

Für M. und S.

Jens Kipper
A Two-Dimensionalist Guide to Conceptual Analysis

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Preface

I became interested in conceptual analysis when working on philosophical thought experiments. Even then it seemed to me that the most plausible account of our judgments about hypothetical cases construes them as resting on ordinary conceptual competence. Accordingly, the method of thought-experimentation can be understood as a type of conceptual analysis. If this is an adequate picture, then conceptual analysis is much more common in philosophical practice than is often acknowledged. Unfortunately, the viability of conceptual analysis as a philosophical method is highly disputed. It is therefore all the more important to set it on a solid theoretical footing.

In my view, the most serious challenge to conceptual analysis has been presented by externalism about linguistic meaning and mental content. Externalists offer an attractive account of meaning which, however, seems to leave little epistemic significance to our conceptual competence. In light of this, it is natural to think that conceptual analysis needs to be underpinned by an equally comprehensive and at least equally appealing semantic theory. This is where epistemic two-dimensionalism comes into the picture. Two-dimensionalism undergirds the method of conceptual analysis in general and our ability to evaluate hypothetical scenarios in particular. At the same time, I believe that it presents an independently plausible account of meaning which incorporates many of the advantages of externalist theories, while avoiding its main disadvantages. The main aims of this book are as follows: Firstly, to defend my interpretation of two-dimensionalism on independent grounds; secondly, to spell out the goals, the promises, but also the limitations of conceptual analysis on the basis of this semantic framework.

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Introduction

Conceptual analysis has served as a pivotal method through much of the history of philosophy. And even though it does not always go under that label, conceptual analysis is still ubiquitous in today's philosophical practice. This is despite the fact that a number of serious objections against its tenability have been raised. Among these, externalist theories about meaning and mental content presumably present the most influential challenge to the method's utility. Some of the insights of these theories seem highly compelling, yet they are hard to square with the idea that we can gain philosophical knowledge through an analysis of our concepts.

Epistemic two-dimensionalism, which is a comparatively recent modal theory of meaning, incorporates many of the insights of externalist accounts, while leaving room for an important component of meaning which is a priori accessible to a speaker. Importantly, epistemic two-dimensionalism thereby promises to restore an intimate connection between apriority and metaphysical modality. The two-dimensionalist framework thus seems ideally suited to provide the theoretical basis for conceptual analysis. Indeed, its two most prominent proponents, David Chalmers and Frank Jackson, have argued that conceptual analysis is a viable philosophical method. Jackson even claims that it is indispensable in any kind of inquiry, in philosophy and elsewhere.

It is fair to say, however, that epistemic two-dimensionalism has met with widespread skepticism. In my view, the skepticism is unjustified. Two-dimensionalism does provide a potent account of meaning and content, in terms of a unifying framework which can account for a great number of phenomena associated with language and thought. I take it that there are some reasons why this framework has nevertheless not been more widely accepted: Since two-dimensionalism is still a young theory, its motivation and many of its implications are not yet well understood. There are still a large number of open questions to be answered, both concerning the positive reasons to endorse epistemic two-dimensionalism and how various objections against it can be dealt with.

As part of a defense of the method of conceptual analysis, it will thus be all the more important to shed light on these issues. Accordingly, the first part of this book will mainly turn on the two-dimensionalist framework. More specifically, my goals in the first part (chapters 1–4) will be the following ones: I will expound the theory and elaborate its implications, examine whether it is able to incorporate externalist insights and how it can deal with objections, and I will develop and investigate a number of arguments in favor of epistemic two-dimensionalism.

The development and establishment of two-dimensionalism will serve as a crucial step in my defense of conceptual analysis. However, the utility of conceptual analysis as a philosophical method depends on many other factors apart from the adequacy of the two-dimensionalist framework. In the second part of the book (chapters 5–7), I will identify these factors in order to investigate the use of conceptual analysis in philosophical practice.

Let me outline the structure of the book in more detail:

In **chapter 1**, I will briefly clarify what I mean by conceptual analysis. I will assume a fairly liberal understanding, according to which for a judgment to be the result of conceptual analysis, it only needs to be based on conceptual competence to a significant extent. I will, however, maintain that conceptual analysis must at least involve an important step which is a priori.

Subsequently, I will give a rough sketch of some of the most important semantic theories of the twentieth (and late nineteenth) century, namely those of Gottlob Frege, Rudolf Carnap, Hilary Putnam and Saul Kripke. This brief historical excursion will help to elucidate the foundations and the motivations of the two-dimensionalist framework, since two-dimensionalism stands in the tradition of the theories of Frege and Carnap while being designed to accommodate Kripke's and Putnam's critique of theories of this (internalist) kind.

In **chapter 2**, I will outline the two-dimensionalist framework in detail. I will first spell out its basic ideas and its key theses and explain the way it

incorporates externalist insights into an account which may nevertheless be called Fregean in nature. Its crucial claim is that linguistic expressions are associated with two intensions, called the primary and the secondary intension. The former of these intensions is a priori accessible to a speaker; the worlds involved in it reflect epistemic possibilities. An expression's secondary intension corresponds to intensions as they are conceived by Kripke and can thus be dependent on features which are external to a speaker. According to two-dimensionalism, secondary intensions are (roughly speaking) determined by the corresponding primary intensions relative to a given context.

The thesis that expressions are associated with primary intensions is intimately linked with the scrutability thesis, which states that the grasp of a primary intension is supposed to bestow the ability to determine the extension of an expression with respect to any hypothetical scenario a priori.

Another key component of two-dimensionalism is the thesis of metaphysical plenitude, according to which there is a metaphysical possibility corresponding to every epistemic possibility. In the second part of chapter 2, I will therefore deal with the question of how this thesis can be squared with the existence of a posteriori necessities. I will do so on the basis of a discussion of Kripke's own two models of modal illusions. This approach draws its justification from the fact that Kripke's models are in fact very close in spirit to the two-dimensionalist account of the necessary a posteriori. I will identify the similarities as well as the differences between the accounts. I will then discuss the plausibility of Kripke's theory. With respect to those aspects of Kripke's models which have attracted criticism, I will discuss how the two-dimensionalist account can deal with the objections. It will transpire that there are no decisive objections to Kripke's models and that the two-dimensionalist framework can account for the standard cases of a posteriori necessities.

Finally, I will recapitulate what the two-dimensionalist account does show and what is yet to be shown in a defense of conceptual analysis.

In chapters 3 and 4, I will defend the central two-dimensionalist claim that linguistic expressions are associated with primary intensions. The main aim of **chapter 3** will be to argue that natural kind terms and proper names have primary intensions. This is particularly important since these kinds of terms have been the main target of the so-called epistemic arguments which are supposed to show that such terms have no a priori associations whatsoever. In the first part of chapter 3, I will concern myself with natural kind terms. Drawing on proposals due to David Lewis, Chalmers and Jackson, I will construe the natural kind term ‘water’ as a theoretical role term, such that it is a priori that water satisfies the associated theoretical role at least approximately.

In the second part of the chapter, I will try to give a rough approximation of the primary intensions of proper names. Following a proposal of Peter Strawson, Chalmers and Jackson hold that the primary intensions of names should be understood deferentially, i.e. as involving a reference to the use of the term by other speakers. I will argue that this understanding is plausible from a theoretical perspective and in line with our judgments about Kripke’s hypothetical cases. Moreover, the deferential understanding of specific kinds of concepts also promises to solve the more general problem of incomplete understanding raised by Putnam and Tyler Burge. It will transpire, however, that the notion of deference thereby raises some other problems. I will argue that in order to account for these problems, primary intensions should first and foremost be taken to represent the content of the thought expressed by an utterance. The final part of the chapter will be dedicated to a discussion of the consequences of this proposal to conceptual analysis.

In **chapter 4**, I will present and discuss a couple of theses due to Jackson about the role of primary intensions in communication and in determining the subject matter. In the first part of the chapter, I will discuss Jackson’s semantic thesis that primary intensions define the subject and his epistemic thesis that they are what enables us to determine our subject matter, beginning with the latter thesis. Since Jackson’s case for the epistemic

thesis which rests on rather general considerations seems hard to evaluate, I will develop my own version of the thesis. That thesis is based on the idea that we are able to pass judgments in response to empirical evidence. I will argue from there to the conclusion that primary intensions are required to account for this ability. The starting point of the argument will be a comparably weak version of the scrutability thesis which only concerns judgments about the actual world and which does not require apriority.

After this, I will argue that Jackson's semantic thesis that primary intensions define the subject does not apply to all cases and is therefore false. It will nevertheless turn out that even in such cases, constancy of the subject matter can only be ensured by taking the associated primary intensions into account.

The second part of chapter 4 will illuminate the role of primary intensions in communication. Again, Jackson puts forth a semantic and an epistemic thesis: According to the semantic thesis, primary intensions are what is communicated in a conversation; the epistemic thesis states that communication would not be possible without primary intensions. I will discuss and eventually reject the semantic thesis. Since this result threatens the epistemic thesis as well, I will propose two alternative ways to defend the epistemic thesis of communication. The first of these proposals provides an argument for a restricted version of the semantic thesis. The second proposal is independent of the semantic thesis: It aims to show that primary intensions facilitate communication even in those cases where they are not transmitted from speaker to hearer.

Chapter 5 will deal with questions surrounding epistemically transparent and epistemically opaque terms: According to the analyses of natural kind terms and proper names which I propose in chapter 3, those terms are epistemically opaque, i.e. their secondary intensions and thus their metaphysical application conditions are not a priori accessible. The existence of such terms is potentially problematic for the prospects of conceptual analysis. In the first part of the chapter, I will discuss attempts which have been made to undermine the utility of conceptual analysis by

arguing that epistemic opacity is ubiquitous. I will reject these arguments on the basis of the fact that considerations about the function of many terms and about our judgments about hypothetical scenarios involving them are best explained by the assumption that these terms are epistemically transparent.

In the second part of chapter 5, I will consider in more detail how one can determine whether an expression is opaque or transparent. It will eventually emerge that transparency and opacity can be determined a priori.

The final part of the chapter will be devoted to the potential use of opaque expressions for conceptual analysis. I will show that while such expressions are undeniably less suitable for some classical analytic projects, an analysis of their primary intensions can nevertheless be valuable for a number of purposes.

Chapter 6 will be dedicated to various issues concerning scrutability. In the first part of the chapter, I will first have a closer look at the thesis and its relation to the central two-dimensionalist claim that linguistic expressions are associated with primary intensions. After that, I will discuss a number of arguments for and against a (comparably weak) version of the scrutability thesis. I will argue that the considerations in favor of the thesis weigh more heavily than those against it. Since the version of the scrutability thesis defended here is precisely the one which served as the premise in my argument for primary intensions from our ability to determine the subject matter in chapter 4, these considerations will complete my case for primary intensions.

In the second part of chapter 6, I will discuss the idealizations involved in the scrutability thesis and more generally how the truth of the thesis bears on the feasibility of conceptual analysis in philosophical practice. I will argue that while there is undoubtedly a huge gap between the idealized rationality invoked in the scrutability thesis and those conditions present in our epistemic reality, there are no reasons to be particularly skeptical towards our ability to make the judgments in question in a reliable way.

In **chapter 7**, I will identify potential goals of conceptual analysis and the preconditions for realizing these goals. In the first part of the chapter, I will outline a couple of applications of conceptual analysis, such as its use (i) in a search for a category's essence or just for either necessary or sufficient conditions for membership in the category, (ii) in reductive explanations and (iii) in the Canberra Plan. It will transpire that although conceptual analysis can be fruitful even in the absence of explicit analyses, such analyses are nevertheless important for many of the purposes discussed. For this reason, I will then investigate the prospects of the project of providing such explicit analyses. I will argue that there are no principled reasons to think that adequate definitions cannot be had. At the same time, I will identify a number of practical obstacles to that project, which may explain why successful definitions are so hard to come by. In conclusion, I will give some reasons to consider the project of providing definitions as a progressing one.

1 What is conceptual analysis and what is the problem?

1.1 What is conceptual analysis?

In this book, I am going to defend the viability of conceptual analysis as a philosophical method. It therefore seems appropriate to say at least a few words about what I mean by conceptual analysis.

It is usually held that conceptual analysis is essentially a priori. I am actually not sure whether one should consider apriority as a nonnegotiable requirement. However, since it fits well into the general project with which I will be concerned, I can accept the apriority condition for the purposes of this work.¹ Aside from that, I am inclined to adopt a very liberal understanding of conceptual analysis: Any way of trying to gain knowledge – philosophical or otherwise – which is based on conceptual competence will qualify. I do not even want to claim that conceptual analysis has to be based on conceptual competence alone. If it turns out that a priori faculties such as logic and imagination are not part of our conceptual competence, yet are necessary to make the relevant judgments as well, then this will be fine for my purposes.

Let me also note that the term ‘conceptual analysis’ is used in two slightly different senses. Sometimes, it is used to denote the process of analyzing concepts, while at other times it stands for what is typically considered as the intended result of such an analysis – an explicit analysis or a definition. Throughout this work, I will use the term ‘conceptual analysis’ to denote the process, whether it aims at an explicit analysis or not. When I am

¹ There are two things to note here, though. Firstly, I will argue in chapter 3 that conceptual analysis can be understood as a two-step process, the second of which is empirical. Accordingly, the apriority requirement only applies to the first step, which is essentially based on conceptual competence. Furthermore, conceptual analysis can be a part of a broader epistemic enterprise which delivers empirical results (cf. also my discussion of the aims of conceptual analysis in chapter 7).

concerned with the second sense of ‘conceptual analysis’, I will speak of ‘(explicit) analyses’ or ‘definitions’.

In my view, the importance of conceptual analysis in philosophical practice is illustrated particularly vividly by philosophers’ reliance on thought experiments. Very often, philosophical theories are tested by checking whether they are compatible with our judgments about hypothetical cases. Far from everyone believes, however, that the evaluation of hypothetical scenarios should be understood as a way of doing conceptual analysis. A number of alternative proposals have been made: Hilary Kornblith argues that we evaluate hypothetical scenarios on the basis of empirical background information (cf. Kornblith 1998). According to Timothy Williamson, judgments about hypothetical cases rely on our everyday ability to evaluate subjunctive conditionals (cf. Williamson 2007, ch. 6). He agrees with Kornblith that these judgments are empirically justified.² On the other side, there are philosophers who think that the judgments in question are a priori and who invoke a special faculty, such as rational intuition,³ to account for this fact (cf. e.g. BonJour 1998). An extreme example of a view of this sort is held by James Brown (cf. Brown 1991).⁴ He believes that thought experiments provide us a privileged Platonic insight into the laws of nature.

In my view, none of these explanations of our (purported) ability to evaluate hypothetical scenarios is entirely satisfactory. It does not seem very well motivated, for instance, to assume that we have a special faculty

² I am simplifying Williamson’s position a bit here. He believes that some judgments about subjunctive conditionals, and thus about metaphysical modality, are a priori, and many are neither clearly a priori nor clearly a posteriori (cf. Williamson 2007, 165ff.). I think it is fair to say, however, that on his view judgments about hypothetical scenarios in the context of thought experiments will generally come out as a posteriori.

³ I should note that it is possible to hold that rational intuitions can ultimately be traced back to conceptual competence (cf. Bealer 1998). I do not have any quarrels with such a view.

⁴ Notice, however, that he is mainly concerned with thought experiments in science.

which allows us to evaluate hypothetical cases,⁵ in particular since the origin and the underlying mechanisms of this alleged faculty are quite mysterious. Kornblith and Williamson, on the other hand, do not postulate any special faculty, which should be considered a definite advantage. However, their accounts are highly revisionary with respect to their understanding of philosophical method which has traditionally been construed as being, at least to a significant extent, *a priori*. Furthermore, I have serious doubts that our judgments about hypothetical cases, in particular about remote ones, could be considered reliable if they depended on empirical information. And finally, as I will argue in some detail in chapter 5, our modal judgments exhibit a number of characteristics which are best explained by regarding them as *a priori*.

Construing our evaluations of hypothetical scenarios as instances of conceptual analysis is therefore much more in line with these characteristics, and also with a traditional understanding of philosophical method. Apart from that, one need not thereby postulate the existence of a special *a priori* faculty, either: On this understanding, our judgments about hypothetical cases are just based on an everyday ability, namely on conceptual competence. In the following chapters, I will say a lot more about the connection between conceptual competence and our ability to evaluate hypothetical scenarios. I will also outline in detail how such an approach, within a two-dimensionalist theory of meaning, promises to provide a general account of modal epistemology according to which we have *a priori* access to the domain of metaphysical possibilities.

Unfortunately, though, the reputation of the method of conceptual analysis is far from pristine. Many people think that there are decisive objections to its viability. These objections can be divided into two categories, corresponding to the two senses associated with the term ‘conceptual analysis’ outlined above:

⁵ On BonJour’s view, rational intuition is required to pass all other kinds of judgments as well, however.

Firstly, there are objections to the idea that it is possible to define philosophically relevant terms. But as I mentioned above, conceptual analysis need not aim at definitions. Therefore, this kind of objection is not suitable for a general attack on the tenability of conceptual analysis as a philosophical method. I will nevertheless address the objection that definitions are not to be had in chapter 7.

Secondly, there are objections to the idea that conceptual competence can be a source of substantial philosophical knowledge. These kinds of objections obviously pose a more principled threat to conceptual analysis as a philosophical method. The arguments of Saul Kripke and Hilary Putnam (cf. Kripke 1980; Putnam 1962, 1970, 1975) which are of this kind are surely among the most influential reasons for philosophers to reject conceptual analysis. The gist of these arguments is that the meaning of an expression and also, more specifically, its reference are not determined by a subject's internal states. Consequently, Kripke and Putnam claim that we do not have a priori access to the application conditions of the expressions we use. Their alternative semantic account emphasizes the importance of environmental and social features for the determination of meaning.⁶

One of the aims of this book is to show that the externalists' attack on conceptual analysis can be parried. What I think their considerations do show, however, is that conceptual analysis needs to be placed on a solid footing in the form of a systematic semantic theory. Such a theory should *inter alia* give an account of conceptual competence and of the way in which reference and meaning are determined which is at least compatible with the view that conceptual analysis is a way to gain philosophical insights. And as I hope to demonstrate in the following chapters, two-dimensionalism is ideally suited to satisfy these desiderata.

In the following, I will give a brief sketch of Gottlob Frege's and Rudolf Carnap's theories of meaning, and of Kripke's and Putnam's own accounts and their critique of internalist theories. The description of Frege's and Carnap's theories will provide the background for Kripke's and Putnam's

⁶ For the relevance of the latter kind of features cf. also Burge 1979.

accounts, which will be outlined subsequently, in the following two respects: It will present the kind of internalist theories which they oppose and it will motivate the intimate connection between meaning and modality on which their arguments rely. Taken together, these considerations will in turn provide the background for the two-dimensionalist account of meaning which I will outline in the following chapter.

1.2 From Frege to Kripke and Putnam

Frege introduces the notion of sense (*Sinn*) in the context of a problem concerning identity statements (in *Über Sinn und Bedeutung*, cf. Frege 1892/2002): What does an identity statement of the form ‘ $a = b$ ’, such as ‘the morning star = the evening star’ express? If the terms involved were only associated with a referent (*Bedeutung*), then such a statement, if correct, could only say that a certain object (in this case, the planet Venus) is identical with itself. But this is hardly plausible since statements of the form ‘ $a = b$ ’, unlike those of the form ‘ $a = a$ ’, are typically of cognitive value. After all, a competent speaker need not know that the morning star and the evening star are actually the same celestial body. From this, Frege concludes that a term does not only have a referent, but also a sense. A sense is primarily a mode of presentation of the corresponding referent. By introducing senses, Frege can explain why it can be a genuine insight to realize that morning star and evening star are identical. Figuratively speaking, when one looks at the same object twice but from different perspectives, one need not be aware that one saw the same object on both occasions (even if one’s memory works perfectly).

Frege holds that while there can be many senses corresponding to one referent, i.e. many ways the referent is presented to us, to each sense there corresponds only one referent. Furthermore, Frege argues that whole sentences also have a sense and a referent: The sense of a declarative sentence is a thought; its referent is a truth-value. But how are senses to be individuated? From Frege’s considerations about identity statements mentioned above, one can derive a criterion of identity for singular as well

as for general terms: Two terms ‘a’ and ‘b’ have the same sense if ‘a = b’ is cognitively insignificant. Consequently, identity conditions for the senses of sentences, i.e. thoughts, are also tied to cognitive significance. In *Über Sinn und Bedeutung*, Frege says that the two sentences ‘The morning star is a body illuminated by the sun’ and ‘The evening star is a body illuminated by the sun’ do not express the same thought since someone could simultaneously consider one of these sentences to be true and the other one to be false (cf. Frege 1892/2002, 29). Let me thus say that when two sentences S_1 and S_2 express the same thought, then one cannot believe S_1 without believing S_2 and vice versa.⁷ At least in one sense, these identity conditions for senses can be considered as criteria for synonymy.

Carnap replaces Frege’s distinction between sense and referent by the notions of intension and extension (cf. Carnap 1947/1956).⁸ On Carnap’s account, the intension of a singular term is what he called an ‘individual concept’; its extension is the denoted object. The intension of a predicative expression (a ‘predicator’) is a property, its extension the class of entities having that property. Finally, the intension of a sentence is a proposition and its extension a truth-value. Up to here, this account does not seem to differ too much from Frege’s. The crucial feature of Carnap’s semantics is that he ties intension to modality, in the following way: First he defines L-truth (logical truth) as truth in all state-descriptions. Since a state-description is supposed to be an explication of the notion of a possible world, an L-truth is a necessary truth. Then Carnap states that two expressions have the same intension if and only if they are L-equivalent, i.e. if and only if they have the same extension with respect to all possible worlds. Today, an intension is usually defined as a function from possible

⁷ In my wording, this is a necessary condition for the identity of thoughts. I think it can be argued that it is also a sufficient condition, but this will not matter for my purposes here.

⁸ Carnap actually believed that Frege’s notion of referent faces more serious problems than his notion of sense (cf. Carnap 1947/1956, 129ff.). Nevertheless, for my purposes it will be more important to highlight the differences between senses and intensions.

worlds to extensions. Although this is not quite the way Carnap puts it, it is at least compatible with his account just described.

Intensions are less fine-grained than senses: For instance, since ' $2^7 = 128$ ' is necessarily true, ' 2^7 ' and ' 128 ' have the same intension. But obviously, it can be of cognitive value to be told that $2^7 = 128$ and thus, the two expressions do not have the same sense.⁹ This illustrates that intensions are not connected with cognitive significance, but rather with apriority, since Carnap believed that all necessary truths are analytic and thus can be known a priori. Although this suggests that intensions are more remote from an intuitive notion of meaning than senses, Carnap's account does have some advantages over Frege's: It is not altogether clear what exactly it takes for a statement to be cognitively significant. Moreover, cognitive significance seems to be highly subject-relative: ' $2^7 = 128$ ' is plausibly cognitively significant for some subjects, but not for others. And even if it was possible to give a more precise and objective account of cognitive significance and thus of sense, the notion would still be too fine-grained for the normative purposes which a semantic theory should arguably serve as well.¹⁰

In defining intensions, Carnap is thus able to provide more precise and more objective identity conditions than Frege. But what makes it sensible to connect meaning with modality in the first place?

Firstly, there are general considerations concerning language and information which speak in favor of such a picture. Sentences (and thoughts) represent states of affairs, i.e. they carry information about the world. Information can be defined as the exclusion of alternatives: The more information a signal carries, the more alternatives it excludes. (Note that the unit in which information is commonly measured is a Bit, where one Bit stands for a binary alternative.) If you are told that, say, the person who stole your car was female, this will provide you with less information

⁹ Carnap is aware of this and suggests that synonymy might rather be connected with 'intensional isomorphism' which corresponds roughly to sameness in intension on the level of an expression's constituents (cf. Carnap 1947/1956, 56).

¹⁰ I will say more about these issues in chapter 6.

than if you are told that it was a six foot tall female, because the latter proposition rules out more potential suspects. Arguably, such alternatives can simply be construed as possibilities. Thus, if one believes, as many do, that a theory of meaning is supposed to account for the informational or representational content of linguistic expressions, it seems consistent to do this by means of a possible worlds framework.

Secondly, a possible worlds account can preserve many of the merits of Frege's theory compared to a purely extensional theory of meaning. There are expressions which have no extension, but which nevertheless seem to have a meaning, such as 'unicorn'. Frege can account for this by insisting that the term does have a sense. It also has an intension, which can be represented by the set of possible worlds where there are unicorns – since, although unicorns do not exist, they could have possibly existed.¹¹ Another problem for an extensional semantics is posed by expressions which have the same extension but seem to differ in meaning, such as the above mentioned 'morning star' and 'evening star' or 'Joachim Sauer's second wife' and 'the first female Chancellor of Germany'. Frege would hold that the two expressions differ in sense, as witnessed by the fact that the statement 'Joachim Sauer's second wife is the first female Chancellor of Germany' is (or at least can be) of cognitive value.¹² Clearly, the expressions also differ in intension, since Joachim Sauer could have never got married. Then there is the problem of so-called intensional contexts, such as belief sentences: If meaning is just extension, how can someone believe that the first female Chancellor of Germany is important without believing that Joachim Sauer's second wife is important? Once again, this problem can be solved if one acknowledges that there are two different beliefs involved because they differ in sense, or intension.

¹¹ Kripke is famously skeptical regarding the possibility of there being unicorns (cf. Kripke 1980, 157f.). I will ignore this complication here.

¹² The problem is more pressing for a purely extensional account when *simple* co-referring expressions are involved. For the purposes of illustration, my example will do as well.

The broadly Fregean account of meaning just sketched thus seems very attractive. However, many philosophers think that it was severely shaken, if not refuted, by Kripke's and Putnam's arguments. The most influential of these arguments rely on modal considerations. In the remaining part of this chapter, I will focus on these. Against this background, it will be easier to grasp the ideas underlying two-dimensionalism, which will be outlined in the following chapter. Since Frege himself did not say anything about the modal implications of his theory, it is not in all cases clear that his account is threatened by the arguments which will be discussed below. But these arguments clearly target a number of theories in the tradition of Frege, including Carnap's. Kripke and Putnam also invoked non-modal arguments against internalist theories of meaning. Those arguments potentially undermine any kind of broadly Fregean account. These so-called epistemic arguments will be discussed in chapter 3.

In *Naming and Necessity* (1980), Kripke argued specifically against the description theory of reference for proper names, which also stands directly in the tradition of Frege. According to descriptivism, the reference of an expression is determined by a description which a speaker associates with that expression. This description is also supposed to give the expression's meaning. But in his so-called modal arguments, Kripke pointed out that names and the definite descriptions which speakers could associate with them are not modally equivalent. Take the name 'Aristotle'. One speaker could think of Aristotle as the teacher of Alexander the Great, another as the last great philosopher of antiquity. However, Aristotle could have died early or spent his life as a shepherd, in which case he would not have satisfied any of these descriptions. This shows that with respect to these possible worlds, 'Aristotle' does not refer to the same person as 'the teacher of Aristotle' or 'the last great philosopher of antiquity'.

Putnam reaches a similar conclusion with respect to natural kind terms, in his famous 'Twin Earth' thought experiment (cf. Putnam 1975): Suppose that there is a remote planet, Twin Earth, which is very similar to Earth. The liquid in Twin Earth's rivers and lakes resembles our water in all of its superficial properties. However, this liquid has a different molecular

structure, which we abbreviate as XYZ. According to Putnam, the liquid on Twin Earth would not be water. Then he invites us to imagine two speakers in 1750, one of them from Earth and one from Twin Earth. They know nothing to distinguish H₂O from XYZ, but still, when they both say ‘water’, the Earthling’s utterance refers to H₂O, and the Twin Earthling’s utterance to XYZ. Accordingly, if there is a sense connected with the term ‘water’ which is grasped by the speakers, then by all appearances, it cannot determine the reference.

Furthermore, since the intension is supposed to pick out the extension of a term in any given world, the intensions of both proper names such as ‘Aristotle’ and of natural kind terms such as ‘water’ are not accessible to a speaker. And therefore, given the intimate connection between meaning and modality (which the notion of intension is supposed to capture) nothing internal to a speaker can determine the reference of an expression. The underlying reason is that proper names and natural kind terms are, in Kripke’s terminology, rigid designators, i.e. they pick out the same individual or kind in every possible world.¹³ But speakers typically only associate contingent properties with these individuals or kinds. One of the most remarkable consequences of this insight is the fact that there are necessary truths which can only be known a posteriori. Typical examples are identity statements involving two rigid designators, for example ‘Hesperus = Phosphorus’, ‘water = H₂O’, or ‘heat = mean molecular kinetic energy’.

Kripke and Putnam conclude that reference is determined by features external to the subject, in particular by causal relations which need not be accessible to a speaker. In light of this, the idea that we can gain genuine philosophical insights by way of pondering on our concepts appears highly dubious. And indeed, as I mentioned at the outset these arguments for semantic externalism were taken by many as the primary reason to reject conceptual analysis.

¹³ It is not clear whether it is theoretically fruitful to apply the notion of rigid designation to general terms (cf. e.g. Soames 2002). I will ignore these complications here, though.

One of the most attractive features of two-dimensional semantics is that it integrates many insights of Putnam and even more so of Kripke into a systematic semantic account which can still be called broadly Fregean. It therefore offers hope concerning the prospects of conceptual analysis as a philosophical method even in light of this critique. How two-dimensional semantics tries to accomplish this feat will be outlined in the following chapter.

