity is not equivalent to a counterfactual taken in isolation, but instead is equivalent to a universal generalisation over counterfactuals. Given this, it seems that there may be a distinction between the mechanisms deployed in the acquisition of beliefs concerning specific counterfactuals (such as, if it were the case that P, then it would be the case that Q) and the mechanisms deployed in the acquisition of belief in certain universal generalisations over counterfactuals.

With these issues in mind, it will be useful to turn to Williamson's account of the processes involved in the assessment of counterfactuals.

4.3.2. Developing Suppositions

Given the (potential) scope for variation in the mechanisms involved in assessing counterfactuals, it remains to be seen what the specific mechanisms are and how they relate to the acquisition of belief in necessity. For the purposes of addressing the Mechanism and Reliability challenges, it is not enough to merely note that we have a general capacity for counterfactual thought. In addition, we also need to articulate how that general capacity functions so as to generate the range of beliefs identified in 1 – 6.

Even if we grant that a (single) cognitive mechanism can be isolated as underlying counterfactual judgements (in a range of prominent cases) it remains to be seen whether that mechanism is sufficient to explain the reliability of belief in necessity. Williamson outlines a number of ideas concerning the constraints under which thinkers operate when developing suppositions to arrive at judgements concerning particular counterfactual statements. This section provides a brief sketch of Williamson's account of the development of counterfactual suppositions, the sketch is intended to set the context in which an account of supposition is to be built.

We can begin with an example from Williamson (2007: 142). "You are in the mountains. As the sun melts the ice, rocks embedded in it are loosened and crash down the slope. You notice one rock slide into a bush. You wonder where it would have ended if the bush had not been there. A natural way to answer the question is by visualizing the rock sliding without the bush there, then bouncing down the slope into the lake at the bottom." Williamson thinks that in such scenarios we often arrive at knowledge of counterfactuals such as the following:

> (ROCK) If the bush had not been there, the rock would have ended in the lake.[69]

Williamson (ibid: 143) suggests that this knowledge is attained (in some way) via *imagination*. However, Williamson (ibid: 143) also acknowledges that such a proposal "sounds puzzling if one conceives the imagination as unconstrained". It seems that we could have easily imagined the rock flying off into the air or sticking to the hillside. Both of these scenarios are within the realm of imagination. In both of these cases our imagination would not have lead us to the scenario where the rock lands in the lake. This issue parallels the issues concerning the constraints on imagination from the previous chapter. Williamson's proposal is that we can understand the constraints upon

[69] I have relabelled Williamson's example.

imagination by considering the role of imagination in counterfactual thought. In particular, Williamson (ibid.) suggests the following constraints on imagination:

> "The default for the imagination in its primary function may be to proceed as "realistically" as it can, subject to whatever deviations the thinker imposes by brute force: here, the absence of the bush.

Here two notions seem to be of most significance. Firstly, the idea that the imagination proceeds as "realistically" as it can. Secondly, the idea that this tendency to proceed "realistically" is subject to deviation by whatever the subject imposes by "brute force". Although, Williamson might be identifying roughly the type of issue involved in the assessment of counterfactuals, the notions of "realistic" and "brute force" would require more thorough articulation to make a compelling account of counterfactual thought.

We might get some grip on the realistic constraint by considering Williamson's (ibid: 147) appeal to a notion of "simulation". Williamson suggests that a process of "simulation" may take place in a range of central cases where thinkers arrive at judgements concerning particular counterfactual statements; where simulation is a matter of running our cognitive capacities "offline". It might be that our cognitive capacities are tuned in such a way that when they are ran offline there do proceed as realistically as possible. Even if this is so, the idea of running a capacity offline tells us relatively little about what goes on in the development of a supposition. Given that simulation exercises may be carried out for a vast array of cognitive functions, we are still left with the task of identifying what those cognitive functions are and how they lead to the pattern of belief captured by 1 -6.[70] We can, however, identify a shell into which an account of those cognitive mechanisms could be placed. For instance, Williamson identifies the following general framework into which more specific accounts of supposition development might placed:

[70] Malmgren (2011: 312) points out that simulation still requires articulation.

> We can still schematize a typical overall process of evaluating a counterfactual conditional thus: one supposes the antecedent and develops the supposition, adding further judgements within the supposition by reasoning, offline predictive mechanisms, and other offline judgements.
>
> Williamson (ibid: 152 -153)

Additionally, Williamson (ibid: 153) suggests that we may appeal to faculties of perceptual imagination (although, it is not *required*) and we might make use of background knowledge. With this general process in mind, Williamson (ibid) suggests that "[t]o a first approximation: one asserts the counterfactual conditional if and only if the development eventually leads one to add the consequent." What's more this account of the acquisition of counterfactual belief is integrated with an account of modal belief in the following way:

> We assert □A when our counterfactual development of the supposition ¬A robustly yields a contradiction; we deny □A when our counterfactual development of ¬A does not robustly yield a contradiction (and we do not attribute the failure to a defect in our search).
>
> Williamson (ibid: 163)

Additionally, Williamson introduces the qualification that the counterfactual development be *robust* in an attempt to circumvent problems that are generated by slight variations in the development of suppositions due to irrelevant details that have been incorporated into the act of imagination. For instance, consider the following example from Williamson (149 and 153):

> (TREE) If there had been a tree on this spot a million years ago, nobody would have known.[71]

[71] I have relabelled Williamson's example.

Williamson thinks that for some counterfactuals there are a variety of different ways of imagining their antecedents. For instance, in the case of (TREE) we might imagine a palm tree or a fir tree. Furthermore, on Williamson's model of supposition development, how we go on to develop the antecedent of (TREE) might differ depending on which type of tree we initially imagine. However, even if we accept that robust, realistic, reasoning with the use of background knowledge, leads us to the right conclusion regarding counterfactuals such as (ROCK), it seems that merely developing counterfactual suppositions according to such constraints will not explain what is going on when thinkers arrive at the pattern of belief in necessity captured by the test cases 1 - 6.

It seems, for instance, that I could have developed the counterfactual supposition *were Socrates human* without reaching a contradiction, but I could also develop the counterfactual supposition *were Socrates a robot* without reaching a contradiction. It seems that the constraints imposed by reasoning "realistically" and with background knowledge do little to generate the contradiction required to form the belief that *necessarily, Socrates is human*.[72] What is more, it seems that the failure to reach a contradiction in such cases is not best attributed to a failure to thoroughly develop the supposition or to an oversight or to error in reasoning. The failure to reach a contradiction in such a case means that a thinker deploying Williamson's proposed mechanism for acquiring belief in necessity would arrive an inaccurate result for one of our test cases. Not only would the thinker fail to acquire the pattern of belief indicated in 1 - 6, but using Williamson's proposed method they would conclude that it is possible that Socrates is a robot. Williamson is aware of the issue and gestures towards a solution.

> If we know enough chemistry, our counterfactual development of the supposition that gold is the element with atomic number [other than] 79 will generate a contradiction. The reason is not simply that we know that gold is the element with atomic number 79, for we can and must vary some items of

[72] This point is noted by Williamson (ibid: 164), it is also raised by Roca-Royes (2011b) and Tahko (2013).

> our knowledge under counterfactual suppositions. Rather, *part of the general way we develop counterfactual suppositions is to hold such constitutive facts fixed*. (Williamson: 2007: 164)

Williamson's brief proposal is suggestive but certainly in need of elaboration. For instance, although it may be true that the "general way" we develop counterfactual suppositions is to hold fixed certain items of knowledge concerning the actual world, there seem to be cases of good counterfactual reasoning in which counterfactual suppositions are developed without such a holding fixed. For instance, if we are working under the assumption that - as a matter of actual fact - we are mistaken about gold and it turns out that gold has – in the actual world – some other chemical constitution, then *upon that assumption*, concerning the facts of the actual world, the way we go on to develop the counterfactual supposition that Gold has the atomic number 78 will be without holding fixed our knowledge that Gold has the atomic number 79.[73] Furthermore, upon the assumption that Gold actually has the atomic number 78, we may, in fact, reach a contradiction in our development of the counterfactual supposition that gold has the atomic number 79. It seems then, that not only do we not hold all knowledge fixed, but there are cases of counterfactual reasoning where we do not even hold constitutive facts fixed. What is needed is some explanation of how these cases relate to each other. What's more, Williamson proposal is also open to two lines of development. One is statistical; *that most of the time* when we develop suppositions we hold constitutive facts fixed. The other is *normative*; when we develop suppositions there is a normative requirement that we hold constitutive facts fixed. I think recent work on supposition sheds light on these issues.

Additionally, even if we grant that holding constitutive facts fixed is part of the general way that we develop counterfactual suppositions we are still faced with a number of

[73] Gregory (2004: 329, 331) makes the point that imagination will be influenced if we are operating under supposition. A similar idea is also found in Yablo (1993: 31). The present point is that our development of counterfactual supposition will depend upon our assumptions about the actual world.

questions. For instance, why is it that thinkers tend to hold constitutive facts fixed? Why is this an important component of counterfactual thought? It cannot be that the thinker engaged in counterfactual thought is concerned with holding such facts fixed *because they are true*. It is a distinctive characteristic of *counterfactual* thought that we suppose things that are counter to (actual) fact. Similarly, it cannot be that thinkers are concerned with holding fixed beliefs on the grounds that they are beliefs or things that are known on the grounds that they are known. Thinkers engaged in counterfactual thought readily put to one side beliefs and knowledge about the actual world and go ahead to reason about scenarios that they know do not obtain. Similarly, on a counterfactual-based epistemology of modality, it cannot be that thinkers hold constitutive facts fixed because not doing so would be to consider an impossibility. Providing an explanation along such lines would be to pre-equip thinkers engaged in counterfactual thought with the modal knowledge that we are attempting to explain.

The central task for counterfactual-based accounts of modal thought is to provide an account of the mechanisms involved in the development of counterfactual suppositions. What is more, it is not enough to capture a component of counterfactual thought that explains a limited range of counterfactual judgements, but fails to account for the pattern of judgement in necessity indicated by 1 -6. In the following chapter recent work on the normativity of supposition is considered. It is suggested that the norms governing supposition offer a potential line of explanation to the issues facing counterfactual-based accounts of modal thought.

4.4. Conclusion

This chapter has aimed to set the context for the development of a supposition-based account of modal thought. It has been suggested that although the relationship between counterfactuals and necessity is intimate and at the heart of a successful response to questions concerning the role of belief in necessity, more needs to be said with regards to

the epistemological relationship between counterfactual thought and modal thought. In particular, the central challenge is to identify the constraints on placed on the development of counterfactual supposition. Recent work on the normativity of supposition provides insight into this challenge and the mechanisms that are deployed in the development of supposition. The following chapter considers this work.

Chapter 5

The Normativity of Supposition

This chapter looks at recent work on the normativity of supposition undertaken by John Divers and Jose´ Edgar Gonzalez-Varela (2012). The specific project undertaken by Divers and Gonzalez-Varela is outlined. Points of overlap and points of contrast are highlighted between that project and the range of challenges with which this thesis is concerned. In particular, although the project undertaken by Divers and Gonzalez-Varela does not directly address The Reliability Challenge it does indicate a number of pivotal issues for an account of modal thought and knowledge. Central among those issues is the idea that the discipline of supposition is governed by norms of content stability or *loss of content*. Divers and Gonzalez-Varela draw upon these norms to outline acquisition and manifestation conditions for belief in necessity. The account outlined offers appealing answers to the challenges of Belief and Role and (a partial answer) to the Mechanism Challenge. Going forward, the aim is to investigate the nature and significance of the normativity identified by Divers and Gonzalez-Varela for The Reliability Challenge.

5.1. The Role of Belief in Necessity

Two lines of thought were indicated in the previous chapter as motivating factors for the consideration of counterfactual-based account of modal thought. The second of those lines of thought concerned the *role* of belief in necessity. In this chapter, I suggest that by taking seriously the question of the role of belief in necessity we gain a better understanding of the mechanisms involved in counterfactual thought. Furthermore, I think that by taking this challenge seriously we gain a better understanding of the

foundational questions indicated in Chapter 1. Recall, the foundational questions were characterised as follows:

> ***Mechanism***: What is the primary mechanism deployed in the acquisition of belief in necessity?
>
> ***Belief***: How does that mechanism produce *beliefs in necessity*?
>
> ***Reliability***: How does that mechanism tend to produce beliefs that are *true*?
>
> ***Role***: What is the *role* of beliefs acquired via that mechanism?

The Mechanism Challenge is that of identifying the mechanism by which belief in necessity is arrived at. It is an assumption of the Mechanism Challenge that our modalizing practices do amount to belief. The Belief Challenge is that of explaining how *that mechanism* – the one indicated in the Mechanism Challenge - produces *belief* in necessity (as opposed to some other attitude or no attitude at all or some other type of belief). The Reliability Challenge is that of explaining how beliefs formed via *that mechanism* tend to be true. The Reliability Challenge (arises out of and) rests upon the claim that we do form beliefs in necessity that tend to be true. The Role Challenge is the challenge of explaining the function or utility of beliefs formed via *that mechanism* – the same mechanism that is referenced in the other three questions

Varieties of scepticism towards each of the questions can be identified. For instance, one variety of sceptic might accept that we form belief in necessity (they might even accept that those beliefs serve a particular function) but they might reject the claim that those beliefs tend to be true. Similarly, we can identify a variety of scepticism that accepts that we tend to form true beliefs in necessity, but denies that such believes have any further role in our intellectual lives. We can also identify a variety of scepticism that denies that

we even form *beliefs* in necessity, instead the mechanisms involved in our modal practices are non-cognitive. However, if such varieties of scepticism are put to one side then each of the questions can be used to help constrain our answers to each of the other questions. This is, I suggest, how the much of the work in the epistemology of modality tends to work already. However, it is primarily restricted to the consideration of the Mechanism and Reliability challenges and how those challenges relate to each other. In most cases the Reliability Challenge functions as a constraint on our response to the Mechanism Challenge. For instance, it might be tempting to address the Mechanism Challenge by appealing to the notion of modal imagination indicated in chapter 3. That notion, however, was arrived at after attempting to identify a reliable connection between modal belief and modal fact.[74] I suggest that we can proceed in a similar way, but taking into account a wider range of concerns.

On this front, it is worth noting that responding to the challenge of explaining the role of belief in necessity is intimately related to the challenge of identifying the mechanism deployed in the acquisition of belief in necessity. It is, after all, the challenge of saying what the thinker goes on to do with those beliefs acquired via *that* mechanism. Whatever our response to Mechanism is, it will have implications for our response to the Role Challenge. Similarly, whatever our response to Role is, it will have implications for our response to Mechanism.

However, in the recent literature on modal thought and modal knowledge, the challenges have not received equal attention. In particular, the challenges of Belief and Role have been underrepresented. However, given the interrelated nature of the questions, any progress on the questions of Belief and Role should have its implications considered for the questions of Mechanism and Reliability. And it is such progress and implications that motivate the discussion of this chapter. The project undertaken by Divers and Gonzalez-Varela (2012) has as a central motivation (what I have referred to as) the Role

[74] The same can certainly be said of Peaocke's principle-based account. Peacocke's account is considered in chapter 6.

challenge. For instance, Divers and Gonzalez-Varela outline as a motivation for their project the desire to answer questions such as the following:

> Why is it important that we should identify some propositions, rather than none at all, as absolutely necessary rather than simply as true? Why is it important that we should ''get it right'' by identifying some propositions, rather than others, as absolutely necessary? What, if anything, raises our attempts to identify absolute necessity of propositions above the level of a philosophers' game? (Divers and Gonzalez-Varela (2013: 359))

Consequently, Divers and Gonzalez-Varela's work speaks to an underrepresented issue concerning modal thought. What's more, the underrepresented issue is one with which the present project is directly concerned. It is important to note, however, the extent and scope of the Divers's and Gonzalez-Varela's project and to indicate the points at this it overlaps with the present project and the points at which the two projects diverge. On this front a number of initial issues are worth highlighting.

Firstly, Divers and Gonzalez-Varela (ibid: 359) approach the Role challenge by attempting to characterise the cognitive role of belief in necessity.[75] The idea being that we may gain a better understanding of the role of belief in absolute necessity by first better understanding how belief in necessity works. For Divers and Gonzalez-Varela this consists in the identification of *proper* acquisition conditions for belief in necessity and *proper* manifestation conditions for belief in necessity. Providing proper acquisition and manifestion conditions would be to come very close to the range of challenges with which the present project is concerned. However, it is important to highlight that the project of providing an account of the *proper acquisition* of belief in necessity should be sharply distinguished from the project of providing acquisition conditions for belief in necessity that are also *sufficient for the truth* of the beliefs so acquired. Rather, the aim of providing

[75] Divers and Gonzalez-Varela do not refer to the challenge in this way, as the "Role Challenge". However, I take the passage just quoted to indicate that they are concerned with the same issues.

proper acquisition conditions for belief in necessity is to identify the primary or canonical method for acquiring such beliefs. That is, it is important to note that the Divers and Gonzalez-Varela project does not (without further development) address the reliability challenge.

An additional interesting feature of the project undertaken by Divers's and Gonzalez-Valera (ibid: 359) is that they take an account of the proper acquisition and manifestation of belief in necessity to be informed by a constraint of *harmony*. This constraint demands that a properly functioning modal thinker will satisfy the acquisition condition if and only if they also satisfy the manifestation condition. In the present context, this constraint on harmony offers the prospects of integrating our answers to Mechanism, Belief and Role. This idea will be articulated in greater detail throughout this chapter, but for now I want to begin by considering Diver's and Gonzalez-Varela's proposed acquisition and manifestion conditions.

5.2. Proper Acquisition and The Mechanism Challenge

The tasks of providing proper acquisition conditions for belief in necessity and the task of identifying the primary mechanism deployed in the acquisition of belief in necessity are very closely related. The Mechanism Challenge asks us to identify that (canonical) mechanism or procedure that is deployed in the production of beliefs in necessity. A mechanism that, when properly executed, produces the following pattern of belief:

1) Necessarily, ¬(P & ¬P).
2) Necessarily, all vixens are female foxes.
3) Necessarily, 2+2=4.
4) Necessarily, Hesperus is Phosphorus.
5) Necessarily, Water is H2O.
6) Necessarily, Socrates is human.

Divers's and Gonzalez-Varela's (DGV) work on supposition provides insight into the mechanisms that are implicated in the production belief in necessity. However, the notion of proper acquisition underlying the DGV account is consistent with a range of distinct patterns of belief in necessity. As a result, the task of providing proper acquisition conditions for belief in necessity and project of identifying the canonical mechanism deployed in the acquisition of belief in necessity do not overlap perfectly. Also, to the extent that the DGV account does overlap with the Mechanism Challenge, it should be noted that DGV's work on supposition provides a thoroughly *normative* response to that challegne. DGV outline an account of the *proper* acquisition of belief in necessity. An account of the *proper* acquisition of belief in necessity, however, is consistent with the claim that the method identified as proper is, in fact, never implemented. Similarly, an account of the *proper* acquisition of belief in necessity is consistent with the claim that the identified method of acquiring belief in necessity is never perfectly executed. Further still, an account of the proper acquisition of belief in necessity is consistent with the claim that properly acquired belief in necessity falls short (perhaps in all cases) of knowledge. An account of the proper acquisition of belief in necessity, then, will not be sufficient to address the reliability challenge, however, it may provide insight into a satisfactory response to the mechanism challenge – which is a precursor to the reliability challenge.

With regards to the proper acquisition of belief in necessity, DGV propose a condition (ACQ) that is built on three primary ideas. Firstly, a distinction between types of suppositional *act*: the act of A-supposition and the act of C-supposition. Secondly, an account of the *interaction* of the acts of A and C supposition. Thirdly, an account of the fundamental norms governing supposition as supposition. In the sections (X-X) the notions of A and C-supposition are outlined. In sections (X1-X2) the fundamental norms governing supposition are discussed. The following section, however, begins with the notion of supposition more generally and its place in the epistemology of modality.

5.2.1. Conceiving and Supposing

Recall the initial discussion of conceivability from chapter 3. It was suggested that notions of *conceiving*, *conceivability* and the idea of a "conceivability theory" can be construed in more or less restricted senses. At one end of the spectrum *conceiving* is sometimes construed (trivially) as that mechanism, whatever it turns out to be, that tends to produce true beliefs in necessity (possibility). A second sense of conceiving has it play a general, but non-trivial, role, with a rough characterisation of the notion of conceiving that is then open to theoretical development in more specific terms. For instance, given a quick gloss on the notion of conceiving might leave us with a notion of conceivability that can be further articulated in terms of (for instance) believability, imagination or supposition. In contrast, a third sense of "conceivability" takes conceiving to be a yet further restricted notion. A specific cognitive mechanism, distinct from those of (for instance) supposition. Any variety of "conceivability theory" in the third sense will be a variety of "conceivability theory" in the second sense. However, not every theory that may be considered a "conceivability theory" in the second sense is a "conceivability theory" in the third sense. The DGV account does not take up the third notion of conceiving and as a result can be contrasted with the type of account considered in chapter 3. The DGV account, however, might be taken to fall under the banner of "conceivability theory" when conceiving is construed in the second, broader, sense.

It should be noted, however, that DGV do not present the account as a "conceivability-based" account. I suggest, however, that it is useful to consider how the account contrasts with other accounts that might be classified as conceivability theories in the second, broad, sense. As was highlighted in chapter 3, an initial point of development for any conceivability-based account consists in providing a more detailed and informative account of what conceiving is.

The notion of supposition, rather than conceiving (in the more restricted sense), is familiar and ubiquitous. For instance, supposition is an integral part of familiar forms of

reasoning. For instance, in attempting to provide a justification for P we may reason by reductio by *supposing* ¬P and deriving a contradiction. This practice is familiar from general areas of a priori enquiry, for instance, take domains in which mathematical or logical proofs are constructed. It is less clear, however, how conceiving (in the third, restricted, sense) is involved in such areas of enquiry. It is also less clear how conceiving (in the third sense) integrates with the other propositional attitudes. For instance, how conceiving integrates with belief. (The connection between these issues is perhaps unsurprising; given that the second issue might be expected to lead to the first.)

This prima facie advantage to the development of an account of modal thought in terms of supposition, however, has often been bypassed on the grounds that responses to challenges such as *Mechanism* and *Reliability* in terms of supposition yield extensionally inadequate results. The idea being that any proposition can be supposed and as a result, the test of mere "supposability" would fail to capture the pattern of belief identified in 1-6. Similarly, as was indicated in chapter 4, even when supposition is restricted to counterfactual supposition, it still seems that there is a sense in which thinkers succeed in supposing propositions that are impossible. For instance, to reconsider the case from the previous chapter, it seems that thinkers succeed in counterfactually supposing, without contradiction, that Gold has atomic number 79.

On this front, the DGV account offers the basis for a more specific and informative account of the mechanisms involved in supposition. The account also offers the prospects of identifying the constraints on supposition that explain why we develop suppositions in the way that we do. Central to the account is (i) a distinction between the acts of A-supposition and C-supposition and (ii) an account of the *interaction* of A and C-supposition and an account of the sustainability of supposition. I begin in the next section by outlining the distinction between A and C-supposition.

5.2.2. A vs C Supposition

DGV (ibid: 362 - 366) distinguish between A supposition and C supposition. A-Supposition is identified as the inferential act of supposing-as-actual that P. C-supposition is the inferential act of supposing-as-counterfactual that P. As highlighted by DGV the term "supposition" is ambiguous between act and content. DGV use "supposition" to refer to the act of supposition. The distinction between A and C-supposition is reflected in natural language. The distinction between A and C supposition tracks the distinction between indicative and subjunctive moods found in natural language. This is the same distinction that was traced in chapter 3 for conceivability-based accounts and again in chapter 4 for counterfactual-based accounts. In contrast, however, the distinction highlighted by DGV separates *acts* of supposition. It does not, for instance, separate distinct notions of primary and secondary *possibility* as Chalmers's account does. Examples of the two types of *act* can be given as follows. Firstly, we A-supposition when we do the following:

(A1) Suppose that Socrates was a robot.
(A2) Suppose that there is intelligent life on other planets.
(A3) Suppose that a time machine will be invented.[76]

In contrast, we engage in acts of C-supposition when we perform acts of supposition such as the following:

(C1) Suppose that Socrates *had been* a robot.
(C2) Suppose that there *were* intelligent life on other planets.

[76] DGV highlight that the distinction can be emphasised in the following way:

(A1*) Suppose that Socrates *actually* was a robot.
(A2*) Suppose that there is *actually* intelligent life on other planets.
(A3*) Suppose that a time machine will *actually* be invented.

(C3) Suppose that a time machine *were* invented.[77]

5.2.3. The Acquisition Condition

The notion of supposition is often overlooked in the epistemology of modality on the grounds that it is insufficiently constrained to accurately capture the acquisition conditions of modal belief. For instance, we can suppose (whether A or C) all of the following:

(1*) ¬ (P & ¬P)
(2*) All vixens are female foxes.
(3*) 2+2=4.
(4*) Hesperus is Phosphorus.
(5*) Water is H2O.
(6*) Socrates is human.

Similarly, we can also suppose their negations:

(¬1*) ¬ (¬ (P & ¬P)).
(¬2*) ¬ (All vixens are female foxes).
(¬3*) ¬ (2+2=4).
(¬4*) ¬ (Hesperus is Phosphorus).
(¬5*) ¬ (Water is H2O).
(¬6*) ¬ (Socrates is human).

[77] Similar to the case of A-supposition, we can also deploy additional emphasis to highlight the distinction between acts of A and C-supposition. DGV (ibid.) provide the following examples:

(C1*) Suppose Socrates had been a robot even though, in fact, he was not.
(C2*) Whether or not it is actually the case, suppose there were intelligent life on other planets.

In fact, it seems to be a distinctive feature of the practice of supposition that *any* proposition can be (initially) supposed. For instance, reasoning by *reductio* is intimately connected with the practice of supposition. However, when reductio reasoning is carried out in an a priori domain (for instance, mathematics) it will be required that we can (initially) suppose a proposition that is incoherent. Given that any false mathematical proposition is necessarily false, then the initial, incoherent, proposition will be impossible. As a result, the "*mere* supposability" of a proposition is no guide possibility. If P's (merely) being supposable was taken to be a mark of P's possibility, then not only would (1*) - (6*) be marked as possible, so would (¬1*) – (¬6*). This initial test of supposability, then, is of little use in characterising the mechanisms deployed in the acquisition of modal belief. The thinker that arrives at (1*) - (6*) (whether those beliefs are true or not) cannot merely be using this test of supposability. Additionally, this basic test of supposability offers little insight into whether or not P is possible.

Central to the DGV account, however, is the idea that a thinker may, once having supposed that P, then go on to *find* the supposition that P *unsustainable*. Where finding a supposition unsustainable is a matter of finding yourself unable to reason in accordance with the fundamental norms governing supposition. The idea is that, when these norms are taken into account we take a step to accurately capture the mechanisms involved in the acquisition of belief in necessity.

5.2.4. *Finding* a Supposition Unsustainable

The notion of finding a supposition (un)sustainable is of primary significance for the condition ACQ. DGV outline the central idea as follows:

> [...] finding oneself able to sustain a supposition, as intended, is a matter of finding oneself able to reason from it in accordance with certain fundamental norms: whichever set of norms it is that underpins the minimal discipline that

> is involved in making supposition work as supposition. (Divers and Gonzalez-Varela: 2012: 14)

There are a number of points worth highlighting, here. Firstly, it is of central importance that the notion of *finding* presented by DGV is *non-factive*. That is, a subject's *finding* a supposition (un)sustainable merely concerns the subject and not the nature of the supposition itself. For instance, a subject's finding a supposition unsustainable is not taken to be reflection on the *act* of supposition itself. Similarly, a subject's finding a supposition unsustainable is not taken to be a reflection on the nature of the *content* of the supposition.

5.2.3. The Fundamental Norms of Supposition

Central to the DGV account are ideas concerning cases in which suppositions are found unsustainable. The pattern of belief generated by ACQ for a thinker X will depend upon X's judgements concerning the fundamental norms governing supposition. DGV highlight two fundamental norms governing supposition. They are norms of *Explosion*, and *loss of content*. In this section, I want to outline the norms highlighted by DGV and indicate a third potential norm concerning *loss of attitude*. First, however, let's take the norms proposed by DGV.

> […] finding oneself able to sustain a supposition, as intended, is a matter of finding oneself able to reason from it in accordance with certain fundamental norms: whichever set of norms it is that underpins the minimal discipline that is involved in making supposition work as supposition. (Divers and Gonzalez-Varela: ibid: 371)

Specifically, DGV highlight two norms which plausibly govern supposition: Explosion and Loss of content.

The rationale for the norm of explosion is that a thinker cannot be said to have sustained the supposition that P, if *everything* is taken to be true under that supposition. DGV (ibid: 371) provide the following example. Take a case where X supposes that P. Furthermore, under the supposition that P, X goes on to validly infer a contradiction (Q and ¬Q). In which case, X takes a contradiction to hold under the supposition P. If, under the supposition P, X also holds that any proposition follows from a contradiction, then X will take every proposition to be true under the supposition P. The idea is that, in such a case, X has found herself unable to sustain her prima facie supposition that P.

The second norm that plausibly governs supposition concerns *loss of content*. This norm concerns the stability of content throughout supposition. The motivation for the inclusion of this norm is the idea that a thinker cannot maintain the supposition *that P*, if the thinker ceases to suppose *that P*. For instance, to get at the intuitive idea, let's say that I suppose that Socrates is human. I then go on to develop that supposition. However, if somewhere in the process of attempting to develop the supposition that Socrates is human, I stop supposing that *Socrates is human* and instead start supposing that Barrack Obama is human, then I cannot be said to have maintained the supposition that Socrates is human. Although I might have sustained the attitude of supposition throughout the process, in order to sustain my supposition that Socrates is human, I need to keep the content of that supposition held fixed, otherwise I will be supposing something else.

DGV (ibid. 371), illustrate the idea with the following example. Firstly, let's say that X is reasoning with appropriate tokens. In such a scenario, one way in which X might avoid explosion is by inconstantly interpreting her own use of tokens. For instance, if X supposes "Fa" and then X supposes "not-Fa", then she can find her supposition non-explosive by appealing to change of content: one token of "a" has one content, and the other token of "a" has another content, and thereby genuine contradiction (under

supposition) is avoided. However, if X is reasoning under the norm of content preservation, then such a slippage between contents is not available. Consequently, reasoning under such a norm X will not find the supposition "Fa" and "not-Fa" sustainable.

In addition to the norms of explosion and loss of content, I suggest that there is a third point at which at act of supposition might break down. Just as there are cases of loss of content, an attempt at supposition may fail due to *loss of attitude*. It seems that one way in which an act of supposition can break down is if we slip from *supposing* to some other type of attitude. For instance, if we move from *supposing* that "electrons are positively charged" to *entertaining* the thought that "electrons are positively charged" we cannot be said to have maintained the *supposition*. The loss of attitude case seems to run deep into the history of the conceivability literature. For instance, take conceivability principles along the following lines that can be traced back to Descartes and Hume:

(CDP) If it is clearly and distinctly conceivable that P, then P is possible.

In adopting principles such as CDP the case of loss of attitude is of central importance. For instance, if we attempt to elucidate modal knowledge by appealing to CDP, we might think that a subject's access to the modal facts is compromised if they slip from *clearly and distinctly conceiving* that P to merely *conceiving* that P. The present concern, however, is with the case of supposition. The central idea in the case of loss of attitude is that a subject may be able to avoid explosion by slipping between distinct attitudes. For instance, an example closer to current concerns is provided by the potential for slippage between C-supposition and A-supposition. A thinker that finds ¬P unsustainable in C-supposition under the A-supposition that P, may fail to find ¬P unsustainable if that C-supposition slips to (mere) A-supposition. It is crucial, then, that the properly modalising subject holds constant not only content, but also attitude.[78]

[78] The Loss of Attitude case can be found in Peter Langland-Hassan's (2015: 226) *Self-Knowledge and Imagination*:

The proposal, then, is that in addition to the norms of explosion and loss of content the fundamental norms of supposition include a norm relating to *loss of attitude*. Explosion, Loss of Content and Loss of Attitude seem to mark three crucial points at which supposition may breakdown. Although there is room for significant debate concerning the fundamental norms governing supposition, going forward I will work with the idea that supposition is governed be the three norms outlined. Also, going forward, primary focus will be placed upon the norm of Loss of Content. The reason for this is that judgements concerning loss of content offer an interesting type of explanation of the pattern of believe that captured by our test cases. I want to turn to that explanation in the following section.

Proposing that mere A or/and C supposing that P is the mechanism deployed in the acquisition of belief in necessity would yield extensionally inadequate results. This remains the case even when the notion of a subject's *finding the supposition unsustainable* is added to the condition. DGV, however, suggest that the canonical acquisition conditions for belief in necessity can be accurately captured if we consider the *interaction* of A and C-supposition. A central component of the DGV account is the idea that these two types of act can be combined in *complex* acts of supposition. For instance, not only can we carry out an act of C-supposition and suppose that Socrates had been a robot, but we can do so *under the A-supposition* that Socrates was actually a robot.

> I am imagining that there are zombies. How do I know that I am? How do I know I am not merely supposing that there are zombies, or wishing that there are, or judging that there are? Of all attitudes I could take toward the proposition that there are zombies, how do I know it is the attitude of imagination? How do I know it is the proposition that there are zombies, and not some other that I am imagining?

Although focusing upon imagination, as opposed to supposition, here Langland-Hassan identifies the potential issues of slippage of both attitude and content. The crucial difference in the present context is that Loss of content and Loss of Attitude are taken to be fundamental norms governing supposition.

With a number of the central components of the DGV account in place we can consider the proposed account of the (proper) acquisition of belief in necessity:

> **ACQ**
> (i) X has properly acquired the belief that P, and
> (ii) X finds herself [able to sustain the A-supposition that P, but (iii) is unable to sustain under that A-supposition, the C-supposition that not-P].

A number of points of clarification are in order. Firstly, satisfying (ACQ) is not taken to be a necessary condition for belief in necessity. The reason for this is that belief in necessity can be acquired in numerous ways. For instance, a subject might acquire some of their modal beliefs via testimony or analogy. The key point, however, is that ACQ is intended to capture the *proper* acquisition conditions of modal belief. The idea here is that a belief is properly acquired if it is acquired through the deployment of the most appropriate, or primary, method. With this in mind, DGV (ibid: 336) endorse the following Acquisition Thesis (that I shall label AT):

> **Acquisition Thesis (AT)**
> Satisfaction of (ACQ) is necessary and sufficient for X to have a properly acquired box-belief that P.

I suggest that the notion of proper acquisition underlying AT speaks to the mechanism challenge of this project. As a result, ACQ and AT indicate significant components of our response to the mechanism challenge. However, it is important to note that ACQ does not (as it stands) address the reliability challenge. For instance, (as it stands) the execution of ACQ is consistent with a variety of patterns of belief in necessity.[79]

[79] DGV consider how the execution of ACQ plays out on Lewisian and Nihilist accounts of content stability and explosion.

5.2.4. Loss of Content and Explanation

Once we have the distinction between A and C-supposition in place, the norms governing supposition offer an explanation of the pattern of belief generated in the Kripkean case. Although, ACQ is consistent with various patterns of belief in necessity. With ACQ in hand and with the norms of explosion and loss of content outlined, we have the basis for an explanation of how the Kripkean reaches the pattern of belief captured by 1–6.

4. Necessarily, Hesperus is Phosphorus.
5. Necessarily, water is H2O.
6. Necessarily, Socrates is human.

An explanation of this pattern of belief is captured by DGV (377) in the following way:

> […] within a Kripkean sensibility, belief in necessity may be seen as regulated by a conception of the identity of propositions and (in particular) by a conception of the identity conditions of the objects that are (loosely speaking) their constituents.[80]

The norms governing supposition in the following way. The norm of Loss of Content directs that a supposition cannot properly be sustained, unless reasoning from it preserves content. A supposition that P is (found) sustainable only if (it is found that) it really is the proposition *that P* that crops up again in other P-seeming places within the reasoning.

Alongside the norm of loss of content, the crucial role played by the *distinction* and *interaction* between A and C-supposition can be seen in the Kripkean cases. As DGV

[80] Additionally, DGV (377) suggest that:

> This speculation promises to be, at least, consistent with the claim that implicit deployment of some such conception of the identity conditions of things is fully and directly implicated in the possession conditions of the concept of necessity (Peacocke 1999: 144–48; 150–51).

(374-5) highlight, asked the unqualified question of whether they can sustain the supposition that Socrates is human, the Kripkean will answer positively. Similarly, asked the unqualified question of whether they can sustain the supposition that Socrates is not human, the Kripkean will also answer positively. Even with the norms of loss of content in place, we fail to capture the pattern of judgement underlying the necessary a posteriori cases. However, by considering the norms of loss of content and the interaction of A and C-supposition it is possible to capture the Kripkean pattern of belief. Asked whether the C-supposition that Socrates is Human can be sustained under the A-supposition that Socrates is human, the Kripkean will answer positively. However, asked whether the C-supposition that Socrates is not human under the A-supposition that Socrates is human, the Kripkean will answer negatively. The idea is that the Kripkean will find themselves unable to sustain the development of the C-supposition that Socrates is not human, under the A-supposition that Socrates is human.

Crucially, this explanation concerns the regulation of *belief* in necessity (for the Kripkean). Consequently, an explanation of this type should be distinguished from those that attempt to explain the necessities "themselves" in terms of the identity of objects.[81] Such explanations take the necessities to hold in virtue of the identity of objects.[82] In the following chapter, I consider the normativity of Loss of Content in greater detail.

It is worth noting a significant difference between the position sketched here and similar work on supposition and conceivability. In a number of places in the literature it is suggested that background knowledge is operational in the development of C-supposition. The present proposal, I suggest, differs from such accounts in that it is *supposition* and the fundamental norms governing *supposition* and the interaction of A

[81] Again, see DGV (377) on the distinction between these explanatory projects.

[82] For example, see Fine (1994) and (Wiggins: 2001: 121, 131) for explanations of the necessity (itself) in terms of the identity of objects. Also, Peacocke's (1999) account offers an explanation of this general type. Peacocke takes necessity to be regulated by a set of principles, where these principles are directly concerned with the identity of propositions. Peacocke's account is considered in more detail in chapter 6.

and C-*suppositions* that plays the central explanatory role. The explanatory route just offered, I suggest, is available as a result of these features of supposition. It is less clear that (for instance) imagination is constrained by these norms. Also, it is by taking into account the role of A-supposition (and its interaction with C-supposition) that we can explain the development of counterfactual suppositions with antecedents we know to be false.

5.3. The Manifestation Condition

The requirement of Harmony proposed by DGV asks us to provide acquisition and manifestation conditions that are rationally interdependent in such a way that for every properly modalizing subject X, the acquisition condition is satisfied if and only if the manifestation condition is satisfied. Such an account offers a basis on which we can explain why beliefs formed in a particular way are manifest in a certain way. Similarly, a harmonious pair of acquisition and manifestation conditions offers a basis from which it is possible to explain why beliefs manifest in a particular way are acquired in a certain way. With this task in mind, in addition to ACQ, DGV propose a corresponding Manifestation Condition for belief in necessity. The proposed condition is characterised as follows:

> **(MAN)**
> (i) X believes that P and (ii) for all S, such that X finds herself [(ii) able to A-suppose P and (iii) subsequently to C-suppose that S] X is prepared to add P as a premise in reasoning from the C-supposition that S.

DGV also propose a Manifestation *Thesis*. The Manifestation Thesis is that manifestation of the complex state - the inferential disposition - described in (MAN) is necessary and sufficient for X to have a properly manifest box-belief that P. If we grant that satisfaction

of (MAN) is sufficient for X to have a *properly manifest belief* in necessity, it is also sufficient for *mere belief* in necessity.

"As in the case of acquisition, the case of manifestation is controlled by, and sensitive to differences among, subject's own judgements of the conditions under which inference explodes, and under which there is preservation of content".

Again, to stress the point, both ACQ and MAN concern a thinker's judgements concerning content preservation. Neither ACQ or MAN concern the conditions for content preservation *itself*. This point is of primary significance to the discussion of the Reliability Challenge in the following chapters.

5.4. Harmony

So, bringing together the two sides of the DGV proposal we get the following account of the cognitive role of belief in necessity:

> (ACQ)
> (i) X has properly acquired the belief that P, and (ii) X finds herself [able to sustain the A-supposition that P, but (iii) unable to sustain under that A-supposition, the C-supposition that not-P].
>
> (MAN)
> (i) X believes that P and (ii) for all S, such that X finds herself [(ii) able to A-suppose P and (iii) subsequently to C-suppose that S] X is prepared to add P as a premise in reasoning from the C-supposition that S.

A central aspect of Divers and Gonzalez-Varela's project is to provide harmonious acquisition and manifestation conditions. On this front, Divers and Gonzalez-Varela

suggest that ACQ and MAN meet the requirements of harmony; where harmony requires that acquisition and manifestation conditions are rationally interdependent in such a way that for every properly modalizing subject X, the acquisition condition is satisfied if and only if the manifestation condition is satisfied. In the present case that amounts to the requirement that the specific conditions ACQ and MAN are rationally interdependent in such a way that for every properly modalizing subject X, ACQ is satisfied if and only if MAN is satisfied. In this regard, DGV endorse the following Harmony thesis:

> HAR
> For every properly-modalizing subject X, ACQ is satisfied by X if and only if MAN is satisfied by X.

I take it that the harmony challenge potentially provides an interesting and useful set of constraints that may inform our response to the challenges of Mechanism, Belief and Role.[83] However, I suggest that the position arising from the current project should also be of interest to those that are *not* invested in the project of providing *harmonious* acquisition and manifestation conditions for belief in necessity. For instance, those unsympathetic to the project of characterising the role of belief in necessity may still be interested in the proposed account in so far as it addresses the mechanism challenge. However, it is the constraints imposed by the project of providing harmonious acquisition and manifestation conditions that allow us to explain the functional relationship between our account of the acquisition and manifestation of belief in necessity.

5.5. The Mechanism Challenge

The Mechanism Challenge is the challenge of identifying the primary mechanism involved in the acquisition of belief in necessity. This challenge is closely related to the

[83] The constraints imposed by harmony may also inform our response to the reliability challenge, although that challenge lies downstream from the issues of this chapter.

challenge undertaken by DGV to provide an account of the proper acquisition conditions of belief in necessity. There is, however, some divergence between the two tasks. The sense of *proper acquisition* central to the DGV account is more liberal than the sense of *primary mechanism* intended in the Mechanism Challenge. For instance, the mechanism proposed as proper by DGV is consistent with a significant variety of patterns of modal belief. The Mechanism Challenge, however, is intended to be more constrained. In particular, it is part of the present project to take the questions of Mechanism, Belief, Reliability and Role to be interrelated in such a way that our response to one of the challenges is likely to place constraints upon our response to the others. One way in which such constraints arise is through the interaction of the challenges of Mechanism and Reliability. Given the starting assumption that the range of belief to be captured is provided by 1 – 6, the Mechanism Challenge is then the challenge of explaining the acquisition of this pattern of belief. The DGV notion of proper acquisition does not speak directly to this task, but the work on supposition and in particular the identification of the norms of loss of content highlights a point of potential significance for the Mechanism challenge.

The identification of the norms governing supposition along with an account of the distinction and interaction of A and C-supposition also provides a basis for progress on the issues concerning conceivability. The account of supposition indicated falls under the banner of a "conceivability-based" account when conceivability is construed broadly.

5.6. The Belief Challenge

It was proposed in chapter 1 that the Reliability Challenge is located between a number of related challenges concerning modal thought and knowledge. In particular, it was suggested that two challenges are (in a sense) prior to the reliability challenge. Firstly, the Mechanism Challenge:

Mechanism: What is the primary mechanism deployed in the acquisition of belief in necessity?

A second challenge was the Belief Challenge:

Belief: How does *that* mechanism produce belief in necessity?

On the account just sketched we have an explanation of the connection between the identified mechanism and *belief* in necessity. On the present account the connection is made through the link between ACQ and MAN. The idea is that a thinker that satisfies ACQ will also have satisfied MAN. DGV (ibid: 388) provide (roughly) the following rationale for the connection between ACQ and MAN. If we assume that X satisfies ACQ, then (from condition (i) of ACQ) X believes that P and (from condition (ii) of ACQ) X A-supposes that P. The idea on the DGV account of supposition is that the acts of A and C-supposition interact in such a way that when X does this (A-supposes that P), X identifies a class of propositions that she *finds* she can then C-suppose. That is, she finds a set of C-suppositions that she can subsequently sustain under that A-supposition. Condition (iii) of ACQ tells us that a thinker satisfying ACQ will find herself unable to sustain the C-supposition that not-P. So, of the available C-suppositions, there will be none to contradict X's C-supposition that P. And the satisfaction of condition (i) of (ACQ) ensures that X already believes that P. Taking these factors together, the idea is that x ought to be prepared to add P as a premiss to any such C-supposition. This offers an explanation of how ACQ amounts to *belief*. It also offers an explanation of how ACQ amounts to belief in *necessity*.

5.6. The Role Challenge

The Role Challenge asks us to identify the role or function of belief in necessity. From DGV we get the following answer:

> The answer is to be given in terms of the normative relation between such judgements and C-supposition. Presuming that C-supposition is itself an important (useful, indispensable) activity, one can see how that activity is assisted by our having at our disposal a stock of propositions which – without further ado, independently of (knowledge of) context and without scrutinizing the content of the particular C-supposition in question – we can rely upon (by introducing as premises) in expanding any C-supposition through good inference.

A number of features of the DGV account are particularly important in making available this response to the role challenge. Firstly, the centrality of supposition (over, say, conceiving) allows for the integration of modal thought with inference more generally. Secondly, the *distinction* between the inferential acts of A and C-supposition. Thirdly, the interaction of A and C-supposition. Additionally, the DGV account provides a partial response to the challenges of Mechanism, Belief, and Role. Crucially, however, the discussion of this chapter has not been concerned with the Reliability Challenge; the challenge that is central to the project of this thesis. The identification of the role of the fundamental norms governing supposition in the proper acquisition of belief in necessity, however, does present a natural area of investigation for the further investigation into the reliability challenge. These lines of investigation concern the nature of the fundamental norms governing supposition.

Not only does the DGV project (i) capture the cognitive role of belief in necessity, it also offers (ii) a means of *explaining* the mechanisms involved in the development of supposition.

5.7. Conclusion

The most promising line of response to the Role Challenge appeals to the relationship between belief in necessity and counterfactual-supposition. In particular, the significance of identifying a proposition as necessary lies in the subsequent freedom to deploy that proposition in reasoning from any counterfactual supposition whatsoever. One way of getting this idea off the ground in the case of *absolute* necessity is to appeal to an account of the fundamental norms governing supposition. Although the norms governing supposition indicate a potential avenue of investigation, the cognitive role of belief in necessity discussed in this chapter has not spoken to the Reliability Challenge. In the following chapter, I suggest that norms of loss of content are involved not only in a specification of the cognitive role of belief in necessity but also in an account of the truth conditions of statements of necessity.

Chapter 6

The Modal Concepts and Supposition

This chapter focuses on the relationship between supposition, the modal concepts and the truth conditions of belief in necessity. In particular, it is suggested that norms of loss of content not only govern supposition but are also involved in an account of the possession conditions of modal concepts and in the determination of the truth conditions of belief in necessity. The chapter focuses upon Christopher Peacocke's (1999) *Principle-Based Account* of both the truth conditions of modal statements and the possession conditions of the modal concepts. Peacocke's account provides one of the most explicit responses to The Reliability Challenge available in the recent literature. In this chapter, I suggest that Peacocke's principle-based account is best developed alongside an account of supposition. Specifically, it is suggested that principles, such as those indicated by Peacocke, underlie the development of counterfactual supposition. It is suggested that once this move has been made we have the initial components for a response to all four of our foundational challenges. However, it is suggested that in order to see this task through and successfully respond to the Reliability Challenge we still require an additional account of the epistemology of content. What's more, it is highlighted the additional account of content must also retain the factuality of judgements concerning content.

6.1. The Principle-based Account

In chapter 1 four potential lines of response to The Reliability Challenge were identified. Of those, two were immediately found to be problematic for the domain of necessity because they appealed to causal-counterfactual notions of dependence that are seemingly inapplicable in the case of necessity. This left two strategies: Modal Anti-Realism and

Non-Standard Realism. Chapter 1 highlighted the problems with Modal Anti-Realism and concluded that Non-Standard Realism stands as the only remaining viable response to The Reliability Challenge for necessity. The most thoroughly developed articulation of (what I am referring to as) Non-Standard Realism has been provided by Christopher Peacocke in his Principle-Based Account of modality. For this reason alone, Peacocke's account is of direct relevance to the present project. There is, however, a second motivation for considering Peacocke's account in the present context. In particular, I suggest that Peacocke's articulation of Non-Standard Realism lands at the same issues that have been indicated in chapter 4. Whereas chapter 4 was concerned with a normative account of the cognitive role of belief in necessity, Peacocke's account is concerned with an account of the possession conditions of the modal concepts and a metaphysical account of the truth conditions of the modal statements. The accounts differ in that respect. However, it seems that issues concerning *loss of content* lie at the heart of both accounts.

In this chapter I outline Peacocke's account of the modal concepts. I suggest that it is based upon a metaphysical account of the truth conditions of statements of necessity that naturally corresponds to the proposed mechanisms for the acquisition of belief in necessity indicated in the previous chapter. In this respect, I suggest that the proposed account of the cognitive role of belief in necessity and the proposed account of the determination of the truth conditions of modal statements combine to provide the *basis* of a response to the four challenges that characterise the present project. The chapter concludes, however, by indicating a significant epistemological gap in the combined account. First, I want to begin by outlining Peacocke's metaphysical and epistemological picture of modality

6.2. Integration and Reliability

In Being Known (1999) Christopher Peacocke identifies and attempts to address, what he refers to as, *The Integration Challenge*:

> I call the general task of providing, for a given area, a simultaneously acceptable metaphysics and epistemology, and showing them to be so, the *Integration Challenge* for that area. (Peacocke: 1999, 1)

The Integration Challenge is closely related to the Reliability Challenge but not equivalent to it. The challenges are similar in that they both face (almost) any domain of epistemological inquiry. Also, the Reliability Challenge and the Integration Challenge are similar in that they are particularly pressing in those domains where epistemological explanation cannot proceed in terms of causal-counterfactual relations between the thinker and the facts of the given domain. For instance, the Reliability and Integration Challenges are pressing in the domains of mathematical, logical, and modal knowledge.[84]

There are, however, a number of points of contrast between the two challenges. Firstly, the challenges differ in their starting assumptions. As the Reliability Challenge has been presented here, various forms of scepticism have been ruled out from the start. The Reliability Challenge is the challenge of *explaining* the reliability of beliefs in given domain. The challenge only arises once we acknowledge that there is a reliable connection between belief and fact. The Integration Challenge, however, is more general. For instance, the Integration Challenge for a given domain might be addressed with an error theory or with a variety of non-cognitivism.[85] In this respect, the starting assumptions of the two challenges differ.

Secondly, there is another respect in which the two challenges may differ. Depending upon how strictly we interpret the requirements of the Integration Challenge, it may be that in one respect the Integration Challenge is more demanding than the Reliability Challenge. This might be the case if we take the Integration Challenge to require the

[84] In Being Known Peacocke addresses the domains of necessity, the past, morality and self-knowledge.

[85] Peacocke (ibid: 9 -11) explicitly identifies such lines response to the Integration Challenge.

provision of a metaphysical account of the relevant domain. However, there may be strategies for meeting the Reliability Challenge that do not require a detailed metaphysical account to be supplied. Perhaps, for instance, the Reliability Challenge can be addressed by a theory that remains neutral on a variety of metaphysical issues. For instance, perhaps the Reliability Challenge in the case of necessity can be adequately addressed by a theory that has a variety of metaphysical commitments but remains neutral between the metaphysical theories of Lewisian Realism and Erzatzism. It seems, however, that an answer to the Integration Challenge, as Peacocke intends it, would amount to either a response to the Reliability Challenge or to the denial of the starting assumptions of the Reliability Challenge.

Although the two challenges are not, in general, equivalent, a response to the Integration Challenge for a particular domain will amount to a response to the Reliability Challenge for that domain, if the starting assumptions of the Reliability Challenge are accepted. Specifically, if it is accepted that the thought and talk in that area is propositional and truth stating and that thinkers genuinely form beliefs about the subject matter of the domain and that those beliefs tend to be true. If all that is accepted and we provide a response to the Integration Challenge for that area of thought and talk, then we will have also provided a response to the Reliability Challenge for that domain. In the case of necessity, Peacocke accepts all of these starting assumptions and, as a result, in attempting to address the Integration Challenge for necessity Peacocke speaks directly to the Reliability Challenge. This alone is sufficient to make Peacocke's account of necessity of direct relevance to the present project. In the following sections I sketch the primary components of Peacocke's account.

6.2.1. Concept Possession and Modality

Peacocke's (ibid: 163) general strategy for addressing the Integration Challenge in the case of necessity is to identify a set of *principles of possibility*. Peacocke's (ibid.) idea is

that we can address the Integration Challenge in the case of necessity by taking these principles to play two significant roles. Firstly, the principles are taken to determine the *truth conditions* of contents containing the modal concepts. Secondly, the principles are taken to capture the *possession conditions* of the modal concepts. Peacocke's general idea is that if the modal concepts are individuated by a set of principles that play both of these roles then, a thinker in full possession of the modal concepts will tend to form beliefs in necessity that are true. The significance of this proposal for the present project is twofold. Firstly, this line of explanation speaks directly to the Reliability Challenge. Secondly, (although Peacocke does not present them in this way) the principles at the heart of Peacocke's account concern a type of loss of content. That is, the principles that Peacocke indicates to be integral to (i) an account of the *possession conditions* of the modal concepts and to be integral to (ii) an account of the *truth conditions* of contents composed from the modal concepts, concern a notion of loss of content that is comparable to that indicated in the previous chapter to (iii) be implicated in the fundamental norms that govern supposition and to (iv) regulate the acquisition and manifestation of belief in necessity. This, I suggest, is no coincidence.

In the case of necessity, Peacocke suggests that the modal concepts are individuated in such a way that a thinker in possession of the modal concepts will be in a position to make accurate judgements concerning necessity and possibility. A distinctive feature of Peacocke's approach is that in the case of necessity this project can be carried out without taking the modal facts to be dependent or determined by our understanding or judgement. Consequently, Peacocke's strategy is a prime example of strategy 4, Non-Standard Realism. It is possible to get some grip on Peacocke's general approach by considering a cluster of ideas concerning concept individuation.

Peacocke (ibid: 13 - 14) tables two ways in which concepts might be individuated. One approach would be to suggest that concepts are individuated in terms of their *acceptance conditions*. On this approach, concepts are individuated in terms of the conditions under which certain propositions containing those concepts are *believed* or *judged* to be true.

Following Peacocke, we can call such concepts *cognitively individuated*. We might attempt to individuate the logical concept of conjunction with the following acceptance conditions.

i) $\frac{ACB}{A}$ ii) $\frac{ACB}{B}$ iii) $\frac{A \quad B}{ACB}$

The concept of conjunction might be taken to be individuated by the pattern of acceptance indicated in (i) – (iii). Where a thinker in possession of the concept conjunction is prepared to believe A given the belief that ACB. Similarly, the thinker is also willing to accept B given the belief that ACB. The thinker is also prepared to accept ACB given the belief that A and the belief that B.

Peacocke's suggestion is that there are range of concepts for which a stronger claim can be made. Peacocke's proposal is that there are some concepts that are individuated in terms of the conditions under which certain propositions containing those concepts are *known*. Peacocke refers to this class of concepts as the class of "*epistemically individuated*" concepts. It is the notion of an epistemically individuated concept that is central to Peacocke's response to the Integration Challenge. The idea is that in the case of epistemically individuated concepts, our account of concept possession and our account of how knowledge is acquired of contents composed from those concepts will be intimately linked.

6.2.2. The Model of Implicitly Known Principles

With the notion of an epistemically individuated concept on the table, it remains to be seen how a concept can achieve this status. Even when we are limited to those concepts that can be epistemically individuated, there remain (potentially) numerous ways in which this is epistemic individuation could be achieved. Peacocke suggests that one

model on which a concept may be epistemically individuated is the model of *implicitly known principles*. The idea here, according to Peacocke, is that possession of some concept c consists in having tacit knowledge of a set of principles involving the concept c, where this set of principles plays a *dual role*. One role is metaphysical in nature and the other role is primarily epistemological. With respect to the metaphysical role, the idea is that principles play a role in determining the truth conditions of contents of which the concept is a component. With respect to the Epistemological role, the idea is that the principles will be directly implicated in a specification of the possession conditions of the concept. According to Peacocke, it is this dual role that secures the status of *Epistemically Individuated* for a given concept. The idea is that the principles themselves play a role in fixing the extension of the concept. So, for a content containing the concept to be true is just for it to be counted as true by the principles themselves. The second role concerns concept possession. The idea is that a thinker who possesses the concept will draw on his tacit knowledge of these principles (perhaps in combination with other information) when making judgements and forming beliefs about contents containing the concept. The idea is that if the principles play both of these roles then the concept will be epistemically individuated as:

> If, in the process of evaluation, the thinker uses the very principles that determine, at the level of metaphysics, whether the content really is true or is false. This will be a way for the thinker to come to know those contents (Peacocke: 2002c, 637).

Peacocke claims that the modal concepts *necessity* and *possibility* are epistemically individuated in this way; via the model of implicitly known principles. With this approach in mind, Peacocke's aim is to formulate a set of *Principles of Possibility*, which are both tacitly known to someone who fully possesses the concepts $\Box$ and $\Diamond$, and which also *determine* the truth or falsity of contents containing those concepts. With Peacocke's

general strategy outlined, we can set up the details of Peacocke's account and highlight the specific principles that Peacocke takes to individuate the modal concepts.[86]

6.2.3. The Principles of Possibility

Given Peacocke's strategy for addressing the Integration Challenge in the case of necessity, much of the explanatory work of the account will be done by the principles that play the two roles indicated. In the following sections I want to sketch Peacocke's proposed principles.

6.2.4. Admissability, Assignments and Specifications

At the heart of Peacocke's account is the idea that the application conditions of the modal concepts are fixed by the identity conditions of the contents to which they are applied.[87] Peacocke proposes a set of "principles of possibility" intended to capture this idea.

> The Principles of Possibility fix the truth values of modal contents by relating them to the conditions which individuate particular concepts, and the principles of individuation for the objects and properties we think about. Peacocke (ibid: 172)

[86] If we take the modal concepts to be epistemically individuated, then they will also be *properly* individuated. That is, an account of the conditions under which contents containing a given concept is known will coincide with an account of the conditions under which beliefs are properly acquired. There is, then, a natural point of overlap between the DGV project and the general strategy endorsed by Peacocke for responding to the integration challenge.

[87] For economy of expression I will frequently talk of the "application conditions of concepts", however, the idea actually concerns the application conditions of Thoughts of which the concept is a component. The idea that concepts have "application conditions" is discussed in greater detail in chapter 7 sections 6.4.3. and 6.4.4. At this stage I take the application conditions of a concept, c, to be equivalent to the conditions in which c is applied truthfully.

To get at this idea, Peacocke outlines a detailed account of (his proposed) principles of possibility that rests upon a number of technical notions. Given this, outlining the specific principles proposed by Peacocke first requires a number of ideas to be put in place. Firstly, it is worth noting that Peacocke's technical, semantic and metaphysical account is essentially a version of possible world semantics on which possible worlds are identified with sets of propositions.[88] More specifically, *possible* worlds are identified with sets of propositions that meet certain constraints. Where the relevant constraints are captured by the *Principles of Possibility*.

To get to Peacocke's proposed principles of possibility we first need to introduce a number of technical notions. In particular, Peacocke's account rests upon a notion of *admissibility*. The notion of admissibility in turn rests upon notions of an *assignment* and a *specification*. Firstly, Peacocke (ibid: 126 – 127) identifies an assignment, s, as a 4-tuple <Ds, vals, propvals, exts>, where:

> Ds = a domain
> vals = a function from concepts to extensions
> propvals = a function from atomic concepts to properties and relations
> exts = a function from properties and relations to extensions.

Secondly, a *specification*, is just the set of propositions that come out true on an assignment. Thirdly, it is taken to be a necessary condition on an assignments being *admissible* that it respect all of the Principles of Possibility (again, these are outlined below). With the notion of admissibility outlined in this way, Peacocke thinks that we can elucidate the truth conditions of modal concepts. For instance, Peacocke suggests that the concept *possibility* applies only to admissible assignments. The idea captured by

[88] In some cases, the terminology of "propositions" is used in a more restricted sense to refer to entities at the level of reference. I'm using it more broadly so as to include Thoughts, in the Fregean sense, composed from concepts.

Peacocke is that the principles of possibility constrain the application conditions of the modal concepts. This is achieved because the principles of possibility constrain the notion of admissibility and admissibility constrains the application conditions of the modal concepts. Although, this approach seems to take an indirect route to the determination of modal truth conditions by going via the intermediate notion of admissibility, I suggest that the notion of admissibility makes more sense when considered alongside Peacocke's proposed Principles of Possibility. Given this, the following section turns to the characterisation of Peacocke's principles.

6.2.5. MEP, The Constitutive Principles and Recombination

Peacocke suggests that the principles of possibility divide into two primary types. Firstly, a principle stating that admissibility is constrained by the identity of concepts. This first principle Peacocke refers to as the "Modal Extension Principle". Secondly, a set of principles stating that admissibility is constrained by the identity of objects, properties and relations at the level of reference. Peaocke refers to these principles as the "constitutive principles". As Peacocke stresses, the two types of principle share a common core idea.

> […] we have two kinds of principles of possibility: *The Modal Extension Principle* and the *constitutive principles*. Though these have very different subject-matters, they are not just arbitrarily slapped together. Both the Modal Extension Principle and the constitutive principles require that what holds according to a genuine possibility must respect what makes something what it is-whether it be a concept, an object, a property or a relation. On any plausible theory of concepts, the identity of a concept depends on the rules which determine its semantic value in the actual world. The Modal Extension Principle then requires that what is involved in this identity be preserved in a certain way across genuinely possible worlds. So the Modal Extension

> Principle draws out the consequences of what is individuative of a concept for what is genuinely possible, while the constitutive principles for objects, properties and relations draw out the consequences of what is individuative of objects, properties and relations. (Peacocke: ibid, 148 – 149)

Using the notions of an assignment and admissibility, Peacocke formulates the following principle to capture the core idea at the level of concepts.[89]

> ***Modal Extension Principle (MEP)***
> An assignment s is admissible only if: for any concept C, the semantic value of C according to s is the result of applying the same rule as is applied in the determination of the actual semantic value of C. (Peacocke: ibid, 136)

The function of MEP, can be seen if we consider assignments that would violate the principle. For instance, Peacocke (ibid: 132 - 133) illustrates the role of the Modal Extension Principle by considering the concepts of logical conjunction and the concept *bachelor*. Taking the concept of conjunction first. Consider the logical concept of conjunction, *&*, and an assignment *s*. In this case it is relatively straightforward to get a grip on the rules involved. For instance, we can specify that the rules are those captured in the truth table for conjunction. If the rules of *&* are captured in such a way, then if *s* assigns to *&* a function which does not return the truth value False, when applied to the truth values True and False, then the assignment s is inadmissible. The assignment *s* would not be assigning to *&* a semantic value which is the result of applying *the same rule* for determining the semantic value of *&* in the actual world. For this reason, *s* would be counted as inadmissible by the Modal Extension Principle.

[89] This is actually Peacocke's (ibid: 136) "Unified Modal Extension Principle". Peacocke's initial formulation of the principles of possibility makes use of two distinct principles; one concerning de jure rigid concepts and one concerning concepts that are not de jure rigid. The Unified Modal Extension Principle is intended to subsume the two initial principles. Peacocke (ibid) states that it was Williamson that suggested that the two principles could be unified.

The same line of thought can be carried over to the concept *bachelor*. In this case, the idea is that the semantic value for the concept *bachelor* is fixed in the actual world by the intersection of the concepts *man* and *unmarried*. In this case, if there is an assignment *s* on which val(*bachelor*, *s*) is not the same as the intersection of val(*man*, *s*) with val(*unmarried*, *s*) then the assignment would be inadmissible. According to Peacocke, this assignment would not be applying *the same rule* for determining the semantic value of *bachelor* as is applied in determining its semantic value in the actual world. So according to Peacocke, this is a violation of the Modal Extension Principle. The idea is that this type of explanation can be carried out for other types of concept, also.

The primary idea underlying MEP is that any concept is governed by a rule, R, whose application determines, in each case, the actual extension of the concept. The role of MEP is to ensure that admissible assignments respect such constitutive relations at the level of *concepts*. In addition to MEP Peacocke suggests that there will be a collection of constitutive principles at the level of *reference*. Although the general idea underlying the principle-based account could be simply recast in terms of different constitutive principles, Peacocke proposes the following candidate constitutive principles as examples. For instance, Peacocke provides the following principle concerning an object's fundamental kind as potential example of a constitutive principle:[90]

> ***Kind***
>
> If P is a property which is an object x's fundamental kind, then an assignment is inadmissible if it counts the proposition x is P as false.
>
> (Peacocke 1999: 145)

Peacocke also takes it to be plausible that there are constitutive principles concerning origin. For instance, it is constitutive of a person, a, that they originate in the particular sperm, b, and egg cell, c, from which they actually originated. Given this, Peacocke proposes the following constitutive principle concerning origin:

[90] I have relabelled the two example constitutive principles.

Origin

An assignment is inadmissible if it both counts the proposition a exists as true and counts the proposition a develops from b and c as false. (Peacocke 1999: 146)

Again, Peacocke provides these principles primarily as examples of the type of principle which would be relevant to the principle-based account. The general approach captured by the principle-based account can be abstracted from the specific principles outlined here. Peacocke suggests that MEP and the constitutive principles provide necessary conditions for an assignment to be admissible. Furthermore, in addition to MEP and the constitutive principles, Peacocke proposes a further principle:

Constrained Recombination

An assignment is admissible if it respects the set of conditions on admissibility given hitherto. (Peacocke 1999: 149)

Constrained Recombination states that MEP and the set of Constitutive Principles are jointly sufficient for admissibility. These are the principles, Peaocke suggests, that fix "a rule for determining the actual extension of the concept admissible" (1999: 151). With this apparatus in place, Peacocke (ibid: 150) suggests that it is possible to specify the contribution made by modal concepts to Thoughts of which they are a part:

Possibility: A Thought or proposition is possible iff it is true according to some admissible assignment.

Necessity: A Thought or proposition is necessary iff it is true according to all admissible assignments.

What we have then, is an account of the truth conditions of the modal concepts that has at its heart the idea that truth conditions of statements of necessity are determined by the identity conditions of the contents to which they apply. This is explicitly recognised by Peacocke with respect to the relationship between the identity of concepts and modality:

> […] the operators of metaphysical necessity and possibility, because of their relations to the Modal Extension Principle, can then be described as operators which are *dependent upon the individuation of concepts*. (ibid. 172. Peacocke's emphasis.)

Peacocke goes on to characterise this dependence in the following way:

> An operator […] is dependent upon the individuation of concepts when its conditions for application are fixed, in the most fundamental cases, in part by the individuation conditions of the concepts which comprise the thought *contents to which it applies* […]. (ibid. 172. Emphasis added.)

This core idea underlies both the principle governing concepts and the principles governing reference. The principles are intended to explain how the application conditions of the modal concepts are fixed. Peacocke's principles, then, are intended to provide the basis for a metaphysical account of necessity. In addition, Peacocke suggests that the principles also play an epistemological role in providing an account of our understanding of the modal concepts. I turn to the epistemological role of the principles in the next section. It is worth noting, however, that the principles might be endorsed as an accurate characterisation of the truth conditions of statements of necessity and possibility, while rejecting Peacocke's account of understanding.[91]

[91] The possibility of separating Peacocke's metaphysical account from his epistemological account is noted by Roca-Royes (2010: 336 - 337).

6.3. Integration and Reliability

The characterisation of the principles of possibility just provided served a primarily metaphysical role. In particular, the characterisation concerned the truth conditions of contents containing the modal concepts. In addition to this metaphysical role, Peacocke suggests that the principles are required to explain our grasp of the modal concepts. By taking tacit knowledge of the principles to be integral to our understanding of the modal concepts it's possible to sketch a response to the Reliability and Integration challenges. In addition to the metaphysical role just highlighted, Peacocke suggests that we can address the Integration Challenge by taking the proposed principles to be directly implicated in the possession conditions for the modal concepts. Peacocke suggests that possessing the modal concepts consists in having tacit knowledge of the principles of possibility. The principle-based account is intended to provide a response to the Integration Challenge (and Reliability Challenge) by having the principles of possibility play the following two roles:

> 1) The Principles of Possibility determine the truth value of modal Thoughts and propositions.
>
> 2) The Principles of Possibility constitute the possession conditions for the modal concepts, *possibility* and *necessity*, so our implicit knowledge of the principles is directing our modal judgement.

The result is that The Principles of Possibility are taken to capture a set of principles which need to be satisfied by a set of thoughts or propositions in order to be counted as a genuine possibility. In turn, the principles individuate the concept *possibility*, and so (on Peacocke's account) an individual in possession of the concept *possibility* has implicit knowledge of the principles. By having the principles play both of these roles, Peacocke ties together the modal facts and our understanding of the modal concepts. It is this *two-role* solution that is typically taken to be the most significant feature of Peacocke's

account. A number of initial points are worth noting with noting with respect to Peacocke's account.

Firstly, Peacocke's proposed solution is intended to avoid anti-realism. The resulting position would provide a prime example of strategy 4, Non-Standard Realism, indicated in chapter 1. Recall, Non-Standard Realism was characterised as follows (where X captures a range of beliefs and Y a corresponding set of facts):

Strategy 4: Non-Standard Realism

Covariance

Step 1: X co-varies with Y

Order of Dependence

Step 2: because X depends upon Y

Type of Dependence

Step 3: The dependence between X and Y is *not* causal-counterfactual

A central component of strategy 4 is that it does not appeal to causal/counterfactual notions of dependence. Instead, this strategy takes there to be an alternative connection between belief and modal fact. On Peacocke's principle-based account there is an a priori connection between modal belief and modal fact. This connection is taken to obtain as a result of the way that the modal concepts are individuated. The concepts *possibility* and *necessity* are individuated in such a way that a subject in full possession of those concepts will make modal judgements that are true. Possessing the modal concepts ensures that a subject's modal judgement is guided towards truth. The reliability of belief in necessity is explained by an account of the individuation conditions of the modal concepts.

A second issue that is important to note concerns the way in which the principles are grasped. Specifically, it is important to note that the principles taken to characterise the possession conditions for the modal concepts are taken to be *tacitly* known. The account is not dependent upon the claim that properly modalising subjects can fully articulate the content of the principles which individuate the modal concepts. This is just as well, as it seems that even thinkers that agree on the issue of how the modal concepts should be applied in a particular case would struggle to state precisely the principles that characterise *possibility* and *necessity* and which underlie the application conditions of the modal concepts. There are two respects in which this is manifest. Firstly, they would struggle to state the principles that characterise possibility *itself*. Additionally, thinkers would struggle to articulate a set of principles that characterise the possession conditions for the modal *concepts*. It is an important feature of Peacocke's account that the principles of possibility are *tacitly* known.

Secondly, I think the most charitable interpretation of Peacocke's account takes tacit knowledge of the principles of possibility to be a necessary condition for *full* possession of the modal concepts. It may be that a more minimal notion of conception possession can be achieved while lacking complete (although tacit) knowledge of all the principles of possibility.[92] The relevant distinction seems to be that between *mere* concept possession and concept *mastery*. It may be that it is necessary and sufficient for the *mere* possession of some concept, c, that a subject is capable of thinking thoughts that have c as a constituent. This, perhaps, can be achieved in the case of the modal concepts without complete (tacit) knowledge of the principles of possibility. On the other hand, it may be that it is necessary and sufficient for mastery of the modal concepts that a thinker has complete (tacit) knowledge of the principles of possibility.[93]

[92] Here, talk of *all* the principles of possibility is intended to include any additional principles that Peacocke has not characterised.

[93] Recently, Verdejo and Rodríguez (2015) press this distinction and its relation to the task of concept individuation.

Peacocke's proposal is a prime example of strategy 4; non-standard realism, because the connection between modal judge and modal fact is secured conceptually via the facts concerning the individuation of the modal concepts. As it stands, however, the account, requires development in a number of areas. In particular, there are a number of epistemological issues left outstanding. I will return to those epistemological issues in sections 6.5.1.- 6.6. First, however, I want to indicate how the principles of possibility relate to counterfactual supposition.

6.4.1. A Supposition-based Account

Peacocke's Principle-Based Account makes progress on a number of significant issues. In particular, the Modal Extension Principle captures a central aspect of the possession conditions of the modal concepts and an integral constraint on the truth conditions of modal statements. However, I suggest that in order to address the range of challenges indicated throughout the thesis, Peacocke's proposed account of truth and possession conditions is best incorporated into an account of supposition development. The central idea is that we deploy the principles of possibility (or principles very similar) in our reasoning within counterfactual supposition. The general idea is that in engaging in supposition we (essentially) effect a (partial) assignment of semantic values. What's more, it might be suggested that our finding suppositions unsustainable is informed by our reason in accordance with the principles of possibility (in particular, MEP). In the following sections, I indicate a number of reasons why the principles should be taken to underlie our reasoning within counterfactual supposition.

6.4.2. The Principles of Possibility and Belief in Necessity

The Belief Challenge asks us to explain how our proposed response to the Mechanism Challenge results in *belief in necessity*. On the sketch of Peacocke's account provided

so far, it seems that this challenge has yet to be addressed.[94] To see this, take two concepts *possibility** and *necessity** and take them to be individuated in the way suggested by Peacocke. For instance, let's stipulate that the following biconditionals capture the contribution to truth conditions made by the concepts *possibility** and *necessity**:

> **Possibility**: A Thought or proposition is *possible** iff it is true according to some admissible assignment.
>
> **Necessity**: A Thought or proposition is *necessary** iff it is true according to all admissible assignments.

Furthermore, if we take (i) the set of principles *MEP*, *Origin*, *Kind*, *Restrained Recombination* (etc) to place constraints on admissibility and (ii) we take possession of the concepts *possibility** and *necessity** to consist in reasoning from these principles, then (plausibly) any thinker that acquires belief through such reasoning will acquire belief in possibility* and necessity*. What is more, given the contribution to truth conditions captured in the biconditionals **Possibility** and **Necessity** the thinker's beliefs will amount to possibility* and necessity* knowledge.

Provided with only with this sketch of the concepts *possibility** and *necessity**, we have yet to provide any account of how such concepts relate to belief in *necessity*. It is granted that the characterisation of the concepts *possibility** and *necessity** will amount to subject's acquiring belief in necessity*, but we have yet to show how belief in necessity*

[94] A similar objection and response is raised by Wright (2002: 657 – 658). Wright highlights the task of connecting the notion of necessity captured by the principles and the intuitive notion of necessity. Wright also indicates that the connection might be achieved via an appeal to counterfactual thought. This issue differs from another issue raised by Wright (ibid) concerning a thinker's ability (using the concepts of necessity outlined by Peacocke) to recognise that the characterisation of necessity is correct.

relates to (genuine) belief in necessity. We have yet to show that the identified concept is the concept of necessity and not something else.[95]

One way in which we can connect the characterised concept and belief in necessity is to relate the proposed account of the acquisition of belief in necessity to an account of the manifestation of belief in necessity. Such an account is exactly what was sketched in the previous chapter. I take our best account of the manifestation of belief in necessity to a development of the of the general idea that having a belief in P's necessity is a preparedness to deploy P in reasoning from any counterfactual supposition whatsoever. The connection between the characterised concept and *belief in necessity* (as opposed to no belief or belief in something else) can be made if we take reasoning from the principles to culminate in belief that is manifest in that way. In that case, I suggest that belief acquired via the principles will be manifest in the preparedness to deploy P as a premise under any counterfactual supposition. That, I suggest, is the second respect in which the principles relate to supposition.

6.4.3. The Role Challenge

So far, in considering Peacocke's account we have sketched an account of the possession conditions of the modal concepts and an account of how the truth conditions of the modal concepts are fixed. The account sketched so far, however, leaves the role of beliefs composed from the concept *necessity* unaccounted for. As it stands, it is unclear what significance possessing the concept *necessity* holds. Similarly, it is unclear what the

[95] It is worth nothing that this challenge differs from the epistemological challenge of explaining how Peacocke's account of concept individuation provides *knowledge* of necessity rather than merely knowledge of necessity* (where necessity* is simply individuated by the principles of possibility). The challenge I intend to highlight is in a sense prior to the epistemological challenge. Whether the proposed mechanism produces knowledge or not (and regardless of what that knowledge is of), there is the question of whether the proposed mechanism produces belief and belief of the appropriate type.

significance of beliefs composed from the concept *necessity* would have, if any. With respect to this issue a natural line of development is to suggest that it is through the relationship between the modal concepts and supposition that the significance of those concepts is established. Indeed, Peacocke proposes a connection along these lines:

> A question it is sometimes tempting to raise is this: "Why do we need the concept of necessity at all? Why should we ever need to talk about anything other than the actual world? One answer to this question is that it is certainly desirable to know a class of principles which can be legitimately employed when reasoning within the scope of any counterfactual supposition whatever. These principles will be the necessary truths, and we must be able to identify some of them if reasoning within the scope of counterfactual suppositions is to proceed. (Peacocke 1999: 172-3)

Here, Peacocke acknowledges the relationship between belief in necessity and reasoning within counterfactual supposition. Peacocke also acknowledges the practical utility of counterfactual reasoning:

> Counterfactuals are also indispensable in practical reasoning. So we can expect some identification of necessary truths to be practically, as well as theoretically, indispensable. (Ibid)

This is the further respect in which the principles relate to supposition. What is more, I suggest that this idea is precisely what is capture in MAN, from the previous chapter. Furthermore, in order to provide harmonious acquisition and manifestation conditions, I suggest that the principles should also be taken to underlie the reasoning involved in ACQ. Further still, I suggest that Peacocke's account can be naturally combined with the conditions ACQ as the principles directly concern a species of loss of content. That is the focus of the following.

6.4.4. Sinning Against Sense

So far, I have indicated a number of ways in which the principles of possibility relate to supposition. The primary idea is that the development of counterfactual supposition is constrained by those principles. With the primary elements of Peacocke's metaphysical and epistemological account outlined, it is possible to highlight a significant point of overlap between the account sketched and the account of the fundamental norms governing supposition and the cognitive role of belief in necessity outlined in the previous chapter. Specifically, I suggest a broad notion of *loss of content* is at the core of:

(i) The fundamental norms governing supposition.
(ii) An account of the acquisition and manifestation of belief in necessity.
(iii) An account of the possession conditions of the modal concepts.
(iv) An account of the truth conditions of thoughts containing the modal concepts.

The previous chapter indicated how norms of content stability relate to (i) and (ii). Additionally, however, I suggest that Peacocke's Modal Extension Principle (or a principle very much like it) captures (part of) the possession conditions of the modal concepts and also captures a constraint on the distribution of truth values among modal statements. What's more, I suggest that the Modal Extension Principle directly concerns a type of content stability. For instance, here's the principle again:

> *Modal Extension Principle (MEP)*
> An assignment s is admissible only if: for any concept C, the semantic value of C according to s is the result of **applying the same rule** as is applied in the determination of the actual semantic value of C. (Peacocke 1999: 136, emphasis added)

MEP is directly concerned with the stability of the rules which individuate concepts and which determine semantic values. It is a constraint on admissibility (and thus possibility and necessity) that these rules are held fixed. I suggest the case in which they are not held fixed can deemed as a case of loss of content. What's more, given that MEP plays the dual roles of (partially) capturing the possession conditions of the modal concepts and determining the application conditions of the modal concepts. The notion of loss of content can be seen as directly involved with (iii) and (iv) above.

It is important to stress that the notion of loss of content found in MEP concerns concepts and the rules which individuate them. Peacocke, takes the principles of possibility to divide into principles at the level of sense and principles at the level of reference. It is at the level of sense that MEP is taken to operate. In cases where MEP is violated there would be loss of sense. To retain something of the Fregean terminology, I suggest that MEP directly concerns a species of loss of content that we might (metaphorically) characterise as *sinning against sense*. Although, only a metaphor, it is appropriate in two respects. Firstly, the Modal Extension Principle is violated in those cases in which sense is applied *in place of* or *against* another. It is not merely that rule R^1 is used and R^2 is not used, it is that R^2 is used in place of R^1. Secondly, the metaphor captures something of the normativity of the relation. It is not merely that R^2 is used in place of R^1, but that R^2 is used where R^1 *should have been*. The following chapter is concerned with articulating this notion in greater detail. For now, I want to move on to a number of outstanding epistemological issues.

6.5.1. Sources of Error

If we grant that the modal concepts are individuated along the lines indicated by Peacocke, we will have a natural explanation of the relationship between the modal concepts, supposition and the modal facts. We will also have the *beginning* of a response to the challenges of Mechanism, Belief, Reliability and Role for necessity. However,

there remain a number of extremely significant epistemological challenges to the development of this approach. These challenges can be placed in focus by considering the potential sources of modal error on the account sketched. That is the aim of this section.

The Reliability Challenge begins with the observation that thinkers *tend* to form beliefs in necessity that are true. The Reliability Challenge then is to go on and explain this tendency. It is important, however, not to overplay the connection between belief in necessity and the modal facts. Just as in other domains of thought and talk, thinkers are not infallible in their judgement and sometimes thinkers form beliefs that are false. This is also the case in the domain of modality. For this reason, an adequate account of modal thought and knowledge will leave room for such errors. An account of modal thought that did not leave room for error would (it seems) fail to capture the epistemological mechanisms that thinkers deploy in the formation of belief in necessity. It would be a great surprise to discover that we are infallible in our judgements of necessity. What is more, for all that has been said so far concerning Peacocke's account of the modal concepts, it is tempting to think that any thinker in a position to acquire belief in necessity is bound to form beliefs that are true. Such a result would mischaracterise the methods deployed in the acquisition of belief in necessity. On this front, a number of potential sources of error in modal judgement are identified by Peacocke. In highlighting the required sources of error more significant epistemological issues can be brought into light.

6.5.2. Constitutive Principles

The first source of error concerns the constitutive principles.[96] Specifically, it seems that if a thinker lacks knowledge of one or more of the constitutive principles provides, then they are mistaken in their judgement of necessity. For instance, a thinker that lacked

[96] A version of this objection is developed at length in Roca-Royes (2010).

knowledge of the principle *Origin* might judge that it is possible for a not to develop from b and c, despite it being constitutive of a that a develop from b and c. However, the way in which Peacocke's account is formulated ensures that any thinker in full possession of the modal concepts will not lack such knowledge and will consequently not be lead to error in their modal judgement in this way. This response, however, merely pushes the epistemological challenge back. For the modalising subject, the challenge now simply becomes that of acquiring the modal concepts. A task which may prove to be daunting or impossible, depending upon the degree of difficulty involved in the acquisition of knowledge of constitutive truth. I acknowledge that is a significant point at which Peacocek's account requires development. However, throughout the remainder of the thesis I want to primarily focus upon another, significant, epistemological gap in Peacocke's epistemological. That is the issue that I turn to next.

6.5.3. The Identity of Concepts

On the account sketched a significant portion of the explanatory work is done by constraints concerning rules and their stability. It is a constraint on admissibility (and thus possibility and necessity), that a concept is assigned an extension that is the result of applying *the same rule* as that applied in the determination of the extension of the concept in the actual world. I suggest that there is content instability whenever a concept C is assigned an extension which is *not* the result of applying the same rule as is used to determine the extension of C in the actual world. Given the centrality of the notion of rules to such content stability and assignment, the nature of such rules is integral to the epistemology and metaphysics of the account sketched so far. The conditions that have been proposed so far are consistent with various theories concerning the rules that determine the extension of a concept in the actual world. Peacocke, acknowledges this point, suggesting:

> […] the details and general presuppositions of my own particular approach to concepts are not required by the present treatment of possibility. Whatever may be your favoured theory of how the actual semantic value of a concept is fixed can be used, in combination with the Main Part of the Modal Extension Principle, to formulate a constraint on the admissibility of an assignment. (ibid: 135)

This seems correct. The proposed principles are consistent with various accounts of the rules governing concepts. Peacocke goes on to make the following, further, claim:

> Provided that we can make some sense of the notion of the way the semantic value of a particular concept is fixed in the actual world, the Modal Extension Principle can get off the ground. (ibid)

This also seems accurate with respect to the *metaphysical* role played by MEP. However, getting the *epistemological* project off the ground may be more difficult. For instance, the issue is apparent when Peacocke discusses the variety of ways in which error in judgements of necessity may arise.

> One source of error is mistakes about the nature of the rule which determines the extension of a given concept in the actual world. Someone who is in error about this may make an erroneous modal judgement, even though she has implicit knowledge of the Modal Extension Principle. (ibid: 166)

That is, even a thinker in *full possession* of the modal concepts and that reasons from the MEP may be mistaken in their judgements of necessity if they are mistaken about the rules that constitute the identity of concepts. This is a point of contrast between way that the principles governing concepts and the principles governing objects (and properties

and relations) are formulated.[97] The constitutive principles are listed one by one. In contrast, at the level of concepts, MEP is a single, general principle governing concepts. Although MEP tells us that admissibility requires that a concept c must have its semantic value fixed via the rule which determines the semantic value for c in the actual world, MEP does not tell us what the rule for determining the semantic value of (the specific concept) c is. Similarly, MEP does not tell us which rule has been used to determine the semantic value of c in a particular assignment. This information, however, is integral to knowing whether or not an assignment is admissible. Without this information, a thinker will not know whether the assignment is admissible. This ignorance with also infect the thinker's judgements of necessity and possibility. Without knowledge of whether or not the principles of possibility are satisfied the thinker will have no basis on which to make judgements of necessity and possibility. It is worth stressing again, that this ignorance potentially faces thinkers *in full possession of the modal concepts*.

Furthermore, it is worth noting that this issue arises even if we grant that the subject has *complete* and *explicit* grasp of the principles of possibility. The fact that the principles are implicit does not generate the problem. The issue concerns the nature of the principles. Specifically, a thinker in possession of a complete and explicit grasp of the principles, both MEP and the constitutive principles, still requires knowledge concerning the identity of the rules determining the semantic value of a concept in the actual world. It is not enough to note that the thinker does succeed in determining a semantic value for such Thoughts. In addition to this, the thinker is required to know whether the *same rule is* applied in each case. This knowledge, however, is not contained in the principles of possibility. Possessing such knowledge would constitute an additional and significant epistemic achievement.

[97] The A-symmetry between the epistemology of MEP and the epistemology of the constitutive principles is highlighted by Roca-Royes (2010: 357).

6.6. A Supposition-Based Account: Epistemology and Objectivity

I suggest that there are four prominent points at which norms concerning content stability are involved in an account of modal thought and knowledge. Specifically, I suggest that norms of loss of content are implicated in an account of (i) the fundamental norms governing supposition (ii) the acquisition and manifestation of belief in necessity and (iii) an account of the possession conditions of the modal concepts and (iv) an account of the truth conditions of thoughts containing the modal concepts. I suggest that by appealing to the notion of loss of content it is possible to construct answers to the challenges of Mechanism, Belief and Role. However, in order to provide a response to The Reliability Challenge we need an account of the nature and epistemology of loss of content.

More specifically, for the development of the approach outlined in this chapter, there are two main requirements that need to be met. Firstly, we require an account of the *epistemology* of the constitutive rules governing conceptual content. MEP does not provide this type of knowledge, but it is required if we are to develop the account into a response to the Reliability Challenge. Secondly, the account requires that there are *facts* concerning the constitutive rules that govern conceptual content. If there are no facts of the matter about the rules which individuate concepts, then MEP will be inapplicable. If there are no facts about the rules that individuate concepts, then MEP will place no constraints on the admissibility of assignments or the distribution of truth values among modal statements. As a result, it would fail to play role (iv) indicated above. This point is noted by Peacocke:

> For someone who thinks that we can in fact make no sense of the idea that some particular rule contributes to the determination of the semantic value of some concept in the actual world, the Modal Extension Principle does not formulate any substantial constraint on admissibility, nor, therefore, on possibility either. The apparatus and theses I am developing are entirely dependent upon the applicability of such a notion of a rule. It is no accident

> that those who have been sceptical about the intelligibility of any such notion of a rule have also tended to be sceptics of one stripe or another about the notion of necessity. Rules and necessity sink or swim together.

Consequently, the development of the approach indicated in this chapter is dependent upon the provision of an account of the nature and epistemology of content that satisfies both of the epistemological and factuality requirements. As gestured at in the passage from Peacocke, both of these requirements, however, face considerable sceptical attack. One of the most significant lines of thought throughout twentieth century philosophy has attacked both the epistemology and the objectivity of content. The following chapter turns to the literature stemming from this sceptical attack in order to consider the prospects of developing the account sketched in this chapter.

6.7. Conclusion

In the previous chapter it was suggested that the cognitive role of belief in necessity was regulated by judgements concerning the fundamental norms governing supposition. In particular, by norms concerning *Loss of Content*. In this chapter it has been suggested that issues of content stability play a role in determining the truth conditions of modal statements. It has also been suggested that such norms are implicated in the possession conditions of the modal concepts. It was proposed in this chapter, that the principles indicated by Peacocke may be underlie our development of counterfactual suppositions. I suggest that by taking the principles to be implicated in counterfactual reasoning in this way we being to construct answer to the full set of foundational questions: Mechanism, Belief, Reliability and Role. There is, however, a crucial further type of knowledge required, that cannot be explained by the principles considered so far. In addition to such principles, a thinker is required access to facts concerning the nature of the content that they deploy, not general principles concerning content, but knowledge of specifically which content they are deploying in the development of supposition. It was suggested

that in order for the proposed account of supposition to be built into a response to the Reliability Challenge, then we need an *epistemological* account of conceptual content that also preserves the *factuality* of judgements concerning content. These two requirements, however, have faced heavy and sustained attack over the last century. The following two chapters seek to address the epistemological and factuality requirements in light of this attack.

Chapter 7

The Normativity of Content

I want to consider more closely the fundamental norms taken, in the previous chapter, to (i) govern supposition and (ii) to be directly implicated in a specification of the proper acquisition conditions of belief in necessity. The chapter draws upon the wider literature on the normativity of meaning and content. The primary aim of the chapter is to highlight that the fundamental norms governing supposition face a significant sceptical challenge. The chapter sketches the attack. A specific type of normativity relating to content stability is identified, specifically, a notion of "proper deployment".

7.1. The Reliability Challenge and Scepticism

It has been suggested that we can make progress on a range of foundational issues concerning modal thought and modal knowledge by appealing to a specific type of normativity of content that is taken to govern supposition. More specifically, we can make progress on these issues by appealing to a norms concerning the stability or loss of content. However, in order to build the suppositional-based account into a response to the Reliability Challenge, we need an *epistemology* of the norms of content stability and we need to ensure that there are *facts* concerning content stability. Both of these requirements, however, have faced forceful and sustained sceptical attack. Although, the literature relating to the sceptical attack on the objectivity of content is vast, the work of Quine (1960, 1969) and Kripke (1982) stands out as being particularly influential.[98]

[98] Putnam (1978, 1980, 1981, 1985) also presents a significant contribution to the sceptical attack in extending the Quinean challenge.

Both Quine and Kripke raise challenges that threaten both the epistemology and objectivity of meaning. Furthermore, the attacks threaten the objectivity of meaning in a way that would render talk of meaning, content and rules non-factual. Consequently, the sceptical attack threatens precisely what is required for the development of the supposition-based approach indicated in the previous chapter.

The Kripkean challenge is presented in more detail in sections 7.1.2.-7.1.4. But a rough summary of the Quinean and Kripkean challenges may help in establishing the relationship between the sceptical attack and the epistemology of modality. Given that, the following section provides a rough sketch of the Quinean and Kripkean challenges.

7.1.1. Attacks on the Epistemology and Objectivity of Meaning

Both, Quine (1960, 1969) and Kripke (1982) threaten the epistemology and objectivity of meaning, but they do so from different starting assumptions. Roughly, Quine starts with certain behaviouristic assumptions about meaning and argues to the conclusion that the facts about meaning are unsettled. Kripke, on the other hand, drops the behaviouristic assumptions and still raises a challenge that threatens to undermine the epistemology and objectivity of meaning and content. The two challenges are closely related, but I begin with a brief presentation of the Quinean challenge before moving on to Kripkean Challenge.

The Quinean challenge is best illustrated through the notion of *radical translation*. Radical translation concerns the task of interpreting a language with which we were completely unfamiliar. What's more, it is a constraint on our task that we interpret the language by considering only the observable behaviour and dispositions of the speakers of the language. The Quinean sceptic suggests that faced with this task we would fail to arbitrate between various competing interpretations of the language. Just based upon the observable behaviour and dispositions of the speakers, we would not be able to determine

the meaning of their linguistic expressions. What's more, Quine concludes that it is not merely that in cases of indeterminacy we cannot *know* what linguistic expressions mean, but rather that there *is no fact of the matter* concerning what those expressions mean. For instance, Quine states:

> […] the question whether two expressions are alike or unlike in meaning has no determinate answer, known or unknown, except insofar as the answer is settled in principle by people's speech dispositions, known or unknown. If by these standards there are indeterminate cases so much the worse for the terminology of meaning and likeness of meaning. (Quine: 1969: 29)

Quine's argument is powerful, given its starting assumptions. If we accept the idea that facts about linguistic meaning are settled by facts concerning "speech dispositions" and we accept that the facts about such dispositions leave the facts about linguistic meaning unsettled, then the facts about linguistic meaning (just) are unsettled.

One response to the Quinean challenge, however, is to deny the behaviouristic starting assumptions.[99] It may be objected that those starting assumptions are too stringent. It might be thought, for instance, that the sceptical conclusion is only reached because we have restricted our attention to just those facts concerning observable behaviour and dispositions. Given this, we might attempt to remove the indeterminacy and restore the factuality of meaning discourse by considering a broader range of facts when attempting to establish the meaning of a linguistic expression.

The attack on the objectivity of meaning launched by Kripke on behalf of Wittgenstein is significant because it threatens to undermine the factuality of meaning discourse even when Quine's behaviouristic assumptions are dropped. The sceptic of Kripke's Wittgenstein (KW) attacks the objectivity of meaning by concluding that there are *no available facts, whether behaviouristic or not*, to make true or false sentences such as

[99] See, for example, Carruthers (1986) for some standard objections to behaviourism.

"Jones means addition by '+'". KW's sceptic argues for this conclusion by allowing us unlimited access to any facts we like in our explanation of meaning and content. However, KW argues that even in such ideal conditions, we will still be unable to identify the facts which constitute our meaning one thing rather than another. Even in such ideal conditions we will fail to identify the fact that constitutes Jones's meaning + by '+'. Again, the central thrust of the sceptic's attack is not, merely, epistemic in nature. The conclusion is not merely that we cannot *know* the meanings of linguistic expressions. KW's conclusion is that there are no facts about meaning for us to know, because if there were such facts then we would have been able to identify them given unrestricted access to whichever facts we like. In this chapter, I outline this attack in a little more detail with the aim of elucidating the nature and epistemology of the norms governing content.

Both varieties of scepticism threaten the epistemology and objectivity of meaning in a way that would block the possibility of developing a response to the Reliability Challenge in terms of the supposition-based account indicated in the previous chapter. It is integral to the success of that account that there are facts about meaning and content and that those facts are epistemically accessible. Given that the Kripkean challenge has a greater range of application, the following sections focus on that brand of sceptical attack.

7.1.2. Kripke's Wittgenstein

Much of the recent literature on the normativity of meaning and content stems from the work of Wittgenstein and Kripke; more specifically, Kripke's (1982) *Wittgenstein on Rules and Private Language*. *Wittgenstein on Rules and Private Language* focuses on sections from Wittgenstein's *Philosophical Investigations* and his *Remarks on The foundations of Mathematics* and presents Wittgenstein's thought "as it struck Kripke" (Kripke; 1982, 5).[100] As a result, Kripke's text is usefully distinguished from those that

[100] The most relevant passages from Wittgenstein are those of *Philosophical Investigations* points 138 – 242 and section VI from *Remarks on the Foundations of Mathematics*.

attempt to more closely capture the thought of Wittgenstein himself. Whether or not Kripke captures the thought of the historical Wittgenstein, the issues identified in *Wittgenstein on Rules and Private Language* present a forceful attack on notions of rule following. The significance of this attack is strengthened by the centrality of the notion of rule following to a wide range of important philosophical issues, including notions of linguistic meaning and mental content. The literature stemming from this work is vast and rich with insight. The aim of this chapter is to outline one primary line of attack underlying Kripke's work and to then consider a number of issues that have unfolded from that line of attack.

Kripke's Wittgenstein (KW) presents a sceptical challenge to the epistemology and objectivity of meaning and content. The challenge asks us to identify the facts in virtue of which we mean one thing rather than another. For instance, KW asks us to identify the facts in virtue of which I mean *snow is white* when I utter the sentence "snow is white". However, once this challenge is raised, the sceptic goes on to argue that it cannot be met and any facts that we may point too will not adequately capture the meaning of the sentence. The sceptic argues for this conclusion by process of elimination; undermining potential explanations as they arise.

At the heart of the process of elimination is the idea that meaning is normative. For KW, this normativity amounts to an adequacy condition on theories of meaning. That is, KW highlights that *meaning is normative* and suggests that an adequate account of meaning should capture this normativity.[101] For instance, take the following, influential, passage from Kripke:

[101] Alongside the normative dimension to Kripke's sceptical attack, Kripke also places considerable emphasis on issues of finitism. In particular, the idea that any attempt to meet the sceptical challenge by appealing to dispositions will fail due to the finite nature of human dispositions. For present purposes I want to focus on the normative aspect of the sceptical attack. The first reason for this is that I take it to be the widest ranging and most challenging part of KW's attack. Secondly, because it has a greater bearing on the epistemological issues pursued in this thesis. Thirdly, it seems that Kripke's concern with the finitude of human dispositions is

> Suppose I do mean addition by "+". What is the relation of this supposition to the question of how I will respond to the problem "65+57"? The dispositionalist gives a *descriptive* account of this relation: if "+" meant addition, then I will answer "125". But this is not the proper account of the relation, which is *normative*, not descriptive. The point is *not* that, if I meant addition by "+", I *will* answer "125", but that, if I intend to accord with my past meaning of "+", then I *should* answer "125". (Kripke: 1982: 37)

Here, the sceptic threatens dispositional accounts of meaning by suggesting that they fail to capture the normativity that is essential to meaning.[102] KW argues that it is not enough to explain X's meaning + by "+" to highlight the fact that X *does*, as a matter of fact, provide the answer "125" when asked to solve "65+57", rather than answering with "5". The idea is that, *given the meaning of* "+" it would be *incorrect* to answer with "5". The idea is that it is this feature of meaning - this normativity - that must be captured by an adequate theory of meaning.[103] It is also this normativity that is *not* captured by a dispositional account of meaning, according to the sceptic. Consequently, the sceptic

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ultimately a concern with the inability of human dispositions to account for the normativity of meaning.

[102] The literature on the normativity of meaning and content is vast. The central idea that meaning is normative has been taken up in various forms by a large variety of philosophers, including: Alston, (2002); Bloor (1997), Blackburn (1984), Boghossian, (2008: chapters 1 and 4), Brandom (1994); Buleandra (2008), Gibbard (1994), Ginsborg, (2012); Hacker (2010), Haddock, (2010), Korsgarrd (1996), McDowell (1998), McGinn (1984), Millar (2004), Putnam (1991), Sellars,(1962), Thornton (1998), Wright (2001).

[103] Kripke's interpretation of Wittgenstein has it that meaning is normative. Furthermore, the claim is typically strengthened in some way. For instance, it might be thought that meaning is intrinsically or constitutively or essentially normative. For instance, it may be taken to be essential to meaning (content) that it is normative, or it might be taken to hold as a matter of metaphysical or conceptual necessity that meaning is normative. For now, I leave the specific way of strengthening the claim unspecified. In this chapter I shall speak loosely of "content being essentially normative"; glossing over the potential ways in which the relationship between content and normativity is best characterised.

threatens the prospects of reducing the facts about meaning and content to facts about dispositions.

To be clear on the sceptic's argument it is important to distinguish between two senses in which the answer "125" is correct. Firstly, the answer "125" is correct in the sense that it is an arithmetical fact that 65+57=125. Secondly, the answer "125" is correct in a "metalinguistic"[104] sense, in that "+" does mean +.[105] The sceptic challenges our confidence in answering with "125" by challenging our correctness in the second, metalinguistic sense. For instance, Kripke states:

> This sceptic questions my certainty about my answer, in what I just called the "metalinguistic" sense. Perhaps, he suggests, as I used the term "plus" in the past, the answer I intended for "68+57" should have been "5"! of course the skeptic's suggestion is obviously insane. My initial response to such a suggestion might be that the challenger should go back to school and learn to add. Let the challenger, however, continue. After all, he says, if now so confident that, as I used the symbol "+", my intention was that "68+57" should turn out to denote 125, this cannot be because I explicitly gave myself instructions that 125 is the result of performing the addition in this particular instance. By hypothesis, I did no such thing. But of course the idea is that, in this new instance, I should apply the very same function or rule that I applied so many times in the past. But who is to say what function this was?

[104] Kripke (1982: 8).

[105] Once the initial claim that content is normative is on the table a number of further foundational issues present themselves. For instance, Gluer and Wikforss (2009a, 2009b) highlight one such issue. Even if we accept that the Kripkean challenge highlights an intimate connection between meaning and normativity, it remains open as to the priority of the two notions. Gluer and Wikforss distinguish between "Meaning Engendered Normativity" and "Meaning Determining Normativity". The idea in the case of meaning engendered normativity is that meaning is to be characterised in normative terms. In contrast, in the case of meaning determining normativity, the idea is that meaning (in some sense) gives rise to normativity, although the characterisation of meaning itself may require more than a specification of such norms.

> In the past I gave myself only a finite number of examples instantiating this function. All, we have supposed, involved numbers smaller than 57. So perhaps in the past I used "plus" and "+" to denote a function which I will call "quus" and symbolize by "⊕". It is defined by
>
> $$x \oplus y = x + y, \quad \text{if } x, y < 57$$
> $$= 5 \qquad \text{otherwise}$$
>
> Who is to say that this is not the function I previously meant by "+"?
> (Kripke: 1982: 8-9)

This attack has a far reaching influence. For instance, although Kripke formulates the sceptical challenge in terms of what we meant by "+" in the past. The sceptic is not merely challenging the identity of meaning across time. The challenge is not merely to explain how we succeed in meaning the same thing as we did in the past, the challenge is to explain how we succeed in meaning anything at all. After all, if the sceptic shows that there are no facts about what we mean in the past, then tomorrow there will be no facts about what I mean today.[106] It is also worth clarifying the *extent* of the challenge. The challenge has a profoundly far reaching influence in that it applies equally to both the cases of linguistic meaning and mental content.

A primary point of contrast with the Quinean sceptic is that the challenge raised by KW does not rule out - in advance - explanations that appeal to mental states. For instance, one line of thought might take the relevant meaning constituting facts to be provided by some form of mental image with a distinctive phenomenological character.[107] Perhaps the motivation for such an approach is that states with distinctive qualitative characters offer some explanation for how thinkers could succeed in identifying meaning. Perhaps

[106] Boghossian (1989) highlights this point.
[107] This line of thought need not be limited to visual images. It seems the same motivations and problems will be found for any mental state with a distinctive qualitative character.

the idea is that particular meanings are associated with a particular mental images and given that such images have a distinctive qualitative character it is possible to identify meaning via the distinctive qualitative character of the mental image. This line of thought, however, is swiftly undermined by the observation that cases of meanings are typically not accompanied by such images. It may be that the when I use the term "philosopher" I occasionally have a mental image of a bust of Socrates. Such an image might even be the qualitative state that I most frequently associate with "philosopher", but it does not occur every time I use the word "philosopher". Even if it did occur every time I used the word philosopher, it's hard to see how an image of a bust of one particular philosopher could capture the full meaning of "philosopher".[108] The same goes for just about any linguistic expression and any distinctive qualitative state.

The sceptic, then, threatens both dispositional accounts of meaning and accounts that attempt to reduce meaning to facts concerning our qualitative mental states. The sceptic, however, will threaten a wide and diverse range of constitutive accounts of meaning and content. For instance, the sceptic will also threaten any account that appeals to *instructions* or *interpretations* (or anything similar). As, for any instruction or interpretation that we might appeal to, the sceptic can simply raise the challenge again. The challenge then becomes that of identifying the facts in virtue of which our instruction or interpretation means one thing rather than another. The sceptic, then, threatens to undermine a diverse range of accounts of meaning and content, including: dispositional accounts, accounts that appeal to qualitative mental states, and accounts that appeal to interpretations or instructions. The force of the sceptical attack is not merely that such a diverse range of accounts are threaten, but that no compelling answer to the constitutive questions concerning meaning and content is forthcoming.

[108] It might be thought that mental images are not up to the job of capturing meaning because they do not bring with them (or explain) the normativity that is distinctive of meaning.

7.1.3. A Sceptical Conclusion: Non-Factualism

In response to the sceptical challenge, Kripke attributes to Wittgenstein the following "sceptical conclusion":

> This, then, is the sceptical paradox. When I respond in one way rather than another to such a problem as "68+57", I can have no justification for one response rather than another. [...] [T]here is *no fact* about me that distinguishes between my meaning plus and my meaning quus. Indeed, there is *no fact* about me that distinguishes between my meaning a definite function by "plus" (which determines my responses in new cases) and my meaning nothing at all.
>
> Kripke (1982: 21, my emphasis)

In this passage, two lines of attack can be identified. Firstly, an *epistemological* attack which aims to undermine the thinker's justification for going on one way rather than another. Secondly, there is an attack on the *factuality* of talk about meaning. The idea on this second line of attack is that we do not merely lack justification for going on one way or the other, it is that there are no facts of the matter concerning the way in which we should go on.[109] It is this conclusion that lies at the heart of KW's scepticism.

The sceptical attack, then, in threatening both the epistemology and factuality of rule following, meaning and content, attacks precisely that which is required for to successfully develop the work from the previous chapter into a response to the Reliability Challenge. Consequently, the challenge poses a significant obstacle to the present project

[109] Although the non-factualist reading of KW is the "standard reading", KW's sceptic has been interpreted differently. In particular, one line of interpretation sees KW's sceptic attacking something other than the *factuality* of meaning-discourse. For *factualist* interpretations see, for instance, G. Wilson (1994, 1998, 2006), A. Bryne (1996), D. Davies (1998) J. Haukioja (2002) and M. Kusch (2006).

and some line of response to the challenge is required. The following section indicates KW's sceptical solution and suggests that it is of no use in the present context.

7.1.4. KW's Sceptical *Solution*

There are a number of ways in which we might respond to the sceptical challenge as it has been presented here. The primary challenge arises from the claim that rule following, meaning and content are normative. One approach is to accept the claim that content is normative. That is, to accept that it is an adequacy condition on theories of content that they account for the normativity of content. Once accepted, however, it is a further question as to whether any theory of content meets that condition. A direct response to the sceptic's challenge suggests that the adequacy condition can be met. Whereas a "sceptical" response to the challenge endorses the adequacy condition but rejects the claim that a theory of content can meet that condition. However, the sceptic may still go on to suggest that some explanation of our linguistic practices can be offered. It is a sceptical response of this type that is proposed by KW (ibid: 77 – 78).

In adopting this approach, KW supplements the sceptical conclusion with a corresponding "sceptical solution". The sceptical solution proposes that despite the non-factuality of meaning-talk, we may still be able to provide some explanation of the linguistic practices surrounding attributions of meaning. Although sceptical solutions accept the non-factualist conclusion, we will arrive at different varieties of sceptical solution, depending upon how we go on to explain our linguistic practices.

KW's proposed explanation makes two moves. Firstly, KW suggests that we should replace the notion of truth conditions with assertability conditions. Secondly, we should then go on to provide a description of the assertibility conditions for ascriptions of meaning. Providing such a description will involve relating the speaker and their words

to the linguistic community at large. Kripke outlines the following motivation for these moves:

> If we suppose that facts or truth conditions are of the essence of meaningful assertion, it will follow from the sceptical conclusion that assertions that anyone ever means anything are meaningless. On the other hand, if we apply to these assertions the tests suggested… no such conclusion follows. All that is needed to legitimize assertions that someone means something is that there be roughly specifiable circumstances under which they are legitimately assertible, and that the game of asserting them has a role in our lives. No supposition that "facts correspond" to those assertions is needed.
>
> Kripke (ibid: 77 – 78)

The non-factualist conclusion drawn by KW is not only deeply counterintuitive, but also potentially incoherent.[110] For instance, it is difficult to understand what the sceptic is claiming when they assert that "there are no facts about meaning". Given that there are no facts about meaning, then there are no facts about what the assertion "there are no facts about meaning" means, but if there are no facts about what "there are no facts about meaning" means, then it seems that the assertion cannot be true. If our conclusion is that sentences lack truth conditions, then we will be unable to find a sentence with truth conditions capable of stating our conclusion. Obviously, the sceptic can resort to the claim that the sentence "there are no facts about meaning" has assertability conditions. However, it seems that in doing so, something of the original conclusion is lost. Either way, whether the sceptic can make sense of their conclusion or not, it is of no help in the present context. With respect to the Reliability Challenge, the success of the approach indicated in the previous is dependent upon a factualist and thus non-sceptical account of content. Regardless of any further explanation of our linguistic practices offered by the sceptic.

[110] Boghossian (2002: 158 – 161) discusses this point. As does Wright (1984: 769 – 70).

7.1.5. Scepticism and Modal Thought

The sceptic, then, threatens the type of explanation offered in the previous chapter in a number of ways. Firstly, judgements concerning content-stability were taken to be at the heart of an epistemological account of necessity. However, the sceptic highlights the difficultly in providing an epistemological account of judgments concerning content. Secondly, the sceptic challenges the factuality of judgements concerning content-stability. With the sceptical challenge briefly sketched and with its relationship to the work of the previous two chapters noted, in the following sections I want to get a little clearer on the nature of the normativity of content relevant to the epistemology of modality. I'll return to the sceptical attack once the relevant notion of normativity has been identified.

7.2. The Normativity of Content

I want to turn now to the second main issue of the chapter. The literature surrounding the sceptical challenge not only highlights significant epistemological and constitutive challenges facing theories of content, but that literature also highlights a number of distinct notions of normativity that are closely related to content. I think we can get clearer on the nature of the judgements involved in the acquisition and manifestation of belief in necessity by considering in more detail the notion of normativity essential to content. That is the aim throughout sections 7.2.1. – 7.2.3.

So far the presentation of the sceptic's position has said little about the *type* of normativity that is taken to be essential to meaning and content. In order to get a greater grip on both the sceptical challenge and the notion of content normativity bound up in the norms of supposition, it will be useful to focus more carefully on the specific type of normativity that is essential to content. This question is important because the deployment of content is governed by a significant variety of norms, not all of which are essential to content.

For instance, although the use of a linguistic expression may be subject to norms of morality it does not seem that moral norms are intrinsic or essential to meaning and content. For instance, when asked if I want a job I should probably say "no" when that job involves stealing my neighbour's car. In such a case, my use of "no" is governed by moral norms and in this case is used correctly, however, this moral normativity is not constitutive of the meaning of "no". In fact, it seems that I could have gone against such moral norms governing my deployment of content and answered affirmatively with "yes". In such a case I may have transgressed the norms of morality, but not those governing my deployment of content. It thus seems that the normativity of content can be separated from the norms governing morality. Further it seems that a general moral can be extracted from this case; it would be a mistake to *assume* that just because a given norm governs the deployment of content that it is essential to content.

It is quite clear that moral norms are not the best candidates for those norms that are constitutive of content. The following sections aim to highlight a number of distinct notions of normativity that are far better candidates for the norms governing content. These norms include: truth, warranted assertability and "use in accordance with meaning". Each of these norms have been identified or closely associated with the norms essential to meaning and content. It will be suggested that norms of "use in accordance with content" or (what I shall refer to as) "proper deployment" capture a significant variety of normativity fundamental to the discipline of supposition and to the truth conditions of modal contents.

7.2.1. Truth, Warrant and Proper Deployment

In the literature on rule following the normativity of content is often discussed in terms of *correct application*. This notion has featured prominently in the literature stemming from KW's discussion of meaning. For instance, Blackburn captures one attitude to the normativity of meaning as follows:

> The topic is that there is such a thing as the *correct and incorrect application* of a term, and to say that there is such a thing is no more than to say that there is *truth or falsity*. I shall talk indifferently of there being correctness and incorrectness, of words being rule-governed, and of their obeying principles of application. Whatever this is, it is the fact that distinguishes the production of a term from mere noise, and turns utterance into assertion – into the making of judgement. (Blackburn 1984: 281)

Here the idea is that the distinction between correct and incorrect use amounts to no more than the distinction between truth and falsity. [111] To use a term correctly is just to apply it truly and to use a term incorrectly is just to apply it falsely. For instance, the words composing the following sentence are used correctly as they are used within a sentence that is true:

N: Newcastle is north of London

Whereas the words used in the sentence below are used incorrectly because they are part of sentence that is false.

S: Newcastle is south of London

[111] A central point of contention surrounding Kripke's interpretation of Wittgenstein concerns the precise notion of normativity at the heart of the sceptic's challenge. In particular, a point that has been of recent prominence is whether the Kripke-Wittgenstein considerations show that meaning is normative in a way that generates prescriptions. For instance, it might be thought that meaning and content have *constitutive* norms, but that those constitutive norms do not produce prescriptions for what you should do. The idea on such an approach is that transgressing constitutive norms for an expression would result in the use of that expression with a different, non-standard, meaning. It is this form of constitutive normativity that is most relevant to the present project; regardless of whether constitutive norms generate prescriptions.

In the literature on the normativity of content, however, it is possible to identify a second influential notion of normativity. For instance, in considering KW's sceptical challenge, Boghossian states:

> The normativity of meaning turns out to be… simply a new name for the familiar fact that, regardless of whether one thinks of meaning in truth-theoretic or *assertion-theoretic terms*, meaningful expressions possess conditions of correct use. … [O]n the one construal, correctness consists in true use, on the other in *warranted use*.
>
> (Boghossian 1989: 513, my emphasis)

In this case, meaningful expressions are taken to possess "conditions of correct use" and the notion of correct use is then taken to be characterisable in terms of either truthful use or *warranted use*. The norms of warranted use belong to a class of *epistemic* norms that have been closely associated with the normativity of meaning. There is some motivation, however, to suggest that when we articulate the notion of correct application in terms of truth or warranted assertability we still fail to capture the sense in which meaning is normative. For instance, Millar (2004: 160) claims that there is "a crucial ambiguity in the notion of correct use".[112] On the one hand, there are the notions of truthful and warranted applications of content, but on the other hand there is the notion of correct use in the sense of "using an expression in accordance with its meaning". Millar states:

> With use understood to be application, correct use, naturally, is taken to be true or warranted application. But this is not the only way to characterize correct use. Another way is to say that a use of an expression is correct if and only if it is in accordance with (in keeping with, faithful to) the meaning of the expression. (Millar: 2002: 59)

[112] Whiting (2008) also considers these distinctions concerning the normativity of meaning.

The key idea here is that there is a notion of normativity bound up with meaning and content that concerns "use in accordance with meaning" and which is not equivalent to norms of truthful or warranted application. There are a number of ways of indicating the difference between the norms of "use in accordance with meaning" or "misuse" and the norms of truthful and warranted application. An initial difference can be found in cases where a speaker uses a word correctly (in the sense of in accordance with its meaning), yet the speaker makes a false statement (and so incorrectly applies the word). For instance, when I mistakenly say "the cat is in the kitchen", when, in fact, the cat is up the tree. In such cases, there is a sense in which the word is used properly, but falsely; I use the words *in accordance with their meaning*, yet I say something incorrect in so far as it is incorrectly *applied*. Such cases mark a divide between correct use articulated in terms of *truth* and the distinct notion of normativity that concerns use in accordance with meaning.

Such cases, however, are not sufficient to distinguish between the norms of "use in accordance with content" and the epistemic norm of warranted assertability. For instance, it might be the case that my assertion that "the cat is in the kitchen" warranted given the information available to me. For instance, I may have recently seen the cat in the kitchen. Then, when asked about the location of the cat, I was warranted in asserting "the cat is in the kitchen", despite the cat having escaped from the kitchen and climbing the tree. There is a second point of contrast that suggests a further distinction between the *epistemic* norms of warranted assertability and the notion of use in accordance with meaning.

A second point of contrast is that the notion of use in accordance with meaning covers a wider range of cases than both the norms of truthful or warranted application.[113] Whereas correct application only concerns the application of words in assertion, the notion of use in accordance with meaning covers *any* occasion on which a word is used. For instance, cases of *application* include the following:

[113] This point is acknowledged in a variety of places. For instance, Millar (2002); Buleandra (2008); Glüer and Wikforss (2009), Kiesselbach (2014).

The cat is up the tree

Socrates is human

All squares have four sides

However, the wider notion of "use" and the normativity of "use in accordance with meaning" covers not only this set of examples, but also cases where words are used to ask questions:

What time is it?

Is the train on time?

Do you like rock climbing?

or to give orders:

Do twenty press ups!

Get to work!

Pass the ball

The notion of "use" and "use in accordance with meaning", cover cases where words are used outside of assertion, including cases where words are used to ask questions and give orders. This second notion of normativity can also be found in Kripke and Moore. For instance, Kripke (1982: 30, 37) discusses what a speaker should do, if their use of a term is to be "in accordance with how it was meant" and Moore states:

> From the fact that you are using language correctly, in the sense of "in accordance with an established rule", it by no means follows that what you assert, by this correct use of language, is "correct" in the very different sense in which "this is correct" = "this is true", nor from the fact that you are using language incorrectly that what you assert by this incorrect use is "incorrect"

> in the very different sense in which "that is incorrect" = "that is false". (Moore 1954: 308-309)

It seems that a version of the distinction between correct application and use in accordance with meaning potentially applies in the case of mental content, also. As in the case of linguistic content, one of the key differences between the norms concerning the *correct application* of content and *use in accordance with content* is that the latter covers a wider range of cases and this seems to be true in the case of contents of thought as well as the content of linguistic expressions. For instance, correct *application* of content is primarily a matter of the application of content within *judgement*. For instance, content is *applied* in the following judgements:

The cat is in the kitchen
Socrates is human
All squares have four sides

In contrast, the *use* of content covers any deployment of content. For instance, content may be deployed in the consideration of the following questions:

What time is it?
Should I drive to work?
What is 68+57?

In considering such questions, it seems that the thinker does not *apply* concepts in the sense indicated above. Similarly, content might be deployed by a subject in the form of an order:

Get up!
Go to Work!
Pass the Ball!

Furthermore, content may be deployed when I *intend* to get up early for work, or when I *wish* I had got up early. Or when I *entertain* the thought that I will get up early. Or, and of particular relevance to the current project, when I *suppose* that I had got up early. In each of these cases content is *deployed*, although not clearly *applied*.[114] The significance of this point is noted in Kripke's discussion of Wittgenstein. Kripke writes:

> Of course Wittgenstein does not confine himself to declarative sentences, and hence to assertion and denial, as I have just done. On the contrary, any reader of the earlier parts of Philosophical Investigations will be aware that he is strongly concerned to deny any special primacy to assertion, or to sentences in the indicative mood. (See his early examples "Slab!", "Pillar!", etc) This in itself plays an important role in his repudiation of the classical realist picture. Since the indicative mood is not taken as in any sense primary or basic, it becomes more plausible that the linguistic role even of utterances in the indicative mood that superficially look like assertions need not be ones of "stating facts". (Kripke 1982: 73)

Based upon this, Kripke suggests:

> Thus, if we speak properly, we should not speak of conditions of "assertion", but rather, more generally, of the conditions when a move (a form of linguistic expression) is to be made in the 'language game'. If, however, we allow ourselves to adopt an **oversimplified** terminology more **appropriate to a special range of cases**, we can say that Wittgenstein proposes a picture of

[114] Millar (2002) also highlights *interpretative* uses of content as a further example to illustrate the distinction between the "predicative" sense of application and the more general sense of use. In such cases content is utilised to make sense of what *some else is saying*; rather than to say something yourself. It seems that interesting questions will surround this interpretative use of content. For instance, does the interpretative use of content permit of explanation in terms of the application of mental content.

> language based, not on *truth conditions*, but on *assertability conditions* or *justification conditions* […] (Kripke 1982: 73-74)

I suggest that one motivation for marking the distinction between truth, warranted assertability and "use in accordance with meaning" is to avoid this simplification as it blurs issues that are important in the present context. For convenience and to clearly mark the distinctions just outlined, I shall introduce the following terminology. When a concept is *used is in accordance with its content* I will say that the content is "properly deployed". In contrast, when a concept is deployed, but *not used in accordance with its content*, I will say that it is "improperly deployed". I take "concept deployment" to cover all cases of concept use. In contrast, I'll take the notion of "concept application" to merely cover the "predicative" use of concepts in judgement.

7.2.2. Judgements of Improper Deployment

The sceptic asks us to provide an epistemological and constitutive account of rule following and this extends to linguistic and mental content. In this section I want to make a prior point concerning the distinction between judgements concerning correct application and judgements concerning use in accordance with content. I suggest that judgements concerning "use in accordance with content" or judgements concerning improper deployment are common and underlie much of the discussion of the rule following considerations. For instance, such judgements show up in the consideration of examples of mathematical rule following. For instance, if we take a simple case in which a teacher asks a student to start at 0 and repeatedly add 2. Perhaps, to be (tediously) thorough the teacher also asks for each addition to be written down. So the student writes the following:

$$0 + 2 = 2$$
$$2 + 2 = 4$$

$$4 + 2 = 6$$
$$6 + 2 = 8$$
$$8 + 2 = 10$$
$$10 + 2 = 12$$
$$12 + 2 = 13$$

At this point, the teacher intervenes and corrects the student. The teacher writes:

$$12 + 2 = 14$$

In this case the teacher judges that a mistake has been made and acts in a way to correct it. I suggest that when the teacher intervenes they judge that the final step in the students writing was "not in keeping with the rule *+2"*. I suggest that the teacher (in all likely hood) not only judged that the student wrote something false, but also that the step was not in accordance with the rule *+2*. I suggest that in such cases, we judge that we cannot keep going in the *+2-way* while doing *that* (whatever it is that we take to be out of accordance with the rule). To go on *that way* would not be to go on in the *+2-way*. We make a judgement about how to continue and we judge that things have not been continued in that way. In pure mathematical cases it is easy to run together use in accordance with content and correct application. To get some grip on the difference between judgements of correct application and use in accordance with content it is useful to consider other judgements concerning rule following that are not judgements concerning correct application. For instance, it is possible to construct cases structurally similar to the mathematical case in which the separation between judgements of correct application and judgements of use in accordance with a rule is more apparent.

Take a case where a parent and child are playing with wooden blocks. There's a box full of blocks and the parent takes two out and places them on the ground side by side. The parent then goes back to the box and takes out another two blocks and places them directly on top of the first two blocks. The parent continues by going back to the box and getting

another two blocks and placing them directly on top of the last two blocks. The parent continues in this way until there is a tower two blocks wide and five blocks high. The parent then invites the child to keep going in the same way. The child goes to the box, gets two blocks and puts them on top of the others. The child then goes back to the box and gets one block and places the single block on top of the others. In such a case the parent is likely to find the child's move out of accordance with the way they had been building the tower. The parent's response, however, does not concern correct application. The parent need not judge that the child has made a judgement that is false. Rather, the parent finds the child's action out of line with the way they had been building the tower. In such cases we find that we *cannot continue in the way we were going* by going *that way*. We make a judgement about how things should continue and we judge that they are not continuing in that way.

Another example that distinguishes the two types of normativity can be seen in the use of linguistic expressions that are not applied. For instance, take the case where somebody greets you with "goodbye" and then says "hello" before leaving the room. In this case, it seems natural to judge that the speaker has not used the words "hello" and "goodbye" in accordance with their meaning. However, they have also not *applied* those words or made an assertion. In this case we might judge that speaker cannot continue in *that way* with "goodbye" and continue to mean *goodbye*. Similarly, we might judge that the speaker cannot continue in that way with "hello" and continue to mean *hello*. We make a judgement about how they should continue and we judge that they are not continuing in that way.

The point of the rule following considerations is that we have such reactions to our own deployment of content, but that those reactions are unfounded. For instance, when I continue the mathematical series one way rather than another, I take myself to be going on in the way that I should, given what I mean. The sceptic, however, challenges the legitimacy of this response, suggesting that I have no basis on which to judge that I am going on in the right way rather than the wrong way. At this point, I merely what to

highlight the type of judgement and response with which use in accordance with content and proper deployment are concerned.

7.2.3. The Connections between Truth, Warrant and Proper Deployment

I think there are a number of interesting issues concerning the relationship between correct application, warranted assertability and proper deployment. For instance, a significant anti-realist line of thought attempts to run together the notions of truth and warranted assertability. KW's sceptic wanted to replace notions of truth conditions with talk of assertability. It is, however, also useful to indicate the relationship between proper deployment and truth. It has been stressed, above, that proper deployment and truth come apart in a wide range of cases. Millar, however, provides a specific characterisation of "use in accordance with meaning" that appeals to a specific relationship between these notions. In particular, Millar suggests:

> A use of a term is a misuse if and only if knowledge of the conditions for true application of the term commits one to avoiding such a use. To put it another way: a use is a misuse if it fails to respect the conditions for the true application of the term. (Millar 2002: 61)

Here, Millar's characterisation of misuse is provided in terms of true application. It seems, however, that such a characterisation of the norms of misuse will leave a number of cases unaccounted for. Millar suggests:

> It is open to those who take correct application to be warranted, rather than true, application to adopt a modified version of the position just reached. Use in keeping with meaning would, on the modified theory, be use which respects the relevant conditions for warranted application. I shall not explore further in that direction but will work with the idea that use in keeping with

> meaning is use which respects the relevant conditions for true application. *The theory of meaning can hardly avoid making conditions of true application central.* I assume that any further refinements by consideration of conditions of warranted application would still leave in place a conception of use in keeping with meaning as use respecting conditions for true application. (Millar ibid: 61 - 62, my emphasis)

One reason that this characterisation might be resisted is that it cuts off the possibility of cases of "use in accordance with meaning" for expressions that lack both truth conditions and assertability conditions. For instance, it seems that expressions such as "hello" and "goodbye" could be used in accordance with their meaning, despite lacking truth conditions and warranted assertability conditions. It might also be thought beneficial to resist a characterisation of "use in accordance with meaning" that rules out such positions in advance. I suggest, then, that Millar's view of the relationship between correct application and use in accordance with meaning is one way of trying to capture a more general distinction, but that it should not be taken as an essential component in the initial characterisation of the norms of use in accordance with meaning. I suggest that with the three types of normativity on the table it remains a further question as to the relationship between them.

With this idea in mind, a set of interrelated projects can be identified. These include the projects of identifying the relationship between (i) the norms of truth and (ii) the epistemic norms (for instance, norms of justified or warranted assertability) and (iii) the norms of proper deployment. This includes the consideration of how those norms interact within different attitudes and acts. In the literature, primacy has been placed upon the consideration of the interaction of these norms within assertion. We must be careful, however, not to *assume* the centrality of assertion over other acts of content deployment without good reason. This is particularly important in the context of the current project given that it is the interaction of the acts of *supposition* and judgement that is under consideration.

Additionally, for all that has been said so far, it may be found that the norms interact differently in various local domains. For instance, consider the relationship between the norms of proper deployment, warranted assertability and truth within the domain of humour. It may be that the relationship between those norms in *that* domain differs to the relationship found between those norms in the domain of physics. And it may be that the deployment of content within the area of physics yields a distinct set of normative relations to those found in the domain of morality. The present project is concerned with how the norms of proper deployment interact with truth and warrant in the case of modality, but it not committed to a specific account of the relationship in other local domains.

7.2.4. Proper Deployment and The Epistemology of Modality

I take the notion of proper deployment indicated here to be of relevance to the epistemology of modality in a number of ways. Firstly, I think the norms of improper deployment are of potential significance to conceivability-based or imagination-based accounts of modality (in general) when those notions are broadly construed.[115] More specifically, I suggest that cases of improper deployment are of potential significance to epistemological theories of necessity that appeal to the idea of a subject's inability to make something of the contrary of a proposition. I suggest that this connection is quite general but that its best articulation is found in the discipline of supposition. Specifically, I suggest that norms of proper deployment of content are directly implicated in the fundamental norms governing supposition.

So far a number of distinctions have been made between norms that are candidates for the normativity essential to content. A distinctions can be drawn between norms of truth, warranted assertability and proper deployment. I suggest that the normativity of proper

[115] Broadly construed in the way indicated in chapter 2, section 3.2.1.

deployment (as opposed to warranted assertability or truth) is a species of *loss of content*. As such, and in line with the proposals from the previous two chapters, it is suggested that norms of proper deployment regulate the discipline of supposition. In particular, I suggest that the fundamental norms governing supposition are violated when content is improperly deployed within acts of supposition. The central reason for this is that the normativity of proper deployment concerns the very identity of the content deployed and it is precisely this concern with identity that underlies the notion of loss of content. For instance, consider the following characterisation of the notion of loss of content provided by Divers and Gonzalez-Varela:

> The second norm [loss of content] directs that a supposition cannot properly be *sustained*, unless reasoning from it preserves content: a supposition that P is (found) sustainable only if (it is found that) it really is the proposition *that P* that crops up again in other *P-seeming* places within the reasoning. (Divers and Gonzalez-Varela (2013: 371))

In cases where the content P is improperly deployed in supposition we cannot be said to have sustained the supposition *that P*. Rather, part of the content constitutive of P has been lost. This is the first significant point that I want to note concerning proper deployment and supposition: that improper deployment is a case of loss of content and, as such, norms of proper deployment govern supposition.

Secondly, I take norms of proper deployment to be directly implicated in our response to the Mechanism, Belief and Role challenges in the ways captured by ACQ and MAN. Thirdly, I suggest that constraints on proper deployment are involved in the possession conditions of the modal concepts. It is suggested that it is a necessary condition for full possession of the modal concepts that a thinker attempts to deploy conceptual content properly within complex acts of A and C-supposition. This idea, I suggest, is captured in the Modal Extension Principle:

Modal Extension Principle (MEP)

> An assignment s is admissible only if: for any concept C, the semantic value of C according to s is the result of applying the same rule as is applied in the determination of the actual semantic value of C. (Peacocke 1999: 136)

If we take the MEP to underlie our development of counterfactual supposition, then in the case where a thinker is reasoning in C-supposition and improperly deploys C, the assignment effected by that C-supposition will fail to satisfy MEP. Any case in which a concept C is improperly deployed is a case in which C does not have its semantic value fixed by the rule that determines the semantic value of C in the actual world. I suggest that a thinker attempting to reason in accordance with MEP in supposition will *find* inadmissible those assignments effected by suppositions that are subsequently *found* to be unsustainable due to the improper deployment of conceptual content. Fourthly, I suggest that the norms of proper deployment play a role in determining the truth conditions of the modal concepts. Again, this idea is captured in the Modal Extension Principle.

The problem, however, is that the sceptic threatens the prospects of developing the account into a response to the Reliability Challenge. The primary threat can be characterised as follows. If we are to address the Reliability Challenge, then there had better be some explanation as to why beliefs formed via ACQ tend to produce true beliefs in necessity. One natural line of explanation would be to take the norms governing supposition to be concerned (in some way) with the nature of the content deployed in supposition. Taking this explanatory route, the idea would be that judgements of necessity acquired via ACQ tend to produce true beliefs *because* our judgements concerning loss of content accurately coincide with certain facts concerning the identity of the content deployed in supposition. A specific way of articulating this proposal is via MEP. In accordance with MEP, it has been suggested that issues of content stability constrain the truth conditions assigned to contents composed from the modal concepts because the truth conditions of modal statements are constrained by the identity of the content to which the

modal operators are applied. The sceptical challenge, however, threatens to undermine this explanatory route by removing the possibility of any coincidence of judgement and fact concerning loss of content. And it threatens to undermine the prospects of appealing to MEP as capturing a constraint of the truth conditions of modal statements. The sceptical challenge will block this explanatory route to the extent that the challenge undermines the factuality of statements concerning loss of content. For this reason, the sceptical challenge is particularly pressing for a proponent of ACQ or MEP attempting to address the Reliability Challenge.

Although effort has been made to distinguish the normativity of proper deployment from notions of truth and warranted assertability, the sceptical challenge from the first half of the chapter remains. In the present context of addressing the Reliability Challenge, we are still faced with the task of providing an account of proper deployment that explains its *epistemology* and does not succumb to *non-factualism*. These factors are considered in the following section.

7.2.5. Reductive and Non-Reductive Accounts

The primary thrust of the sceptical attack consisted in the challenge of identifying the facts in virtue of which a speaker means one thing rather than another. Where we can appeal to any facts we like. However, in failing to identify a range of facts which constitute our meaning one thing rather than another (despite having unlimited epistemic access to any range of facts we like), the sceptic concludes that there are no facts about what we mean (because if there were, we would be able to identify them). The challenge can be applied generally, to both linguistic and mental content.

Faced with this challenge, we have three primary lines of response.[116] Firstly, we might continue to look for the species of fact to which constitute our meaning and content. It is not obvious, however, how this explanation would proceed. KW's arguments against reductive accounts of content are far reaching and potentially lethal. Secondly, we could accept the sceptical conclusion and attempt to explain meaning talk in non-factualist terms. However, in the present context, this proposal isn't an option. In order to meet the Reliability Challenge along the lines indicated in the previous chapters, we need MEP to impose a genuine constraint on the distribution of truth values to modal statements. This, however, requires there to be facts concerning rules and their application.

There is, however, a third option. We might accept the sceptical argument as far as it goes, but suggest that it does not go as far as the non-factualism that KW proposes. For instance, it is worth noting that if we accept that the sceptic provides a cogent argument against *reductive* accounts of meaning and content, it would be an additional step to conclude that there are no facts of the matter concerning meaning and content at all. The *primary* thrust of the sceptical attack leaves untouched *non-reductive* accounts of meaning and content. One approach to the problem then, is to take the sceptics point that facts about content cannot be reduced to facts from some other domain, instead the facts concerning meaning and content are sui generis and irreducible.[117]

There is, however, a significant issue with this approach and it is highlighted by KW. Kripke (1982: 51) considers a very similar idea; specifically, the idea that meaning might be a primitive state that cannot be equated with dispositions or qualitative states (such as headaches) and writes:

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[116] Although the primary options, the three options here are not the only ones available. For instance, we might attempt to diffuse the sceptical attack some other way. One route would be to attempt to try and undermine the claim that meaning is normative (in the way required to generate the sceptical argument).

[117] Boghossian (1989: 540 -5 41) and McGinn (1984: 161) highlight the argument against non-reductionism as a weak point in Kripke's sceptical argument.

> Such a move may in a sense be irrefutable, and taken in an appropriate way Wittgenstein may even accept it. (ibid)

However, Kripke goes on to say:

> But it seems desperate: it leaves the nature of the postulated primitive state – the primitive state of meaning addition by "plus" – completely mysterious. It is not supposed to be an introspectible state, yet we are supposedly aware of it with some fair degree of certainty whenever it occurs. For how else can each of us be confident that he does, at present, mean addition by "plus"? (ibid)

The problem with this "desperate" approach, according to Kripke, is that it renders notions of meaning and content mysterious. Specifically, KW thinks that we will have no available explanation of the *epistemology* of meaning and content. We will have no explanation of how we succeed in going on in the right way, rather than the wrong way, and how we succeed in correctly making judgements concerning what we mean.

Consequently, in the present context, although the non-reductive strategy allows us to respect our requirement of factuality, it threatens the epistemological requirement. Kripke is correct in suggesting that the non-reductive account of meaning and content require an attendant account of the distinctive epistemology of meaning and content. However, if an adequate epistemological account can be provided, then the non-reductive strategy offers a potential line of response to KW's sceptic. What is more, it would allow us to meet both the requirements that we are after. It would preserve the factuality of our talk of content and it would fill the epistemological gap in our response to the Reliability Challenge. With this in mind, the next chapter looks at the prospects of a non-reductive response.

7.3. Conclusion

In this chapter the normativity of "use in accordance with content" or "proper deployment" was indicated and distinguished from norms of truth and warranted assertability. It was suggested that norms of proper deployment are essential to conceptual content and that they govern the discipline of supposition. It was suggested that in order to develop the account from the previous chapters into a response to the Reliability Challenge we would need an account of proper deployment that met two requirements. Firstly, we would require an account of the *epistemology* of proper deployment. Secondly, we would require an account of proper deployment that preserved the *factuality* of proper deployment. This chapter has outlined the threat posed by Kripke's Wittgenstein to the prospects of meeting these requirements. However, it was suggested that the factuality of proper deployment could be preserved if we endorse a non-reductive account of content. However, by taking content to be irreducible we face a significant challenge when it comes to meeting the epistemological requirement. The next chapter takes up that epistemological challenge.

Chapter 8

Anti-Realism, Content and Supposition

This chapter focuses upon the epistemology of the constitutive norms governing conceptual content. Although the primary force of Kripke's sceptical argument threatens to undermine reductive accounts of meaning and content, non-reductive accounts remain available. The central challenge to the non-reductive account is to elucidate the epistemology of content. The primary proposal of this chapter is that the questions posed by the Euthyphro Contrast re-emerge at this point, with respect to the norms governing content. In this chapter, Crispin Wright's (1993) Order of Determination Test is used to articulate The Euthyphro Contrast. It is also suggested that Wright's Euthyphronic treatment of self-ascriptions of intentional states provides insight into the nature of the epistemology of the constitutive norms governing content. The final sections of the chapter consider the consequences of a Euthyphonic account of the norms of conceptual content on the discipline of supposition.

8.1. The Sceptical Challenge and Non-Reductivism

A number of lines of thought converge on the idea that norms governing content are integral to an account of the epistemology of modality. In particular, it has been suggested that such norms are fundamental to the discipline of supposition and it is this discipline that provides the best explanation of the *role* of belief in necessity. What is more, judgements concerning the loss of content are plausibly implicated in an account of the mechanisms involved in the acquisition of belief in necessity and in the determination of the application conditions of the modal concepts. In chapter 6 it was

suggested that Peacocke's proposed account of the possession conditions of the modal concepts leaves the epistemology of such judgements unaddressed. In the previous chapter, I attempted to get a little clearer on the nature and epistemology of such judgements. In this chapter, I want to indicate outline one way in which the epistemology of the norms governing conceptual content can be developed.

8.2. The Epistemology of Content and Intention

The epistemology of meaning and content is often taken to possess a number of distinctive features. The features pose and characterise epistemological challenge to theories of meaning and content. Firstly, thinkers are taken to have a privileged first person perspective on the contents of their thought. That is, claims concerning content have a distinctively A-symmetrical epistemology in so far as thinkers are granted with having a particularly secure authority over the content of their own thoughts, but this authority is not shared by others occupying the third person perspective. Not only are the two epistemic perspectives unequal, but in general from the third-person perspective it is an individual's claims concerning the content of their thought that is typically taken to be the best evidence on which to judge what the individual is thinking.

Secondly, as KW's sceptic highlights, an individual typically arrives at judgements concerning what they mean without appeal to reasons. Jones does not need to work through an argument to work out that he means + and not $\oplus$ when he attempted to calculate 5 + 7. Thinkers are capable of making judgements concerning their own meaning and the content of their thought without appeal to inference. Similarly, there is no inner *observation* that can be carried out to determine what is meant on a particular occasion. That is, even though thinkers are typically assumed to have authority over their own meanings, this is not achieved via a process of introspection. There is no inner state of meaning or content there to be observed. Any attendant images are merely coincidental and constitutive of meaning.

It seems, however, that these features are not restricted to the epistemology of meaning and content. Rather, as Wright (The Central Project of Lingusitics) suggests, such epistemological features are present in cases of self-ascriptions of intentional states generally. Wright suggests that self-ascriptions of intention possess the same range of epistemological features. People are typically taken to be authoritive over their own intentions and they successfully state their intentions without reason, inference or observation.

Wright suggests that we can explain this distinctive epistemology in the case of intention by recognising that self-ascriptions of intention (made in best conditions) play a *constitutive* role with respect to the facts concerning intention. That is, when someone believes that they intend to go to the shop, then they do intend to go to the shop and this is the case because their belief plays a role in determining that they have that intention. On this approach, the distinctive epistemology of intention is no longer mysterious but is a consequence of the constitutive role played by our beliefs and judgements concerning our intentions. There is no need for introspection of some qualitative mental state. Similarly, there is no need for the thinker to attempt to arrive at the belief through inference. The thought is that if sense can be made of the epistemology of intention, then sense can be made of the epistemology of content. The aim of this chapter is to reconsider the Euthyphro Contrast as it applies to the norms of proper deployment. The hope is that in doing so we can make sense of the epistemology of proper deployment and in doing so meet the epistemological requirement indicated a few chapters back.

8.3.1. The Euthyphro Contrast and The Order of Determination Test

In chapter 2 it was suggested that the Euthyphro contrast could be made operational by appealing to the two conditions of *apriority* and *non-triviality*. The idea was that a biconditional connection between a range of responses and a range of facts that was both

a priori and non-trivial would be best interpreted Euthyphronically; with the identified responses playing a constitutive role in determining the covariant facts. Characterising the distinction with the apriority and non-triviality conditions was sufficient to generate the problematic transparency results for Modal Anti-Realism. In this chapter, however, I want to appeal to a more rigorous set of conditions used to articulate the Euthyphro Contrast. Specifically, I want to consider Wright's "Order of Determination Test". Wright's test is a more demanding way of making operational the intuitive distinction between the Socratic and Euthyphronic interpretations of cases of covariance between the response of a subject and a range of facts. In addition to the conditions of apriority and non-triviality, Wright proposes *Logical Independence* and *Extremal Conditions*. These conditions and the Order of Determination Test in general, are outlined in the following sections.

8.3.2. The Order of Determination Test

Wright (1989) presents two formulations of the Order of Determination Test. Wright's idea is that the intuitive distinction between the Socratic and Euthyphronic positions may be best articulated in slightly different ways depending upon the specific subject matter at hand. Wright's first formulation of the test can be characterised as follows, in terms of *provisional equations*. Where a provisional equation takes the following form:

$$C \rightarrow (s \text{ judges that } P \leftrightarrow P)$$

Where C is a specification of the conditions in which the subject, s, judges that P and it is true that P. Where the "C-conditions" specify the conditions in which the subject's judgement that P coincides with the truth of P. With a biconditional of this form in place, Wright's first formulation of the order of determination test proceeds as follows:

> A concept F is Euthyphronic if [...] a provisional equation can be written for it meeting the following conditions:
>
> (i) The provisional equation is true a priori [...]
> (ii) The conditions, C, are specified in specific, substantial terms.
> (iii) The satisfaction of the C-conditions is a matter that is independent of the details of F's actual extension.
> (iv) The provisional equation is primitively a priori - it admits of no proof from ulteriori premises concerning F of such a kind as to vindicate the idea that the C-conditions merely enable a subject to keep infallible track of an independently determined extension.
>
> (Wright: 2002: 425)

Wright's proposal is that a concept that meets conditions (i)-(iv) is response-*dependent* and the subject's response in the specified C-conditions is taken to be *extension-determining*. In contrast a concept that *does not* meet conditions (i)-(iv) is deemed to be response-*independent* and the subject's responses in the C-conditions are taken to be *extension-tracking*. In cases where the verdict of response-dependence is returned, the relevant subject matter is taken to have *failed* the Order of Determination Test. Wright's idea seems to be that a subject matter that *fails* the Order of Determination Test is lacking in some of properties required for the strongest varieties of objectivity.

The role of each of the conditions is outlined in more detail below, however, there are a number of initial issues worth clarifying. Firstly, the characterisation just provided speaks of Euthyphronic *concepts*. That is, on this characterisation it is *the concept F* that is deemed to be Euthyphronic if it meets the conditions of the order of the determination test. This terminology is not unmotivated, but it might still be misleading. Presenting the Euthyphronic position in terms of concepts may be useful in so far as it undercuts a variety of implicit realist assumptions that may creep into our characterisation of the Socratic/Euthyphronic distinction. For instance, in presenting the contrast in terms of

concepts, with responses playing an extension-determining or extension-reflecting role for those concepts, we present the distinction without assuming that there is some independent subject matter for the concepts to be about.[118] Such a presentation, however, may be misleading (especially within the present context). For instance, it might be thought that (when presented in terms of concepts) the order of determination test merely tells us something about our means of *thinking* about a given subject matter and not something *about the subject matter itself*. However, the proposal that I wish to examine concerns the *subject matter* of the relevant concepts. For instance, if the concept *RED* faced the order of determination test and passed (i.e. it met the specified conditions) it would reveal something about the red-facts; specifically, that the red-facts are constituted by our best judgements. For present purposes, I take the test to mark a significant distinction between subject matters. However, the notion of subject matter is taken extremely minimally. For instance, it allows for subject matters that are response-independent and it also allows for subject matters that are response-dependent.

Secondly, it is worth stressing that a verdict returned in favour of an extension-*tracking* account of a concept should *not* be read as verdict in favour of a causal epistemology of that concept. To assume that an extension-tracking account of a concept amounts to a causal epistemology for that concept would be to overlook the type of non-standard realism that was identified in chapter 1 and that has been the focus of this thesis since chapter 3.

Thirdly, for the purposes of chapter 2 the Euthyphronic position was set up simply using bi-conditionals. For instance, it was the bi-conditional IC that took centre stage:

$$\text{IC: } \Diamond P \leftrightarrow \text{ICP}$$

[118] This point is highlighted by Gundersen (Doctoral Dissertation: 96 – 97) and the following discussion of "subject matter" follows Gundersen's articulation of the point

This was fine for the purposes of chapter 2 as the central points of that chapter could be made without any need for a more complex construction. There is, however, some motivation for developing the Euthyphronic position with the C-conditions specified outside of the scope of the biconditional. In particular, Wright (1993: 117 – 120) highlights (what he refers to as) *provisional equations* for this purpose. Provisional equations differ from the two constructions just indicated in that the biconditional connecting judgement and the facts of a given domain are nested within the consequent of a conditional. The general form of provisional equations can be captured as follows:

$$C \rightarrow (x \text{ judges that } P \leftrightarrow P)^{119}$$

The primary motivation for the move to provisional equations is provided by cases in which the bringing about of the C-conditions interferes with the truth of P. Going forward I shall stick with provisional equations.[120] With those initial points highlighted, we can outline characteristic conditions of the Order of Determination Test in more detail.

8.3.3. The *Apriority* Condition

The first condition in Wright's order of determination test requires that the provisional equation is a priori. The motivation for the apriority condition is the same as discussed

[119] Again, it is not an essential feature of provisional equations that they concern *judgement*. We could freely replace the response of judgement for some other response and still be operating with a provisional equation.

[120] It is also worth noting that the move to provisional equations means that the Euthyphronic position has little to say when C-conditions are not satisfied. For this reason, it is perhaps more correct to characterise the Euthyphronic interpretation of a provisional equation as one in which best judgements *partially* determine the extension of a concept. That is, in C-conditions the extension of the concept is fixed by the subject's responses, however, Euthyphronism constructed in terms of provisional equations will have nothing to say about the truth-status of P outside of C-conditions.

in chapter 2. In essence, the idea is that in the case that best judgement plays an extension determining role, then there is a relation of conceptual dependence between the extension determining judgements and the extension which is determined. The thought is that such conceptual dependence should be discoverable apriori.[121]

8.3.4. The *Non-Triviality* Condition

Again, this condition was central to the consideration of Euthyphronism in chapter 2. Condition (ii) requires that the C-conditions of the provisional equation be specified substantially, without appeal too trivial "whatever-it-takes" conditions. If C-conditions can be specified trivially with "whatever-it-takes" clauses, then it will be possible to construct a priori provisional equations for (almost) any area of judgement. For instance, the following is an example of a "whatever-it-takes" clause:

> **(Whatever)**
> X judges that P in conditions *conducive* to the formation of true beliefs and x has the *appropriate* cognitive capacities to establish the truth of P.

If we took (Whatever) as a specification of the C-conditions for the following provisional equation, then the provisional equation would be true and apriori.

$$C \rightarrow (x \text{ judges that } P \leftrightarrow P)$$

The problem is that the provisional equation would be true and apriori for just about any P that we care to specify. As a result, allowing such "whatever-it-takes" specifications of C-conditions would render the Order of Determination Test non-operational as it would

[121] Prior to the appeal to the a priority condition, Wright tabled the idea that the proposed connection between best judgement and fact hold necessarily. The necessity requirement for Euthyphronism was dropped due to problem cases generated by *rigidification*. See Wright (1998: 114-117) for a discussion of the reasons for the abandonment of the necessity condition.

no longer play a role in distinguishing between those judgements that play an extension determining role and those judgements that play an extension reflecting role. The non-triviality condition is intended to block "whatever-it-takes" clauses of this type and for this reason.

8.3.5. The Logical Independence Condition

The Logical Independence Condition requires that the C-conditions of the provisional equation be specified without presupposing the actual extension of the concept up for determination. The idea is that if specifying the conditions in which a subject's response plays a role in determining the extension of F requires us to *presuppose* the extension of F, then it cannot have been the subject's response that determined the extension of F – as the extension of F was already taken to be in place. The Euthyphro Contrast articulated in terms of the Order of Determination Test suggests that in order to make the case for an Euthyphronic account of a provisional equation, this condition on logical independence should be respected.

8.3.6. The *Extremal* Condition

Wright's test has a fourth, and final, "extremal" condition. The extremal condition requires that the truth of the provisional equation be left unexplained by anything other than Euthyphronism. The Order of Determination Test is constructed conservatively, with Euthyphronic verdicts returned as a last resort. As a result, Wright's articulation of the Euthyphro Contrast is particularly rigorous. With the distinction articulated in terms of the Apriority, Non-Triviality, Logical Independence and Extremal conditions, there is very little room for a concept to satisfy those conditions and still be interpreted Socratically.

8.3.7. A Test Case

The nature and function of the test can be seen by considering how it operates in specific cases. For instance, the role of the test can be illustrated by considering the case of colour. For instance, in the case of colour we might take the concept *Blue* and the following provisional equation:

(Blue) $C \rightarrow (s \text{ judges that } x \text{ is blue} \leftrightarrow x \text{ is blue})$

In order to work out whether or not the concept *Blue* is Euthyphronic, we need to specify C-conditions for the biconditional (Blue). For the case of colour, Wright (The Central Project: 192 – 193) proposes (roughly) the following set of conditions. The subject must be viewing in good light, with the object in the immediate vicinity and not obscured from view. Furthermore, the object is relatively stationary, and the thinker is paying attention to the relevant surface. Additionally, the subject must have statistically norm visual equipment and be competent with the concept *blue* and the subject must be generally cognitively lucid. Finally, the subject must be free from doubt about the satisfaction of any of these conditions.[122]

In the conditions just specified, (Blue) is true and plausibly a priori. What's more the specification of the C-conditions is not trivialised by a "whatever-it-takes" clause. Also, the C-conditions did not require the extension of the concept *Blue* to be settled in advance of the subject's judgement. Failing the emergence of a better explanation of the provisional equation there is significant pressure to take the judgements about colour to be extension-*determining*.

[122] The final condition is included because a subject that does doubt the satisfaction of any of these conditions might withhold judgement or form an unusual set of beliefs. For instance, if the subject believes that they are under the influence of a hallucinogenic drug they may withhold judgement about the colour the surface.

8.4. Intention and The Order of Determination Test

With the general structure and purpose of The Order of Determination test outlined we can reconsider the claim that self-ascriptions of intentional states are extension-determining. The idea is that when we can identify covariance between a range of beliefs and range of facts The Order of Determination Test provides a way of articulating the distinction between Socratic and Euthyphronic interpretations of that covariance. In the case of colour and shape it was possible to distinguish the Socratic and Euthyphronic readings using the conditions Apriority, Non-triviality, Logical Independence and Extremal. That test seemed to be sufficient for the Euthyphronist to make their case in the case of colour. Wright, however, suggests that The Order of Determination Test may require modification when applied to a range of other cases. For instance, Wright highlights that Euthyphronism offers an attractive solution to the challenges facing epistemological accounts of self-ascriptions of intentional states, however, in this case it is suggested that the test be modified slightly. The modified version of the test can be seen by considering the case of intention.

Wright (2001: 200-206) proposes that self-ascriptions of intention are prime candidates for Euthyphronism. They possess the distinctive first person epistemology, they are authoritive, groundless and transparent. With this in mind, we can construct the following provisional equation for intention:

(INT) $C \rightarrow$ (x judges that he intends to $\phi \leftrightarrow$ x intends to ϕ)

What is more, the provisional equation, (INT), seems to be true and a priori given a straight forward specification of the C-conditions. Wright (1989: 201) suggests that a provisional equation such as (INT) will be true when C-conditions require (i) that x grasps the concepts required for the formation of the judgement concerning his intentions and (ii) x is appropriately attentive to the issue of his intentions and (iii) x is not self-deceived.

When the C-conditions are filled in this way (INT) is true and a priori and the first condition of the test is satisfied.

The second condition of the Order of Determination Test requires C-conditions are specified without triviality. However, if we take (i), (ii) and (iii) as the C-conditions for (INT), then it seems that (INT) will be a priori but trivial. The problem is that the proposed C-conditions for the provisional equation for intention rely upon a "no-self-deception" clause. Without this clause (INT) may be false given those cases where x is self-deceived. However, with the "no-self-deception" condition the C-conditions for (INT) become trivial. As, the requirement that x is not self-deceived, seemingly amounts to the requirement that x's judgement is correct.

One move would be to attempt to unpack the "no-self-deception condition" and provide specific details concerning cases of self-deception. This, however, would be a significant task that has little promise of being completed any time soon. Wright, however, suggests that a second line of response is available in the case of intention. In particular, Wright suggests that:

> The motive for condition (ii) [the Non-Triviality Condition] was not a distaste for triviality as such, [...] but rather for the particular kind of triviality involved in "whatever-it-takes" formulations. Wright (ibid: 201)

What is more, Wright thinks that the no-self-deception condition possesses a distinctive feature. Specifically, the way we naturally think and talk about intentions is to take the no-self-deception condition to be satisfied unless we have reason to think that it is not. In this sense Wright suggests that the no-self-deception condition is *positive presumptive*. Specifically, Wright suggests:

> We have, I think, to depart somewhat from the approach which emerged in the case of colour. But a possible variant of it is suggested by the reflection

> that the troublesome no-self-deception condition is *positive presumptive*. By that I mean that, such is the "grammar" of ascriptions of intention, one is entitled to assume that a subject is *not* materially self-deceived, or unmotivatedly similarly afflicted, unless one possesses determinate evidence to the contrary. Positive presumptiveness ensures that, in all circumstances in which one has no countervailing evidence, one is *a priori justified* in holding that the no-self-deception condition is satisfied, its trivial specification notwithstanding. Wright (ibid: 202)

Given this, the case for Euthyphronism remains as we are now faced with the task of explaining the *a priori credibility* of the provisional equation for intention. Wright's suggestion is that if we are lacking an epistemological explanation in terms of extension-tracking, then there is good reason to take that a priori credibility to be explained in terms of extension-determining responses. Wright suggests, in effect, that the positive presumptive nature of the no-self-deception condition allows us to remove the no-self-deception clause from the C-conditions of the provisional equation for intention. The move to positive presumptive C-conditions highlights a way in which the Euthyphro Contrast can be made operational, despite the triviality of the C-conditions.

Another point of contrast between the application of the Order of Determination Test to the case of colour and its application to intentional states can also be found when we consider the Logical Independence Condition. The point can be highlighted by considering an objection raised by Boghossian against Euthyphronic accounts of mental content:

> In a way, an intuitive difficulty should have been clear from the start. A 'judgement-dependent' conception of a given fact is, by definition, a conception of that fact according to which it is *constituted* by our *judgements*. This idea is clearly appropriate in connection with facts about the *chic* or the *fashionable*; familiar, though less clearly appropriate, in connection with facts

> about colour or sound; and, it would appear, impossible as a conception of facts about mental content. For it cannot in general be true that facts about content are constituted by our judgements about content: facts about content, constituted independently of the judgements, are presupposed by the model itself." Boghossian (1989: 507)

With this point in mind it is crucial that the nature of the dependence between self-ascriptions made in best conditions and the facts with which they covary is taken in the intended way. In particular, it is important to note that the "order" in "order of determination test" does not concern *temporal* order.[123] Facts about what a subject intends are not taken to be fixed *after* judgement concerning intention has been passed. The "order" in "order of determination" concerns a form of *conceptual* dependence. The real issue Boghossian concerns the Logical Independence condition. The initial formulation of the Logical Independence condition states that it is a necessary condition on R's being a response-dependent concept, that the C-conditions referenced in the provisional equation for that concept R not presuppose facts about the extension of R. The idea being, that if the extension of R is determined in conditions C, then those conditions shouldn't require that the extension of R is already determined. In the case of intentional content this condition does not seem to be satisfied. It seems that in order for my judgement to determine my intentional content, my judgement must itself already (conceptually) possess intentional content.

A line of response to this issue is indicated by Wright. Specifically, Wright suggested that the dependence relevant in the case of intentional states is a *holistic* form of dependence. Wright suggests:

> My own instinct is that we do better, in the case of intentional states, to look for a ***holistic* mode of dependence**: roughly, that the details of a subject's intentional states are, a priori, determined in such a way as to maximise

[123] Wright (1993:133 – 134).

> harmony with her self-conception, as manifest in her own elicitable self-ascriptions (or, at least, to minimise inexplicable discard with it).[124]
>
> Wright (1993: 139, fn.47)

The idea, then, seems to be that intentional content is assigned en bloc, but the assignment is conceptually constrained in such a way that a subject's self-ascriptions are maximially respected. More recently, considering a constitutive account of self-ascriptions of intentional states, Wright suggests the following:

> Simply: it can be taken to be a *constitutive principle* of best psychological interpretation that the interpreter must maximally respect the express self-conception of the interpretee […] and must minimize the extent to which unacknowledged mental states are ascribed to the interpretee […], whilst otherwise making the best possible sense of what she says and does.
>
> (Wright: 2012: 406)

This proposal offers an initial line of response to concerns regarding the independence condition. What's more, if we take the Extremal condition to be satisfied, then, I suggest, we have a case for interpreting (INT) euthyphronically. What's more, I suggest that the model of the Order of Determination Test applied in the case of intentional content can be used to shed light upon the nature and epistemology of proper deployment.

8.5.1. Anti-Realism and Improper Deployment

Throughout chapters 5, 6 and 7 I have been working with the idea that conceptual content is governed by a type of normativity that is distinct from norms of truth and warranted assertability. This type of normativity has been referred to in a number of ways; as a norm of *loss of content*, or *use in accordance with content* or *proper deployment*. I have

[124] Here the italics are from Wright's original text but I have added additional emphasis in bold.

suggested that this type of normativity is fundamental to the deployment of conceptual content. However, accounts of the nature and epistemology of this normativity face significant sceptical challenges. Furthermore, the challenges facing a reductive account of this normativity are particularly demanding. On the other hand, non-reductive accounts of this normativity threaten to leave the epistemology of content deployment mysterious. In this section I want to consider the proper deployment of conceptual content in light of the foregoing discussion of the constitutive account of self-ascriptions of intentional states. I consider a number of examples of understanding and rule following to identify cases in which content may be improperly deployed.[125] These cases are used to formulated C-conditions for a provisional equation for proper deployment.

It seems that thinkers can properly deploy content without effort and they can make judgements about its deployment in confidence. For instance, a thinker deploying the concept of addition can do so (in a sense) effortlessly. Although it might take a considerable amount of work to determine the truth of a mathematical proposition, when a thinker is in best conditions and takes themselves to be using a concept *properly*, then they typically are. It seems to be part of our understanding of conceptual understanding that thinkers in possession of a concept can do this.

In the case of conceptual understanding, it seems to be little more than a platitude to suggest that grasping a concept C is a matter of knowing how to deploy C properly. Slightly more specifically, it seems that when a thinker grasps a concept, the thinkers finding themselves to be acting in accordance with the requirements of that concept and the thinkers (genuinely) acting in accordance with the requirements of the concept will tend to coincide. Similarly, it seems that when a thinker grasps a concept, the thinker's finding themselves to be acting out of accordance with the concept will also coincide with

[125] The similarity between "understanding", "meaning" and "intending" was highlighted by Wittgenstein. For instance, Wittgenstein states: "I have been considering the word "intend" because it throws light on the words "understand" and "mean". The grammar of the three words is very similar; for in all three cases the words seem to apply both to what happens at one moment and to what happens in future." Wittgenstein's Lectures on The Foundations of Mathematics.

the thinker's (genuinely) acting out of accordance with the concept. It seems that this is just part of what conceptual understanding is about. I suggest that we cannot interpret a thinker as a grasping a concept C without taking their response of finding themselves to be acting in (out of) accordance with the requirements of C to be largely correct. If there was a substantial discrepancy between a thinker's *finding* themselves to be acting in accordance with the rule constitutive of C and their (genuine) acting in accordance with rule constitutive of C, then there would be significant reason to question whether they grasped C at all. With this in mind, I want to begin by considering a prima facie plausible idea. The idea can be captured in the following provisional equation:

(PD) C → (x deploys c ↔ c is properly deployed)

The idea is that in best conditions a thinker deploys the content c if and only if that content is properly deployed. I think, in fact, that the reason the normativity of use in accordance with meaning or improper deployment has not received greater attention is that (PD) is taken to hold in such a wide range of cases that it is often assumed that there is no distinction to be made at all between *mere* deployment and *proper* deployment. To address this issue and to get clearer on the nature of improper deployment it will be useful to identify potential cases of improper deployment; that is, cases in which a subject deploys c, despite deploying c improperly. This is required if we are to capture the required gap between the deployment of content and the proper deployment of content. Secondly, proper use is normatively constrained and respecting this normativity requires a distinction between the (mere) deployment of P and the proper deployment of P. Failing to capture this distinction (it would seem) would be to fail to capture something integral to the notion of content. An initial task then, is to consider cases in which deployment of content and proper deployment come apart. More specifically, to identify cases in which content is deployed but deployed improperly.

On this front, I think we can identify a number of significant *types* of case in which the norms of proper deployment are (potentially) violated. Firstly, there are instances where

the subject deploying the content occupies *less-than-best-conditions* and makes an occasional slip in their manipulation of content. Secondly, cases of deference may allow for *systematic* improper deployment. Thirdly, there are cases where a subject intends to deploy content improperly (or merely *finds* that content is improperly deployed). I shall take each case in turn.

An initial type of example can be extracted from Millar (2004: 182). Millar asks us to consider the following scenario. Bill hears that Tom is Sally's uncle and infers from this that Tom is the brother of one or other of Sally's parents. The thought here, is that, Bill succeeds in deploying the concept *uncle*, but fails to deploy it properly. Had Bill deployed the concept properly he would not have overlooked the fact that an uncle can be the husband of an aunt. Millar (ibid: 181) suggests that in this case Bill "fails to employ the concept correctly - in keeping with its content - because he takes the information he receives to have an implication it does not have". In Millar's terms, in this case Bill "*treats the concept as if it were other than it is*".

If we suppose that Bill has full possession of the concept *uncle* and we suppose that Bill's error is not systematic, but merely a momentary slip, then it seems natural to explain Bill's error in terms of (something like) a lack of attention, insufficient care when reasoning, fatigue, perhaps his being under the influence of alcohol. It seems that if Bill's error can be explained in these terms, then we have a case for suggesting that Bill did deploy the concept *uncle*, but he deployed it improperly. Similarly, it seems that further potential cases of improper concept deployment may be found in cases where thinkers occupy *less-than-best conditions*. For instance, in cases where the thinker is distracted, tired or under the influence of drugs, we may be able to find a plausible explanation for how the thinker managed to deploy a concept improperly. Such explanations, I suggest, are part of our ordinary understanding of thought and content. Such explanations seem to be part of providing our best interpretation of the thinker's thoughts and actions.

Building on the previous example, we might consider a case where a thinker improperly deploys a concept *systematically*. For instance, take a version of Burge's (1979: 77 and 1986) arthritis patient. In this example, a patient, Fred, applies the concept arthritis to any painful condition of his limbs. Arthritis, however, is a condition that only affects the joints. Despite applying the concept in this way, Fred may deploy his concept *arthritis* when (for instance) in conversation with doctors and using the term "arthritis". Fred might even judge that he is using the word "arthritis" properly and that he is deploying the concept *arthritis* properly. In this case, the thought is that Fred's deployment of the concept *arthritis* cannot be explained in terms of Fred's being distracted, fatigued, drugged etc. One potentially plausible explanation for such cases is that Fred is *deferring* in is deployment of the concept *arthritis*. Perhaps, the case for deference could be made plausible if it is shown that Fred is willing to adjust the way that he deploys the concept arthritis in light of information concerning the way that the rest of his linguistic community (or perhaps just the experts in his community) deploy the concept *arthritis*. I flag the case of deference and systematic improper deployment merely to indicate the possibility of such cases.

The idea flagged in the case of deference is that improper deployment may occur systematically despite the thinker being in otherwise best conditions. This proposal, however, can be contrasted with another plausible feature of judgements of improper deployment. It seems that there is only so much improper deployment that we will tolerate before reinterpreting the thinker as deploying some other concept. In this sense, it is questionable whether there can be case of systematic improper deployment at all. What is more, it seems that if a thinker is taken to possess conceptual content, then the systematic misuse of that content cannot be global, across the entire range of the thinkers grasp and deployment of content. It seems that, if there are cases of systematic improper deployment, then they will be localised to a subject's deployment of a number of specific concepts. It seems that the ascription of conceptual content depends upon the subject, by and large, deploying that content properly. Additionally, it might be thought that rather than deferring in their deployment of a concept, the thinker is instead, deploying a

deferential-concept. In this case, the thinker's improper deployment would be minimal despite the thinker have a significant range of false beliefs.

Ruling out cases where the subject occupies less-than-best conditions or defers in their deployment of a concept, are there any other cases where a thinker improperly deploys a concept? I think a further type of case can be recovered by considering another example where constitutive rules are in place. For instance, it seems that (even) a grand master of chess can violate the norms that are constitutive of the game chess, if they are in less-than-best conditions. For instance, if the grand master is short sighted and is playing in extremely poor lighting he may, in moving one of his pieces, misplace it, by putting it on a square that the piece could not move to without violating the rules regulating the movement of pieces of that type in the game of chess. For instance, the grandmaster's misplacement might amount to moving his rook diagonally. In such a case the grand master will have violated a constitutive rule of chess. Similarly, if the grand master is distracted by someone talking to him he may attempt to move his king as though it were a queen. Again, the grand master would have violated a constitutive rule of chess. It seems, however, that if the grand master were in favourable conditions, then he would not make such errors without (in some sense) "recognising" them as such. For instance, perhaps he intends to mock his opponent by playing badly or he intends to test his student on the rules of the game. In both cases, despite occupying best conditions the grand master may violate the norms governing the game of chess as long as he takes himself to do so.

I think a similar type of example can be recovered from the linguistic case, also. For instance, it seems that a speaker may use a word improperly if they *intend to do so*. For instance, suppose that a student, call her Alice, is French, she grew up in France and has French as her first language. However, suppose that Alice has also been taking English classes and she is now at a point where she can speak fluently in English on a wide range of subjects. However, although Alice can speak fluent English, for one reason or another she decides that she will fail her speaking test. For instance, perhaps, she dislikes her

teacher and thinks that failing the test will reflect badly on her. In the test, she purposefully uses a variety of English words improperly despite having a good grasp of their meaning. For instance, Alice might refer to the table as "the toaster" and the computer as "the toast". Alice's error might extend beyond cases of *application*. For instance, Alice might say "Good bye" when she greets the examiner and "Hello" when she leaves the room. When asked how long she has lived in England Alice might respond with:

(N) Five years dog barking clown

It seems plausible that in such a case (despite being in best conditions and being competent with the relevant linguistic expressions) Alice uses the words improperly and not just in the sense of failing to speak truthfully. To generate this type of case, it might be sufficient that the Alice *intends* to use the words improperly, or simply takes herself to be using the words improperly. In the linguistic case, any speaker that (i) grasps the meaning of the words "five", "years", "dog", "barking" and "clown" and (ii) is free from other limitations, such as distraction, and (iii) uses those words as in (N) will *take* those words to be improperly deployed. It seems that if such deployment were not accompanied by (at least) the finding of the content being deployed to be improperly deployed, then there would be reason to question (i) or (ii). I suggest that it is part of our ordinary understanding of "grasp of meaning" (and its cognates) that, firstly, such cases can occur and, secondly, that without the attendant response of *finding* the words to be used improperly either (i) or (ii) would have to be abandoned. However, if it is granted that the subject is in otherwise best conditions and takes themselves to be using the word "five" to mean *five* and "years" to mean *years* (etc) and also takes the words to be used improperly, then the subject will be using those words improperly. In this case deployment and proper deployment come apart, despite the speaker being in best conditions.

8.5.2. A Provisional Equation for Improper Deployment

We can then, I suggest, construct the following provisional equation for improper deployment:

(IMD) C → (x finds c improperly deployed ↔ c is improperly deployed)[126]

Where C is a specification of best conditions, x is the subject and c is a component of conceptual thought (either a concept or a Thought composed from concepts). I suggest that in the case of the deployment of conceptual content, in otherwise best conditions a violation of the norms constitutive of a concept only occurs alongside acknowledgement that such violation has occurred. I suggest that we can draw from the cases above to formulate a set of C-conditions for IMD.

Here is a first pass at the C-conditions for IMD. To satisfy the C-conditions x may need to be in generally good health, free from the influence of drugs and generally cognitively lucid, in possession of the relevant concepts, focused upon the issue at hand and not deferring in their deployment of the relevant conceptual content. Additionally, x will need to be free from doubt about whether any of these conditions obtain.

A number of initial points about these C-conditions can be made. Firstly, that a detailed investigation of the C-conditions might hope to specify the conditions such as "good health" statistically with reference to statistically normal health (etc). Secondly, although the no-deference condition has been added, it is questionable whether it is required. It may be that rather than deploying a concept deferentially, it might be thought that the subject is perfectly deploying a deferential-concept. Secondly, I suspect that the no-

[126] Primary focus is placed on cases of *improper* deployment (as opposed to cases of *proper* deployment), due to the way that the normativity of content interacts with the presentation of the norms governing ACQ. Specifically, my primary point of focus with ACQ is with the subject's finding a C-type supposition to be unsustainable.

deference condition is positive presumptive, if this is the case then it can be removed from the C-conditions in the same way that the no-self-deception condition was.

A second initial point to note concerns the apparent conflict between IMD and PD. IMD *appears* to sit in direct opposition to any account that takes best conditions to guarantee a connection between deployment and proper deployment. For instance, IMD appears to sit in opposition to the provisional equation with which we started:

(PD) C → (x deploys c ↔ c is properly deployed)[127]

To consider the apparent conflict let's suppose that (i) C-conditions are satisfied. In which case, assuming that (ii) IMD is true and (iii) x finds c improperly deployed, then we know that (iv) c is improperly deployed (by x). What is more, given that the improper deployment of c is sufficient for the (mere) deployment of c, we know that (i)-(iii) ensure that (v) c is deployed (by x). But if we also assume that (PD) is true, then given (i) and (v) we can conclude that (vi) c is properly deployed. But if we combine (iv) and (vi) then we get the conclusion that c is properly deployed and that c is improperly deployed.

The conflict, however, is only superficial and arises from the assumption that the same set of C-conditions are used in both IMD and PD. This, however, isn't the case. In order for PD to be true we would need to add a clause to the C-conditions specifying that *x does not find c to be improperly deployed*. If we add this additional condition, then (iii) would be false when the C-conditions of PD are satisfied. Without (iii) the argument doesn't go through because (iii) is required to get to (iv) (the improper deployment of c). On the

[127] In the literature on conceptual understanding there has been considerable emphasis placed upon cases of *partial* or *incomplete* understanding. It is worth noting that there is a significant point of contrast between the account proposed here and cases of incomplete understanding. Here, it is suggested that when a thinker does have *complete* understanding, then this ensures (together with the occupation of best conditions) that a thinker's judgements of improper deployment are accurate.

other hand, in the case where (iii) is true, then the C-conditions for PD will not be satisfied so we can't get from (v) (the deployment of c) to (vi) (the proper deployment of c).

The point is that both IMD and PD are true apriori, but in different C-conditions. The point around which the C-conditions pivot is x's finding c improperly deployed. It is, I suggest true apriori that a thinker in best conditions deploys c if and only if they deploy c properly, except for those cases where the thinker *finds* that they have deployed c improperly. PD with the additional condition added specifies a constraint on proper deployment. IMD captures a constraint on improper deployment.

With respect to the Order of Determination Test, I suggest that IMD is apriori (or apriori credible, if positive presumptive C-conditions are used). In which case the first condition of the Order of Determination Test is satisfied. The proposed C-conditions of IMD are also free from *whatever-it-takes* clauses. To this extent, I suggest that IMD satisfies the non-triviality condition.

Perhaps, however, it might be objected that the concept possession condition renders IMD trivial. It might be thought that possessing the relevant concepts *just is* to find those concepts improperly deployed when they are improperly deployed. The idea might be that it is an apriori feature of concept possession that it is only attributed to those that can *track* when content is improperly deployed. So (the objection goes), when we attribute *that* ability to a thinker, of course IMD is true. Such an objection, however, presupposes exactly what is at stake and exactly that which the Euthyphronist rejects. Obviously, a Euthyphronist interpretation of IMD endorses the biconditional connection between a thinker's finding c improperly deployed and c's being improperly deployed for a thinker in possession of c (and best conditions generally). This, however, would only amount to the trivialisation of IMD if we presupposed that the Euthyphronic interpretation IMD is false and that the Socratic interpretation is correct. For instance, the concept *Blue* is a good candidate for response-dependence, however, there is also a clause in the C-conditions for the provisional equation for *Blue* stating that the thinker possess the

concept *Blue*. If we presuppose the type of Socratic interpretation of concept possession just indicated, then possessing the concept *Blue* amounts to judging that blue things are blue in best conditions, because possession of the concept *Blue* is only attributed to those that successfully track the blue things. In which case, of course the provisional equation is true apriori. This presupposition, however, is precisely what is at stake. It is precisely what the Euthyphronist does not accept. It is also one reason for the inclusion of the Extremal Condition in the test. The Euthyphronist argues that the provisional equation is apriori and that we *lack* a suitable extension-tracking account of that apriority. If the Euthyphronist successfully shows that we lack an adequate extension determining explanation, then the Euthyphronist has removed the type of explanation that is *presupposed* by those that take the provisional equation to be trivial. To this extent, the Extremal condition plays a significant role in the test.

In the present case, KW's sceptic plays a significant role with respect to the Extremal Condition. An Euthyphronic account of IMD would be threatened by the extremal condition if there were available a better explanation of the a priority (or a priori credibility) of the equation than is provided by an Euthyphronic reading. However, one of the primary motivations for the initial consideration of the Euthyphronic account of the norms of content is provided by sceptical arguments (such as those provided by Kripke's Wittgenstein) that, on the present diagnosis, threaten to undermine Socratic readings of those norms. KW threatens to undermine any Socratic reading of the biconditional connecting best judgement and the norms governing content. To this extent, I take the Extremal Condition to be satisfied.

That is the apriority, non-triviality and extremal conditions considered. That leaves the Independence Condition. It seems that the C-conditions for IMD and PD will involve reference to facts concerning proper deployment. With respect to the non-triviality condition it was suggested that presupposing an extension-tracking view of concept possession would render the equation trivial. The Euthyphronist can avoid the charge of triviality by undermine the extension-tracking view of concept possession. However,

with respect to the Independence Condition, things are slightly different. For instance, it seems that for X to judge that P, where P involves conceptual content, X will be required to have contentful judgements, however, such contentful judgements will already require constitutive norms governing conceptual content to be in place. In which case, those judgements are not independent from the species of fact that they are taken to constitute.

An initial response to this issue is to suggest that facts concerning contentful states and (im)proper deployment are determined holistically. The driving idea behind the Euthypho Contrast, however, is not merely that two sets of facts are interdependent. The idea is that one of them takes priority over the other. Where the relevant type of priority is not temporal or causal, but conceptual. In the following section, I indicate a way in which this notion of priority can be maintained by the Euthyphronist in the case of proper deployment.

8.5.3 A Constitutive Principle

In response to the Quinean variety of sceptical attack there has been a significant amount of attention afforded to the requirements placed upon an adequate interpretation of a speaker. In particular, principles concerning the maximisation of true belief and rationality have taken centre stage. For instance, Quine (1960: 59, 69; 1969: 46) has proposed that best interpretation should avoid interpreting a thinker as having absurd or contradictory beliefs. Donald Davidson (1973: 173) suggests that it is constraint on best interpretation that we "assign truth conditions to alien sentences that make native speakers right when plausibly possible". Lewis (1974: 337) also outlines a number of constraints on best interpretation, including the constraint that when" interpreting a speaker, they should be represented as a rational agent; the beliefs and desires ascribed to him […] should be such as to provide good reasons for his behavior".

The second half of the previous chapter was focused upon the task of distinguishing between a number of candidate norms governing content. It was suggested that norms of *proper deployment* or *use in accordance with content* are *essential* to the deployment of conceptual content. The normativity of proper deployment was taken to concern the deployment of content in accordance with its constitutive rules. It was suggested, that although notions of truth and epistemic norms governing warranted assertability are closely related to the deployment of content, it is the normativity of proper deployment that is fundamental. This, I suggest, extends to the requirements placed upon the interpretation of a subject as a subject engaged in conceptual thought. Specifically, I suggest considerations of content stability, loss of content, use in accordance with content or proper deployment (however, we want to phrase it), is integral and of primary importance to the best interpretation of a thinker as a thinker. With this in mind, I propose the following constraint as a constitutive principle governing the interpretation of a subject as a subject engaged in conceptual thought:

> **Constitutive Principle of Proper Deployment**
>
> It is a *constitutive principle* of best interpretation that interpretation maximally respects the thinker's findings of content to be (im)properly deployed. Furthermore, the interpretation must minimize unacknowledged cases of improper deployment, whilst otherwise making best sense of what the thinker says and does.[128]

I suggest, that to interpret a thinker otherwise would be to fail to interpret the thinker as a subject engaged in conceptual thought. The general idea is that we should not ascribe conceptual content to a thinker if it renders them a hopelessly improper deployer of that conceptual content. Phrased slightly differently, we should not ascribe conceptual content to a thinker if means that they hopelessly misuse it, lose its content or deploy it out of accordance with its meaning. I suggest that in such cases, we would be better off

[128] This principle directly mirrors the principle considered above and proposed by Wright (2012) for the case of self-ascriptions of intentional states.

interpreting the thinker as deploying some other content entirely or deploying no conceptual content at all. What's more, this, I suggest, is what we *do* when we interpret thinkers. Even though we are less-than-best interpreters, we still attempt to interpret thinkers in this way. It seems that there is only so much misuse of a concept we can take until we reinterpret the thinker as meaning something else.

There are a number of points worth noting with respect to this proposal. Firstly, the appeal to constraints on best interpretation are not intended to provide a reductive explanation of content. They are not intended to get us out of the circle of semantic, intentional and normative notions. It is consistent with the constitutive principle outlined that the sceptics attack on reductive accounts of content is successful. The present proposal is that although facts concerning content deployment cannot be reduced, there is a constitutive connection between our finding content (im)properly deployed and its so being.

Secondly, the constitutive principle states that a subject's findings of improper deployment should be "maximised", however, it might be more accurate to say that the thinker's findings should be "optimized". The idea of "maximising" the accuracy of the subject's findings, perhaps, has connotations suggesting that an interpretation should not allow cases of inaccuracy in a subject's findings at all. This, however, is not the intended reading. On the intended reading, the requirement allows interpretations of improper deployment that are unacknowledged in cases where this is required to make best sense of the subject. Similarly, a thinker's judgements concerning proper deployment may go astray in cases where this is required to make best sense of the subject.

In this sense, it is a *constitutive principle* of conceptual understanding that proper deployment should be maximised/optimised. To consider someone as engaged in conceptual thought is to consider them in this way. The principle, however, is not intended to be merely epistemological. It is taken to be a genuine constraint on *content determination*. It is not merely a constraint on how we do, or how we should, or how we

must, interpret someone. It is a constraint on the *determination* of the content deployed by a thinker. This, more substantial, role is required, if we are to make the case for Euthyphronic interpretation of IMD.

Finally, with this constraint in hand we have a way of addressing the Independence Condition from the Order of Determination Test. Although, the facts concerning content are taken to be determined holistically, there is an order of conceptual priority between a thinker's finding content improperly deployed and it's so being. This order of priority is found in the constraints placed upon the best interpretation of a thinker. The constraint requires that content is ascribed in a way that maximises the accuracy of the thinker's findings with respect to (im)proper deployment. This does not take judgements about improper deployment to be causally or temporally prior to the facts concerning improper deployment. However, despite this, I suggest that this constraint captures enough of the *intuitive* idea behind the Euthyphronic reading of IMD.

8.5.4. An Euthyphronic account of Proper Deployment

In light of the foregoing discussion, I suggest that the following provisional equation is best interpreted Euthyphronically:

(IMD) C → (x finds c improperly deployed ↔ c is improperly deployed)

The proposal, then, is that the motivations for an Euthyphronic account of intention, can also be found for our judgements of improper deployment. I suggest that judgements concerning improper deployment inherit the same motivations as those already present in the case of self-ascriptions of intentional states. These cases, I suggest, also hold the privileged first person and non-inferential epistemology of intention.

There is, I suggest, an a priori connection between concept possession and the (im)proper deployment conditions of concepts that ensures that a thinker in possession of a given concept will (in best conditions) find that concept (im)properly deployed if and only if it is so. This I suggest captures something of the idea that "understanding a concept is knowing how to properly deploy it". One approach to this connection, is to suggest that concept possession just is the requirement that a thinker know how to properly deploy the concept, where this achievement is characterised as the *tracking* of some independently constituted rule. This approach, however, renders the epistemology of (im)proper deployment mysterious. We lack an adequate explanation of how such tracking could be achieved. However, by taking judgements of improper deployment to play a constitutive role in conceptually determining cases of improper deployment, the epistemology of such judgements becomes relatively straight forward. The priviledged first person perspective is captured, along with the authority, transparency and groundlessness of judgements of proper deployment. As a result, we have a way of meeting the epistemological requirement needed by the supposition-based account in order for that account to stand any chance of addressing the Reliability Challenge. Additionally, the resulting position preserves the factuality of judgements of improper deployment. This is in contrast to sceptical responses to KW's challenge. Although the facts concerning cases of (im)proper deployment are irreducible, those facts are constrained by our response in best conditions. In the following section I want to consider the Euthyphronic account of proper improper deployment interacts with supposition.

8.6. Euthyphronic Content and Supposition

Supposition is governed by norms concerning loss of content. It has been suggested that such norms also apply in the case of conceptual content more broadly. Specifically, it has been suggested that conceptual content is governed by norms of proper deployment. These norms have been distinguished from norms of truth and warranted assertability and are taken to concern the identity of the conceptual content deployed. It has been

highlighted that the significant sceptical attack on the objectivity of meaning and content applies directly to the normativity of proper deployment, also. It has been highlighted that one diagnosis of the issues raised by the sceptic takes the sceptic to successfully attack reductive notions of conceptual content. On the present diagnosis, however, it is possible to preserve the factuality of judgements of improper deployment and to capture its distinctive epistemology by taking the facts of improper deployment to be conceptually constrained by best interpretation, where best interpretation is governed by constraints to maximise the accuracy of thinker's judgements concerning proper deployment.

I suggest that a response-dependent account of improper deployment has significant impact upon our understanding of the norms governing supposition. In particular (but roughly), if a subject is in best conditions and executes the mechanism indicated by ACQ and finds the content of the supposition improperly deployed, then that content will be improperly deployed. There will be a (genuine) case of loss of content, when the subject finds there to be. For instance, when a thinker knows that 2+2=4 and A-supposes that 2+2=4 and (under that A-supposition) C-supposes ¬2+2=4 and finds the content of the C-supposition improperly deployed, then that content is - genuinely - improperly deployed. The idea is that there is no way of reasoning in accordance with the content of *¬2+2=4* in C-supposition, whilst under the A-supposition that 2+2=4. In such cases, the thinker finds the supposition unsustainable and the supposition is – genuinely - unsustainable.

The epistemology of supposition, then, will inherit a number of the epistemological features of self-ascriptions of improper deployment. The epistemology of supposition will also share a number of similarities with the epistemology of intention. In particular, some of the judgements integral to the development of supposition will be authoritive, transparent and groundless. This, I suggest, captures a number of the features that are typically taken to motivate a conceivability-based account of modal thought.

On the issue of groundless judgement, it is worth clarifying the sense in which the epistemology of self-ascriptions of improper deployment within acts of supposition are non-inferential. It is important to note that although acts of supposition involve inference the response of finding content improperly deployed is not taken to be inferential. It may, however, be a response to the deployment of content within an inferential procedure. For instance, reasoning under the supposition that A&B a thinker, x, might find the concept & improperly deployed when the inference from A&B to C is made. Although the response may (in some sense) *concern* inference, the response is not *derived* from inference and is not warranted or justified through the execution of an inferential procedure.

It was highlighted in chapter 3 that the contents of our conceptions are directly accessible. We do not need to *observe* scenarios and work out who is who and what is what. However, it is one thing to conceive of a scenario and it is another to identify whether or not that scenario is possible. It was also suggested that the notion of conceivability (broadly construed) requires more specific articulation. This, I suggest, is best achieved by appealing to the act of supposition. It was also suggested that links between modal belief and modal fact will only be fit for epistemological work (with respect to the Reliability Challenge) if they appeal to conditions that subjects frequently occupy. I suggest that these issues have been addressed by the proposed connection between belief in necessity and the necessity-facts.

To illustrate the case further using (roughly) the notions proposed by Peacocke, we can say that whether or not an assignment is admissible will depend upon what the assignment is. The idea is that engaging in supposition is to affect a (partial) assignment. However, which assignment is effected is dependent upon our response within supposition. There is a sense in which the facts about assignments are determined by best response. Which assignment has been made, depends upon best response. For instance, whether the concept C, has been assigned a semantic value via R or R1, depends upon the best response. The response of finding there to be loss of content, plays a role in determining

whether or not there has been a loss of content within the supposition and equally whether the affected assignment is admissable.

Given the proposal that content is constrained holistically, it is difficult to consider individual concepts in isolation and it is even more challenging to identify how an individual's concepts relate to the meaning of their linguistic expressions. However, it is worth noting that it is consistent with the present proposal that there are cases of improper deployment "across A/C-supposition". Potential examples of this would amount to aposteriori necessities. Consequently, for the purposes of illustration we might as well take a classic a posteriori necessity. For instance, take a thinker X reasoning with a de jure rigid concept c^1 that has Socrates as its semantic value. It is worth stressing that in this case, the thinker *does have a concept,* c^1. However, if it is settled that this is the concept X is reasoning with, then the constraints on content assignment have already been taken into account. Primary among those constraints is the constraint of content stability. In which case it is already settled that X's reasoning and X's finding c^1 improperly deployed will (by and large) coincide with its improper deployment. This has been taken into account and X is still assigned the *de jure rigid* concept c^1. Similarly, if X is reasoning with a concept C^2 which has as its semantic value the property HUMAN, then it has already been determined that X's reasoning and judgements of loss of content maximally coincide with cases of loss of content for the concept C^2. Given this, when X is reasoning with c^1 and C^2 in supposition and A-supposes $C^2(c^1)$, and subsequently C-supposes the negation of $C^2(c^1)$, X will (likely) find the content of the complex act of supposition $C^2(c^1)/\neg C^2(c^1)$ improperly deployed. It is an integral component of Peacocke's account of the application conditions of the modal concepts that concepts constitutive rules are held fixed. I suggest that the concepts and their constitutive rules deployed by thinkers is constrained in such a way that thinker's judgements concerning loss of content are accurate. It may be that the concept is de jure rigid and the rule can only be individuated by reference to factors beyond the thinker's knowledge, however, it is a constraint on the ascription of the deployment of any given conceptual content (including conceptual content like *that*) that a thinker be assigned content that maximises

the thinker's judgements concerning loss of content. It is due to this, I suggest, that thinkers effortlessly engage in supposition.

Even if we are reasoning about an individual under a mode of presentation C, the content assigned to C will be constrained by our finding there to be loss of content. It is also worth stressing, that the nature of the referent is not constrained by best response. That is just a matter of how things are with the object. But the *content ascribed to our reasoning* is constrained. It is constrained in such a way as to minimise discord with our finding there to be loss of content. For this reason, in most cases, thinker's judgements concerning loss of content and the facts concerning loss of content will coincide. Similarly, a thinker's finding a supposition to be unsustainable and its being unsustainable will coincide when the unsustainability is due to loss of content. The crucial point is that the thinker does not *detect* cases of loss of content. They do not introspect, examine their thoughts, or observe that content has been lost. It is a constitutive relation between the subject's response and the content deployed.

8.7. Conclusion

The sceptical challenge to meaning and content extends right to the heart of our response to the challenges of Mechanism, Belief, Reliability and Role. In this chapter it has been suggested that the Euthyphro contrast re-surfaces within the epistemology of modality in relation to the normativity of content. Initially, in chapter 2 it was considered whether Euthyphronism was applicable to the modal facts themselves. In contrast, in this chapter it has been suggested that Euthyphronism is applicable to the norms of proper deployment that govern supposition and regulated the distribution of truth values to modal statements. It is suggested that the Euthyphronic approach offers a means of addressing the epistemological gap left by the Principle-based account, whilst preserving the factuality of the constitutive norms governing content.

Chapter 9

The Reliability Challenge

This chapter summarises the central argument of the thesis. The positive account is sketched and points of contrast are highlighted between the positive account and some of the primary work considered throughout the thesis. A number of objections are also considered.

9.1. Summary

The aim of the thesis has been to address the challenge of explaining the reliability of belief in necessity. The aim has been to do this by drawing upon a number of foundational and interrelated questions concerning modal thought. The set of questions were the following:

> **Mechanism**: What *mechanism* is deployed in the production of beliefs in necessity?
>
> **Belief**: How does that mechanism produce *beliefs in necessity*?
>
> **Reliability**: How does that mechanism tend to produce beliefs that are *true*?
>
> **Role**: What is the *role* of such beliefs once formed?

I have taken these questions to be at the heart of work on modal thought and modal knowledge. The literature has focused primarily on the Mechanism and Reliability

questions and, naturally, much of the literature has addressed the two questions in tandem; with an answer to one bearing on an answer to the other. The approach of this thesis has been to take the same approach, but with a wider set of foundational concerns. In particular, those concerns captured by the questions Mechanism, Belief, Reliability and Role.

It is difficult to provide a satisfactory classification of recent work in the epistemology of modality. One of the most useful and widely used classifications distinguishes between conceivability-based, counterfactual-based, understanding-based and essence-based accounts of modal knowledge. Although useful, these groupings are neither exclusive nor exhaustive. A central thread running throughout the thesis has been to draw together significant points of overlap between accounts within these categories. Prior to that, however, I suggested that a more general classification of work on the Reliability Challenge could be provided. Specifically, it was highlighted that responses to the Reliability Challenge tend to proceed in a couple of steps. Those steps were captured as follows:

> **Covariance**: X co-varies with Y
> **Order of Dependence**: because X depends upon Y
> **Type of Dependence**: the dependence between X and Y is causal-counterfactual

Where X is a range of beliefs and Y a range of facts. It was suggested that by taking this general form of explanation and crossing the parameters of *order of dependence* and *type of dependence*, it is possible to identify four broad strategies for addressing the Reliability Challenge. Strategies 1 and 2 both featured causal-counterfactual dependence and merely differed on the question of order of dependence. The first two strategies were found to be prima facie inapplicable in the case of necessity due to the causal isolation and counterfactual invariance of modal facts. It was proposed that strategies 1 and 2 be put to one side. This left two remaining strategies. Both strategies 3 and 4 abandoned causal-counterfactual dependence in favour of some other type of dependence, such as logical

or conceptual dependence. Although strategies 3 and 4 both abandoned causal-counterfactual dependence, a line could be drawn between them on the issue of order of dependence. A distinctive feature of Strategy 3 was its endorsement of an anti-realist, or Euthyphronic, order of dependence between belief in necessity and the necessity facts. The Euthyphonic account took the facts to be dependent upon the doxastic states with which they covaried. In contrast, Strategy 4 took there to be a Socratic order of dependence running in the opposite direction. The aim of chapter 2 was to consider the prospects of strategy 3, modal anti-realism.

The conclusion of chapter 2 was that the field of potential explanations could be closed further as Euthyphronic accounts of modality are pinned into a very problematic position with no clear route of escape. The problem arises from the need to articulate the distinction between the Euthyphronic and Socratic positions. The realist and anti-realist *may* agree that there is a biconditinal connection between the thinker and the facts of necessity. For instance, both the realist and anti-realist might accept a biconditional connection between ideal conceivability and possibility such as IC:

$$\text{IC: } \Diamond P \leftrightarrow \text{ICP}$$

However, in order to ensure that there is a genuine – and operational - distinction to be made between the two positions, we require some criteria for determining whether such a biconditional should be interpreted Socratically or Euthyphronically. The standard criteria proposed for this task are the conditions of *apriority* and *non-triviality*. However, as Sherratt highlights, if we attempt to construct a Euthyphronic account along these lines, with an a priori bi-conditional connection between thinker and modality, then the account will generate implausible "transparency" results. What is more, if we attempt to adjust the Euthyphronic account in a way that will prevent the generation of the transparency theses, then we will either (1) have given up on the project of Euthyphonism and resort to a realist account of modality or (2) we will have rendered the distinction between the Euthyphronic and Socratic positions non-operational or (3) we will have given up the

project of providing an epistemological account of *absolute alethic necessity*. As a result of this, it was proposed that modal antirealism should be put to one side and an answer to the Reliability Challenge should be sought amongst the variants of strategy 4, Non-Standard Realism.

In chapter 3, the consideration of Non-Standard Realism began with the idea that modal knowledge is acquired via imagination or conception. Construed broadly, I took this approach to be on the right lines. However, it was highlighted that in order to address the Mechanism and Reliability Challenges the notion of conceivability would require articulation in a way that is informative and non-trivial. The account would need to be informative in the sense that it would elucidate the cognitive mechanisms underlying conception. The account would need to be non-trivial with respect to the reliability of modal belief acquired via conception. For instance, both of these requirements would be unfulfilled by a notion of conceivability that was characterised as *that mechanism that tends to produce true beliefs in possibility*. A second general issue that could be extracted from the consideration of conceivability-based accounts is that approaches of this type are required to meet the competing constraints of accessibility and reliability. In some cases, in attempting to identify a notion of conceivability that is reliably connected to possibility, conceivability-based accounts undermine the seemingly privileged access that subjects possess to the contents of their imagination. Additionally, it was suggested that if we adopt a *narrow* notion of conceivability, then it is not obvious what the role of beliefs acquired via conceiving would play in our cognitive lives more broadly. Finally, with the constitutive link between imagination and modality cut, such approaches face the challenge of *explaining* the connection between imagination and modality. It was suggested that one way in which some of these challenges could be addressed is to appeal to a *broad* notion of conceivability, which is subsequently articulated in terms of *supposition* and its role in counterfactual thought. That was the route taken in chapter 4.

In chapter 4 it was suggested that counterfactual-based accounts of modality are primarily motivated by two lines of thought. Firstly, the idea that the epistemology of modality can

be reduced to the epistemology of counterfactuals as a result of certain logical relations that obtain between counterfactuals and modality. The relevant logical relations were these:

(1) $\Box p \equiv \forall q(q \mathrel{\Box\!\!\rightarrow} p)$.

(2) $\Box p \equiv \neg p \mathrel{\Box\!\!\rightarrow} p$.

(3) $\Box p \equiv \neg p \mathrel{\Box\!\!\rightarrow} \bot$.

A second line of thought proposes that we can provide an account of what belief in necessity consists in by considering the relationship between modal and counterfactual thought. On such approaches, the general idea is that to treat a proposition as necessary is a matter of being prepared to hold that proposition available as a premise when reasoning from any counterfactual supposition whatsoever. These initial motivations offer the promise of responses to the challenges of Belief, Reliability and Role that were not available on narrow notions of conceivability. However, a number of initial issues facing counterfactual-based accounts were highlighted. Firstly, that the logical relations between counterfactuals and necessity provide no guarantee that belief in necessity is acquired via those logical relations or via judgements concerning counterfactuals. Secondly, even if we grant that belief in necessity is acquired via counterfactual thought, a satisfactory response to the Mechanism Challenge would still require an account of the mechanisms underlying counterfactual thought. A number of initial issues facing the development of the counterfactual-based approach with sketched in relations to Williamson's specific development of that approach. It was suggested that the central issue for counterfactual-based accounts to deal with concerns the need to explain the mechanisms involved in the development of counterfactual supposition. In particular, to address the concern that supposition is insufficiently constrained to provide reliable access to the facts of necessity. With this point in mind, in chapter 5 I turned to recent work on the normativity of supposition.

In chapter 5 it was suggested that recent work on the normativity of supposition provides insight into the mechanisms involved the development of supposition. The account can be considered a conceivability-based account, when conceivability is broadly construed. However, by focusing, specifically, upon supposition we make an initial step to providing an account that is informative and non-trivial in the sense indicated in chapter 3. In chapter 5, John Divers and Jose Edgar Gonzalez-Varela's account of the cognitive role of belief in necessity was sketched. The account recognised a distinction between two types of inferential act; the inferential act of A-supposition and the inferential act of C-supposition. The account also outlined an account of the *interaction* of A and C-supposition. Central to the account, however, was the idea that the discipline of supposition and belief in necessity are regulated by *the fundamental norms governing supposition*. Two primary norms were proposed. Firstly, a norm concerning *Explosion*. The idea underlying this norm, is that we cannot be said to have sustained a supposition if every proposition is true under it. The second norm concerned *loss of content*. This norm concerned content stability and is motivated by the idea that we cannot be said to have sustained the supposition *that P*, if in attempting to reason with P, we in fact, reason with some other content (or no content), in place of P. A further norm relating to *loss of attitude* was highlighted as point of future development.

Through the consideration of these factors it is possible to begin to construct answers to the challenges of Mechanism, Belief and Role. In particular, the following conditions from DGV were highlighted as capturing conditions (necessary and sufficient) for the *proper* acquisition and *proper* manifestation of belief in necessity.

(ACQ)

(i) X has properly acquired the belief that P, and

(ii) X finds herself [able to sustain the A-supposition that P, but (iii) is unable to sustain under that A-supposition, the C-supposition that not-P].

(MAN)

(i) X believes that P, and

(ii) for all S, such that X finds herself [(ii) able to A-suppose P and (iii) subsequently to C-suppose that S] X is prepared to add P as a premise in reasoning from the C-supposition that S.

It was suggested that ACQ and MAN go some way to answering the challenges of Belief and Role. With respect to the Belief Challenge, MAN captures what belief in necessity consists in and MAN and ACQ are related in such a way that a (rational) thinker satisfying ACQ will satisfy MAN. What is more, with belief in necessity manifest in the way indicated by MAN, then the role of belief in necessity will consist in the acquisition of a set of propositions that can be freely deployed in counterfactual supposition. On this approach, to the extent that counterfactual thought (in general) is significant, belief in necessity will be significant.

Crucially, however, the project undertaken by Divers and Gonzalez-Varela addressed the challenge of providing a normative account of the cognitive role of belief in necessity and did not speak directly to the question of the reliability of belief in necessity. The endorsement of ACQ and MAN as accurate characterisations of the cognitive role of belief in necessity is consistent with the claim that a thinker meeting those conditions with respect to some proposition, P, may still fall short of attaining knowledge of P's modal status. Similarly, the task of accounting for the proper acquisition conditions of belief in necessity, as Divers and Gonzalez-Varela undertake it, differs slightly from the Mechanism Challenge. Execution of the method captured by ACQ will generate different patterns of belief depending upon the thinker's judgements concerning the norms of explosion and loss of content. The primary conclusion of the chapter was that these norms indicate potentially fruitful areas of epistemological enquiry with respect to the Reliability Challenge.

Chapter 6 focused upon Christopher Peacocke's work on the modal concepts. The primary point of the chapter was that despite Peacocke's project differing significantly

from that undertaken by Divers and Gonzalez-Varela, both accounts converge on the issue of content stability. In chapter 6 it was suggested that a number of aspects of Peacocke's work combine with ACQ and MAN to produce (partial) answers to the Mechanism and Reliability Challenges. Similarly, it was suggested that Peacocke's account of the modal concepts can be integrated with work on supposition in order to address the challenges of Belief and Role. In isolation neither account addresses the range of challenges with which the present project is concerned.

It was indicated that Peacocke aims to provide an account of the truth conditions of modal statements and whilst simultaneously accounting for the possession conditions of the modal concepts. The crucial component of Peacocke's account is that the principles concerning the identity conditions of content play two roles. Firstly, they constitute the possession conditions of the modal concepts. Secondly, they determine the truth conditions of contents that have the modal concepts as constituents. Peacocke's proposal is that this dual role ensures that a thinker in full possession of the modal concepts will acquire belief in necessity that is true. It was suggested that in order to explain the role of belief in necessity, the account of concept possession for the modal concepts must be integrated with an account of supposition. It was also suggested, however, that there was a significant explanatory gap still remaining. In particular, even equipped with a conception along the lines indicated by Peacocke, a thinker is still required to possess additional knowledge concerning the identity of the specific content deployed in supposition. Such knowledge, however, cannot be gained from knowledge of the principles that individuate the modal concepts. It was highlighted that in order to address the Reliability Challenge we would need an epistemological account of our knowledge of the rules that individuate concepts and we would have to ensure that there are facts concerning the rules that individuate concepts. Chapters 7 and 8 turned to the task of meeting these two requirements.

More specifically, Chapter 7 drew upon the wider literature on the normativity of content in order to do three things. Firstly, to try and clarify the significant epistemological and

constitutive challenges that face an account of judgements concerning loss of content. Secondly, to try and connect the relevant type of knowledge to those norms discussed in the literature on the normativity of content. The normativity of "proper deployment" was distinguished from norms of "correct application" that are often articulated in terms of truth and warranted assertability. It was suggested that the norms of *proper deployment* (specifically) are integral to the present project in a number of ways. Firstly, they constitute one type of loss of content and as such are implicated in (i) the fundamental norms governing supposition (ii) they are implicated in an account of the mechanisms involved in the acquisition and manifestation of belief in necessity (iii) they are directly implicated in an account of the possession conditions of the modal concepts and (iv) they are involved in the determination of the application conditions of the modal concepts. The central conclusion of the chapter was that the normativity of proper deployment is at the heart of the challenges of Mechanism, Belief, Reliability and Role. Not only that, but the nature and epistemology of such normativity has come under significant attack. The sceptical challenges threaten the prospects of providing a response to the Reliability Challenge. However, it was suggested that the primary thrust of the sceptical attack threatens *reductive* accounts of content. Non-reductive accounts are left unscathered, however, they do face the significant challenge of accounting for our epistemological access to facts concerning content. This was the challenge, taken up in chapter 8.

In chapter 8, the epistemology of proper deployment was considered in more detail. I suggested that Euthyphronism with respect to judgements of proper deployment provides a line of response to a number of the challenges raised by the sceptic. It was suggested that an Euthyphronic account of best judgement provides an explanation of the priviledged first person perspective, non-inferential, non-observational epistemology of judgement of improper deployment. It was suggested that the following provisional equation is best interpreted Euthyphronically:

(IMD) $C \rightarrow$ (X judges that c is improperly deployed $\leftrightarrow$ c is improperly deployed)

It was proposed that judgements (made in best conditions) concerning improper deployment play a constitutive role in conceptually determining the facts of improper deployment. This claim, however, should not be mistaken for the claim that *constitutive facts* are dependent upon our conception and judgement. It was suggested that because best judgement plays a constitutive role with respect to the facts of (im)proper deployment, that thinkers find suppositions unsustainable in cases where suppositions are – genuinely – unsustainable. That is, it is not merely that thinkers find (in the non-factive sense) supposition to be unsustainable, but that it is – genuinely – unsustainable in those cases. It was suggested that we could make the case for Euthyphronism by taking the facts concerning proper deployment to be determined by best interpretation, with best interpretation constrained by a principle of content stability.

We can now, I suggest, state more clearly how the proposed account addresses the Reliability Challenge. I suggest that we can build from ACQ and reliability condition for belief in necessity. Firstly, in order for ACQ to be converted into a reliability condition, we will need to strengthen the first clause. I suggest that in order for ACQ to present a reliability condition for belief in necessity for a thinker X, not only must X have properly acquired the non-modal belief that P, but X's properly acquired non-modal belief must amount to knowledge. If this is the case and X is in best conditions for judgements of improper deployment, then X's also satisfying the remaining conditions of ACQ will amount to X's having formed a belief in necessity that is true. So, suppressing the conditions concerning favourable conditions, ACQ can be matched with a corresponding Reliability Condition.

(REL)

(i) X knows that P, and

(ii) X finds herself [able to sustain the A-supposition that P, but (iii) is unable to sustain under that A-supposition, the C-supposition that not-P].

This reliability condition will apply in those cases where the content deployed by X is conceptual and X's finding the supposition unsustainable is due to X finding the concept content P improperly deployed. In these cases, I suggest that the execution of (REL) will tend to produce beliefs in necessity that are true. This proposed explanation is taken to provide a response to the Reliability Challenge in line with Non-Standard Realism. It required connection between the thinker's belief and the modal facts is forged through the constitutive connection between a thinkers finding content improper deployed and it's so being.

9.2. Improper Deployment Across A and C-Supposition

The proposed account concerns the norms governing *conceptual* content. More specifically, the account concerns cases in which a thinker is reasoning in supposition with *conceptual* content. However, it is interesting to note, that it is consistent with the proposed account that in some cases, conceptual content is lost *across* A and C-supposition. That is, although the content is found properly deployed in the A-supposition that P, that content is found improperly deployed in the C-supposition that ¬P (whilst under the A-supposition that P). In such cases, the thinker, X, engaged in the complex act of A and C-supposition will find the A-supposition sustainable and the C-supposition unsustainable. What is more, if X has properly acquired the (non-modal) belief that P, then X will have fulfilled the conditions specified by ACQ for the proper acquisition of belief in P's necessity. What is more, if X's properly acquired (non-modal) belief that P, amounts to knowledge, then X will satisfy REL. In which case, X will have a reliably acquired belief in P's necessity.

For examples of this type of phenomena, we would have to look to cases in which A-supposing influenced the sustainability of C-suppositions. The classic examples of this are the a posteriori necessities. Although, the present account is not committed to a specific account of the rules individuating specific concepts, for the purposes of

illustration we can consider how A and C-supposition might break down by considering one of our test cases. For instance, it may be that the conceptual content *human* is improperly deployed in the case where a thinker A-supposes that x is human and under that A-supposition, C-supposes that x is not human. In this case, the supposition with the conceptual content *x is human* cannot be sustained within the complex suppositional act indicated by ACQ. Similarly, a second potential example may be provided by the supposition that Water is H2O. If a thinker is best interpreted as reasoning in supposition with concepts of water and H2O, then the thinker may also be interpreted as finding the conceptual content *Water is H2O*, improperly deployed across A and C-supposition. That is, the thinker might be best interpreted as deploying the conceptual content *water is H2O* in A-supposition and finding it properly deployed and to be reasoning under that A-supposition with the C-supposition that ¬*Water is H2O* and finding it improperly deployed. Likewise, for the concepts of *Hesperus* and *Phosphorus*. These, I suggest, are examples intended to illustrate the general phenomena of conceptual content lost across A and C-supposition. However, it remains to be seen which conceptual content is best ascribed to thinkers in particular cases.

It should also be noted that the conceptual content assigned to a thinker, X, may be externally individuated, in the sense that explaining the rule that fixes the semantic value of the concept assigned to X, may require reference to X's environment and the objects that make up X's world. However, the present proposal is that even in those cases where the rule that individuates the concept deployed by X, is externally individuated, ascriptions of conceptual content to X must optimise X's proper deployment of content and the accuracy of X's judgements concerning loss of content. I suggest that if this condition is not respected then we will have failed to interpret X as a thinker deploying conceptual content. It is a requirement on interpreting X as rational and in possession of true beliefs that X, first, (largely) deploy content properly.

It should also be noted that the intended content is conceptual and not linguistic. It is another issue entirely to consider the semantic content of the *linguistic* expressions

"human", "water", "H2O" etc. And it is an entirely different issue to consider the constraints placed upon the ascription of linguistic content. However, it should also be noted that the best interpretation of a thinker's deployment of conceptual content, cannot be made in isolation from the fact that the thinker is also a language user. In the ascription of conceptual content to a thinker we will have to ascribe contentful states that also make sense of the thinker as a language user.

9.3. Objections and Replies

In this section, I want to consider a number of potential objections to the account outlined and to offer an initial response. I want to begin exactly where the previous section left off.

One objection to the present proposal might suggest that the notion of proper deployment simply takes concepts to have encoded within them constitutive truths concerning their referents. And as a result, we are still left with the task of explaining how a thinker comes to know those constitutive truths and to possess the relevant concepts. In response to this objection, I suggest that the present proposal does not encode constitutive truths into the proper deployment conditions of concepts, but, I suggest, the best ascription of *conceptual* content to a thinker will optimise proper deployment and minimize the cases in which content is improperly deployed and not acknowledged. As a result, given that facts concerning best interpretation are taken to play a determining role in fixing the conceptual content deployed by a thinker, it will turn out that thinkers are, by and large, correct in their judgements concerning loss of conceptual content.

I think the idea can be isolated by considering how it compares to two extreme positions. The extreme positions are as follows. Firstly, there is the case where a thinker has a conception of something that is (what we might call) accurate and complete. For instance, perhaps I could have an accurate and complete conception of Socrates if I knew all there

is to know about him. Perhaps, I could know everything true of him in the actual world and everything that would be true of him if things were different. Or perhaps it is enough for an accurate and complete conception that this knowledge is conditional. For instance, I might have an accurate and complete conception of Socrates if I know exactly which properties Socrates has in each of the ways the actual world might be and I know all the properties that Socrates would have if things were different from how they actually are. Secondly, at the other extreme, there is the case where a thinker has beliefs without any conception at all. In this case, there is no mediating conception or mode of presentation. But, there are also those cases in between. The cases where a thinker reasons with conceptual content but does not have a conception of the referent that is accurate and complete in the sense just outlined. For instance, I'm pretty sure that I've got a concept of Barrack Obama and a concept of water. But I'm also pretty sure that my idea of Barrack Obama probably isn't that accurate and it's probably not complete. Same goes for my concept of water. I see water all the time, I drink it a lot and I keep reading that it's H2O, but there's plenty I don't know about it. I'm not sure I know exactly what is true of water in all worlds, considered as actual and counterfactual. But if that's the case then my conceptual understanding can't be equated with the first extreme. But, the observation that my understanding is less than accurate and complete doesn't seem to be sufficient to equate my understanding to the second extreme, either. It would be a jump to conclude that I have no concept of Obama or water at all. But then we have the problem of explaining how we can have a concept of something despite having a conception that is inaccurate or incomplete. One move might be to suggest that factors external to me come into play to ensure that my concept of Obama is a concept of Obama, despite my ignorance of the properties of Obama. Perhaps, for instance, I succeed in having Obama or water concepts, because my conceptual understanding stands in a certain causal-historical relation to my environment and specifically to Obama and water.[129] That might

[129] I'm using the example of causal-historical reference fixing rules because they are classic examples of *externally individuated* rules. The example, however, could be replaced with whichever reference fixing rules you like. Ultimately, I take the reference fixing rules assigned to a thinker to be constrained by best interpretation, which in turn, I take to be constrained by the principle of content stability.

be a start, but we are still left with the task of identifying which causal-historical relation connects the concepts I deploy and things which my concepts are of. Should I be ascribed the concept that has its reference determined by causal relation R1 or causal relation R2? The issue isn't just restricted to causal reference fixing rules; it will apply to whichever rules we want to appeal to.

The present proposal is that constraints on content stability and proper deployment play a role at precisely this point. Whichever type of reference fixing rule is appealed to; it will be constrained in such a way that (by and large) there is loss of content when loss of content is found. The rule might mention causal-historical chains or not, but the selection of one rule rather than another will be constrained by judgements concerning loss of content. So, for instance, when I suppose that *Socrates is Human* with a de jure rigid concept of Socrates, the selection of *that rule* as the rule deployed in my supposition that Socrates is human, is constrained by my findings with respect to loss of content. Whatever the rule that individuates the concept C, whether or not I deploy a concept with *that rule* depends in part on my judgements concerning loss of content. It depends in the sense that that the concern for content stability plays a constitutive role in the determination of the content I deploy. The reason for this is the order of dependence between judgements concerning content deployment and the content deployed. On this approach, the thinker, for instance, does not grasp a concept *Socrates* by discovering how to apply that concept in all scenarios considered actual and counterfactual. It might be, for instance, that the rule for determining the semantic value of C involves a reference to the objects in the thinker's environment. If this is the rule for C, then that was determined holistically and constrained by concerns of content stability. The only way to make sense of a thinker using *that rule* is to ascribe content that respects the thinker's judgement concerning loss of content. There may be cases when judgements concerning loss of content and cases of loss of content come apart, but overall, such judgements will be accurate. It is worth noting again, however, that the present proposal is not committed to a specific interpretation of the content deployed in a given case.

I now want to move on to consider a number of further, potential, objections. Firstly, it might be objected that the notion of A-supposition plays just the same role as Williamson's background knowledge and Chalmers's non-modal knowledge. I suggest that the present account differs in a number of significant ways from such accounts. Firstly, it is significant that the present proposal is developed in terms of *supposition* and, specifically, in terms of two types of suppositional act. It is important that the two types of supposition are identified and taken to interact. It is through the interaction of A and C-supposition that we find propositions that are a posteriori necessary *under A-supposition*. If we appealed only to background knowledge and not to the two types of supposition, this contrast would not be captured. Secondly, it is it significant that the account appeal to *supposition*, because it is the norms fundamental to supposition that play the primary explanatory role. Additionally, the appeal to supposition (as opposed to a narrow notion of conceivability) plays an important role in explaining the subsequent role of belief in necessity.

Thirdly, it might be thought that the present proposal In chapter 2, it was suggested that one issue facing conceivability-based explanations concerned the accessibility or transparency of the conceivability-facts. The present proposal is a variety of conceivability-based account (broadly construed), as such it is important that the account does not succumb to this objection. I suggest that it does not. Specifically, I suggest that the constitutive nature of content stability respects the intuitive idea we have a privileged type of access to the content of imagination.

Thirdly, it might be objected that the proposed account succumbs to one of the initial objections levelled against conceivability-based accounts. It was also objected that certain developments of the conceivability-based approach lead to varieties of global anti-realist about truth. It was objected that we should treat with suspicion clams suggesting that truth is constrained by our capacity to conceive, if those claims arise merely from our attempt to construct a conceivability-based account of modal thought. To remove this suspicion, we would need independent motivation for the claim that truth is constrained

in this way. It might be objected that the present proposal is also committed to a significant variety of anti-realism, in that it takes the facts concerning proper deployment to be constrained by our response in best conditions. There are two differences, I suggest, between this proposal and the variety of anti-realism outlined in chapter 3. Firstly, I take the constitutive account of proper deployment to be motivated independently from the epistemology of modality. It is motivated by the significant sceptical attacks on the objectivity of meaning. In fact, the constitutive account is intended to *preserve* a degree of objectivity in light of the sceptic's attack, by providing an alternative to the sceptic's non-factualism. Secondly, there is a significant difference between the two proposals in that one concerns truth and the other proper deployment. The facts about whether a subject deploys his concepts properly is one thing, the facts about whether the subject applies them correctly is another. Undoubtedly, interesting connections between the norms of proper deployment and truth obtain and further work into their relations may return interesting results, but the two are distinctly different.

It is also important to note the difference between the present account and that of the modal anti-realist from chapter 2. Both accounts appeal to the type of biconditional connection appealed to by proponents of response-dependence. The primary difference between the two accounts is located at the point at which those biconditionals are deployed. The modal anti-realist deploys their biconditional to connect facts about (for instance) our mental capacities and modality (itself). In this sense, the modal anti-realist of chapter 2, deploys their biconditional *directly* to modality. In the contrast, the present proposal does not endorse a biconditional connection to modality. Rather, the present proposal, takes the application conditions of the modal concepts to be fixed by the identity conditions of the content to which they are applied. The present proposal suggests that there is a constitutive relationship between a subject's response and the content that they deploy. It is suggested that because the subject's response plays this role (in constraining the content deployed by the subject), the response plays a role in constraining the subject's judgements in necessity in such a way that (in certain conditions) they tend to be true. This, however, is not to interpret *modality* Euthyphronically. It is to interpret

the facts concerning the (proper) deployment of content Euthyphronically. As such, the present proposal is an example of strategy 4: Non-Standard Realism when we consider the Reliability Challenge for the domain of necessity. However, the account is an example of strategy 3, when the Reliability Challenge is applied to the domain of conceptual content.

The present proposal will not appeal to those that have a thirst for a reductive account of content. Such an opponent might object that the non-reductive strategy leaves the nature of content mysterious. Obviously, if by "mysterious" we mean "without reductive explanation", then, yes, the facts about content are "mysterious". This, however, is not to say that significant work cannot be done. For instance, working out the constitutive properties of best interpretation need not require a reductive account of content.[130] Similarly, there remains significant explanatory work to be done in articulating the nature and relationship between the propositional attitudes.[131] For instance, as Boghossian (2002: 187) suggests the non-reductive strategy is consistent with explanations of "what makes a given mental state a *belief*, as opposed to a wish or a desire – and with the claim that the grasping of certain mental contents depends on the grasping of others, and so with theories of the *compositional structure* of mental content." The nature of content remains to be elucidated in ways such as these, and the mystery surrounding content will diminish to the extent that our response to such explanatory challenges is successful. What is more, it is an explanatory project of precisely this type that has been undertaken throughout this thesis with respect to modal thought.

Conclusion

It has been argued that a range of foundational challenges concerning modal thought and modal knowledge can best be addressed by considering the nature of supposition. It has

[130] A very similar point is highlighted by Boghossian (2002: 187).
[131] Again, Boghossian (ibid) raises this point.

been suggested that by appealing to an account of the fundamental norms governing supposition we can begin to construct answers to the questions of Mechanism, Belief, Reliability and Role. Specifically, it has been suggested that supposition is governed by norms of proper deployment. The same type of normativity has been taken to constrain the truth conditions of modal statements. Throughout the thesis an antirealist, or Euthyphronic, account of this normativity of content has been outlined. It has been suggested that the Euthyphronic account of content allows us to make progress on range of challenges concerning modal thought and modal knowledge.

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