

The Semantics and Metaphysics of Contingent Identity

by

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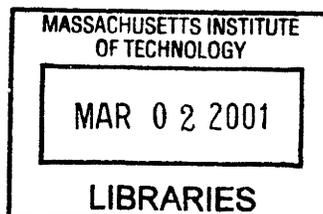
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Abstract

The thesis is divided into three chapters. The first chapter considers how we ought to understand a thesis of contingent identity if it is to accomplish the work it is proposed to accomplish while at the same time avoiding certain obvious and otherwise persuasive objections.

I begin by presenting a metaphysical thesis I call the Thesis of Contingent Identity, and defending it against alternatives. I then set out the principal objection to the Thesis, the objection from modal properties, and offer a response. The chapter concludes with an appendix devoted to criticizing Allan Gibbard's and H. W. Noonan's accounts of contingent identity and their replies to the objection from modal properties. The chief weakness in their proposals is that they concentrate on the semantical while neglecting the central metaphysical issues of contingent identity. In the process, they compromise the metaphysics they had intended to defend.

The second chapter contains a discussion of some of the technical issues surrounding the Thesis of Contingent Identity. A robust version of the semantics outlined in the first chapter is presented and contrasted with competing alternatives. It has been said that semantic considerations alone cannot decide against contingent identity; I show why this is so. The chapter ends by considering in what sense the Thesis actually expresses contingent identity, and how it affects our views on which logic is the best modal logic for metaphysical necessity.

The third chapter investigates and criticizes challenges to the Thesis of Contingent Identity from the transitivity of identity and the thesis that names are rigid designators. I argue that, according to the approach to contingent identity outlined in the previous chapters, the identity relation behaves normally. Claims that it violates transitivity are based on an equivocation which is exposed by paying careful attention to the notion of *perspective*.

Similarly, I argue that the thesis that names are rigid designators is compatible with the Thesis of Contingent Identity. I review the debate between Kripke and Gibbard and criticize the weakness in the latter's approach. Moreover, I argue that close scrutiny of the influence and function of names uncovers an equivocation in certain arguments purporting to establish an incompatibility between contingent identity and rigid designation. These considerations point to the hypothesis that some names might have multiple *possible* referents. The chapter concludes with some elaboration and defence of this hypothesis.

Thesis Supervisor: Robert Stalnaker

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Tony Gray

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Chapter 1

What is the Thesis of Contingent Identity?

1.1 The Robust Thesis of Contingent Identity and the Modal Property Objection

Some philosophers think that the solution to certain persistent metaphysical puzzles lies in endorsing the idea that certain identities are contingent. Many philosophers think that the very notion of a contingent identity is incoherent and so no help at all in solving anything. I will not settle this dispute here. Instead, I will set the stage for a settlement by considering how one ought to interpret a thesis of contingent identity if it is to accomplish the work it is proposed to accomplish while at the same time avoiding certain obvious and otherwise persuasive objections. I think such an interpretation can be found, but this alone is not enough to establish contingent identity as a viable, or even a plausible, tool for solving metaphysical puzzles. In the final section of the paper, I will indicate the direction in which a successful defense—or, indeed, a successful refutation—of contingent identity can be sought.

To motivate the intuitive notion of contingent identity—and to get a little clearer about just what contingent identity is supposed to be—let's begin with a persistent metaphysical puzzle. Following Judith Jarvis Thomson, let 'Swan' name a particular ice statue of a swan, and let 'Ice' name the portion of ice from which it is made.¹ Imagine that I create the statue

¹Thomson first presented the example of Swan and Ice in a seminar at MIT. It is based on Allan Gibbard's

by pouring water into a mould and freezing it, bringing Swan and Ice into existence at the same instant. Imagine also that I later destroy the statue by melting it, suddenly in a furnace, thus destroying Swan and Ice at the same instant. Under these circumstances it is natural and convenient to regard Swan and Ice as identical. Let's call this the 'Co-Incident Identity Thesis' for Swan and Ice. More clearly,

CO-INCIDENT IDENTITY: If Swan and Ice come into and pass out of existence at the same instants then they are identical.

But what if I had dropped the statue on the way to the furnace, shattering it into many pieces? Clearly, such a shattering would destroy Swan, but merely scatter Ice. In this case, plainly, Swan and Ice are not identical: Ice outlives Swan. This realization forces us to reconsider the Co-Incident Identity Thesis. Surely whether or not Swan and Ice are identical can't depend on whether or not I slip on the way to the furnace (can it?). It begins to seem as though Swan and Ice aren't identical, even if they are co-incident. Yet this idea is also puzzling. Am I carrying *two* statue shaped objects to the furnace? As David Lewis asks, "Why don't the two together weigh twice as much?"² For all the world it seems I am carrying only one. So how are Swan and Ice related? Either they're identical or they're not. We can call this the puzzle of Swan and Ice.

Rhetoric aside, there are several ways to escape the puzzle. For example: (i) Perhaps the shattering doesn't destroy Swan. On this view, Swan and Ice are simply identical. But it does seem odd that the little bits of ice scattered on the floor are still a statue of a swan. If I sweep them into a pile, or make them into ice cubes, are they still a statue of a swan? Surely not. Of course, we might say that Swan—that is, Ice—still exists, it is just no longer a statue. *Being a statue* is a contingent, and in the case in which I shatter it, a temporary property of a portion of ice (or more precisely, of some collection of atoms). (ii) Perhaps a coincident Swan and Ice merely share a temporal part. On this view, Swan and Ice are not identical, but instead share a part, the part that extends from the time I froze the statue until the time I shattered it. Of course, if this is right, then the statue is not (nor

example of a statue ('Goliath') made from a lump of clay ('Lumpl'). See Gibbard (1975) and Thomson (1998). I follow Gibbard in the use of 'portion'. A portion of ice can be broken and scattered into many parts and yet still remain the same portion. A piece of ice, on the other hand, let us say, cannot survive being broken; the piece is destroyed and replaced by several new pieces.

²Lewis (1986, pg. 252).

ever was or will be) wholly on the table: statues—and portions of ice and people—are four dimensional objects, extended throughout time as they are through space. This might be a natural thing to say about *lives*, for example, but it is, I think, an unattractive view to hold concerning statues. (iii) Perhaps, distinguishing constitution from identity, it is not so bizarre that I carry two (or more) statue shaped objects to the furnace. Swan and Ice are simply distinct and the Co-incident Identity thesis is simply false. We bite the bullet and accept the uncomfortable conclusion that I am carrying two (or more) statue shaped objects to the furnace.

For many philosophers a solution to the puzzle rests with one of these approaches. But for other philosophers, there is something deeply unsatisfying in each of them, and so some turn to contingent identity for a solution to the puzzle. That solution, they argue, goes like this: Let us grant the Co-Incident Identity thesis, that Swan and Ice, co-incident throughout their existence, are identical. Let us simultaneously grant that if I were to slip and shatter the statue then Swan and Ice would not be identical. What the puzzle shows, they claim, is that a co-incident Swan and Ice *are* identical, but not *necessarily* identical. The puzzle of Swan and Ice is only puzzling until this is realized, or so the argument goes. Call this, for now an informal characterization aimed at expressing an intuition, the ‘Rough Thesis of Contingent Identity’ (or just the ‘Rough Thesis’ for short):

ROUGH THESIS OF CONTINGENT IDENTITY: Swan and Ice are actually, but not necessarily, identical.

Of course, the Rough Thesis is very rough indeed, and, before it can be useful, needs considerable sharpening. This is a deceptively difficult project, and one of the central tasks of this paper.

It bears emphasizing, however, that, while it may not yet be clear what the Rough Thesis is, it should be clear what it is not. It is not, firstly, what might be called the ‘trivial and easy’ thesis of contingent identity. The statement,

(1) Ben Franklin was the Postmaster General of the United States

if true, is a true contingent identity, but it is not the sort of contingent identity we’re interested in. If (1) is contingently true, it’s because ‘the Postmaster General of the United

States' is an accidental designator and might have named someone other than Ben Franklin. But nothing follows from this about the *individuals* Ben Franklin and the Postmaster General of the United States (other than how they are named). The Defender of contingent identity, however, requires a more robust sense of contingent identity to help solve the puzzle of Swan and Ice. If Swan and Ice are contingently identical, as he claims, then this is not because 'Swan' and 'Ice' might have simply *named* two different things, but rather because Swan and Ice might have *been* two different things. (More on the positive thesis in a moment.) The puzzle of Swan and Ice is not primarily a puzzle about language, though language plays a powerful, inescapable, and indeed puzzling role—a role which a successful solution to the puzzle of Swan and Ice will have to explain. Rather, the puzzle of Swan and Ice is primarily a metaphysical puzzle about *individuals*, touching on questions of persistence, constitution, and possibility. Accordingly, the Rough Thesis, interpreted properly, must be a thesis about the individuals Swan and Ice, not just the names 'Swan' and 'Ice'.

Similarly, the Rough Thesis is not what might be called the 'trivial and incoherent' thesis of contingent identity. On a straightforward reading of the Thesis, it might be interpreted as claiming that a pair of objects, Swan and Ice, say, stand in the identity relation, but might not have. That is, the Rough Thesis might be interpreted as the thesis which stipulates that, for some x and y , $x = y$ and possibly $x \neq y$. But this would be a mistake. Such a view is incoherent and indefensible: no *two* objects bear the identity relation to each other, contingently or otherwise, and no single individual could fail to be self-identical.

The best interpretation of the Rough Thesis emerges, not surprisingly, from the metaphysical picture offered by the Defender of contingent identity to explain the relationship between Swan and Ice. According to this picture, in the actual situation (in which the statue is not shattered) there is only a single individual which is both a statue of a swan and a portion of ice. But in the counterfactual situation (in which the statue is shattered) there are two individuals, a portion of ice, and a statue of a swan, coincident during the period throughout which they both exist. The contingency of the identity between Swan and Ice arises, on this view, from the fact—disclosed in the story (according to the Defender)—that had I shattered the ice statue, Swan and Ice would have been two things, but inasmuch as I did not shatter the statue, they are identical.³ Put another way, Swan and Ice—the

³Of course, we must not be misled by grammar. The 'they' in the phrase 'they are identical' awkwardly refers to a single individual, not (as it usually does) to two distinct individuals. Russell offers a similar

single individual—might have been two things, rather than one. Call this thesis the ‘Robust Thesis of Contingent Identity’:

ROBUST THESIS OF CONTINGENT IDENTITY: A single individual, under certain circumstances, might have been each of two distinct individuals.

This, I suggest, is how we ought to understand contingent identity (whatever might be meant by ‘contingent identity’ in the literature), and what we will call from now on, the ‘Thesis of Contingent Identity’. It still needs elaboration.

The idea behind the Thesis of Contingent Identity is not, of course, the simple (and uncontroversial) one that had I broken the ice statue it would have become two things: Top Half and Bottom Half, say. Had I not broken the statue, Top Half would still be just the top half or so of the statue; Bottom Half would still be just the bottom half or so of the statue. But no one thought Top Half and Bottom Half were identical in the first place. Instead, the idea behind contingent identity, properly understood, is that under certain circumstances one individual might have been *each* of or *both* of two distinct individuals. In the present case, if I had dropped the ice statue, it would have been each of two things, a statue which is shattered and perishes, and a portion of ice which, though scattered, persists. In the cause of clarity, call that ice statue by a single name, ‘Swice’, and call the two individuals which Swice might have been—i.e., the statue which is shattered and perishes, and the portion of ice which, though scattered, persists—‘Perishes’ and ‘Persists’ respectively. Accordingly, then, the Defender of contingent identity argues that the story of Swan and Ice shows, and can be best explained by pointing out, that Swice might have been each of two things, Perishes and Persists. Defer for the time being skeptical concerns over whether this is a plausible metaphysic.

The Thesis of Contingent Identity is most easily accommodated in the formal semantics of counterpart theory, and the Thesis can be conveniently explained in its terms. In a counterpart theory, individuals are represented as existing in other counterfactual worlds in virtue of having *counterparts* in those worlds, and an individual’s properties (modal and

warning:

Identity is a rather puzzling thing at first sight. When you say ‘Scott is the author of *Waverly*’, you are half tempted to think there are two people, one of whom is Scott and the other the author of *Waverly*, and they happen to be the same. That is obviously absurd, but that is the sort of way one is always tempted to deal with identity.⁴

non) are interpreted as a function of those counterparts in the familiar way. The counterpart theorist argues that, when we say “Al Gore might have won the 1992 presidential election,” what we mean is that Al Gore’s counterpart in some counterfactual world won the 1992 presidential election. In the case of Swice, the Defender of contingent identity argues that, in the world in which I shatter it, Swice has *two* counterparts. In other words, in the world in which I shatter it, Swice is represented by—or, as the counterpart theorist understands it, Swice simply is—both of Perishes and Persists. To be sure, this idea poses the semanticist challenging problems—particularly concerning predication—but set aside for the moment your worries about either the implementation or the plausibility of counterpart theory. The general picture is useful in understanding, perhaps by visualization, the metaphysical picture presented by the Thesis of Contingent Identity.⁵

Consider a helpful analogy which does for doxastic modality what Swan and Ice do for metaphysical modality. Hammurabi looks up into the evening sky, points to the planet Venus and says, “That’s Hesperus”. The next morning, Hammurabi looks into the morning sky, again points to the planet Venus, but this time says, “That’s Phosphorus”. Hammurabi’s is a common mistake.⁶ He (erroneously) believes about one thing that it is actually two distinct things. That is, he believes of Venus (*de re*) that it is each of Hesperus and Phosphorus. It is natural to describe Hammurabi’s beliefs by saying what the world is like according to him: according to Hammurabi, the sky contains (among others) two distinct stars, one visible just at night (Hesperus), and one visible just in the morning (Phosphorus). But, unbeknownst to him, the actual sky contains only a single counterpart for his Hesperus and Phosphorus: the planet Venus.

The Defender of contingent identity suggests that we understand the metaphysics of Swan and Ice along the same lines as those proposed to understand Hammurabi’s beliefs. Hammurabi believes of Venus that it is each of Hesperus and Phosphorus. But, given that Hammurabi is wrong, Hesperus and Phosphorus are actually Venus. Analogously, the Defender of contingent identity argues that Swice might have been each of two things, Perishes and Persists. But given that I did not, in fact, shatter the statue, Perishes and Persists are

⁵I develop a metaphysically neutral counterpart theory which accommodates the Thesis of Contingent Identity in Chapter 2. I should emphasize that none of the controversial possibilist commitments associated with David Lewis’ counterpart theory are required either here or in Chapter 2.

⁶Similar examples abound in the literature, from Bernard J. Ortcutt and the man in the brown hat, to Pierre’s London and Londres.

actually Swice. The cases are straightforwardly similar—in each a single individual is represented in some other possible world by both of two distinct individuals—and will respond, I think, to similar treatment. At the very least, if the metaphysical picture is coherent, it can help to resolve puzzles about belief by explaining how believers like Hammurabi who make identity mistakes can nevertheless have coherent, if mistaken, beliefs. Our task for the moment, however, has been to seek by analogy a better understanding of the metaphysics of contingent identity and to fill in some of the details behind the Defender’s claim that Swice might have been each of Perishes and Persists.

At all events, and holding objections at bay for the moment, if it could be made to work, there is something particularly pleasing in the Defender of contingent identity’s solution to the puzzle of Swan and Ice. Metaphysical puzzles are often the product of conflicting yet strongly held intuitions. In the case of Swan and Ice, we are stuck between, on the one hand, the intuition that a portion of ice, shaped in a certain way to represent or resemble a swan and perhaps with that intent, *is* a statue of a swan. There is nothing more to being an ice statue of a swan than this. The ice simply is a statue. On the other hand, we have the competing intuition that shattering an ice statue destroys the statue but merely scatters the portion of ice; shattering destroys statues, but not portions of ice. Under such circumstances, statue and ice are evidently not identical. The puzzle of Swan and Ice arises from the interaction and seeming incompatibility of these intuitions. Each of the alternative responses to the puzzle, mentioned above, proceeds by arguing that one or the other of these strongly held intuitions ought to be abandoned, and then explaining why and how this is so. Nevertheless, we are reluctant to surrender either intuition, not just as a matter of taste (of course) but because of our firm belief in their truth. This reluctance helps explain our dissatisfaction with these responses. The reply from the Thesis of Contingent Identity, to its credit, acknowledges both sets of intuitions and seeks to show that they are not in competition. A solution to the puzzle of Swan and Ice based on the Thesis of Contingent Identity is therefore attractive, at least on the surface.

The trouble with the Thesis of Contingent Identity, and the chief challenge to its defenders, is that the Thesis is surrounded by an undeniable air of paradox and contradiction. Indeed, there seems to be good reason to think that it is false. I will call the following objection to the Thesis of Contingent Identity, prevalent and persuasive in the literature, the Modal Property Objection: If our preliminary version of the Thesis of Contingent Identity

is true—if Swan and Ice are in fact a single individual which, had I shattered it, would have been each of two individuals—then by the Principle of Identity, Swan and Ice must have all of their actual properties in common.⁷ However, there is a property that *actually* distinguishes them: Ice could survive a shattering, but Swan could not.⁸ Hence, Swan and Ice are not identical, contingently or otherwise. More clearly, the Modal Property Objection is given by the following simple argument:

MODAL PROPERTY OBJECTION

PREMISE 1: Ice has the property *could survive a shattering*.

PREMISE 2: Swan lacks the property *could survive a shattering*.

CONCLUSION: Swan and Ice are not identical.

If the Modal Property Objection is right, then the Thesis of Contingent Identity is untenable.

But the Modal Property Objection is not right. As I will show in the next section, the Defender of contingent identity should not be persuaded. Nevertheless, the Objection's failure does not itself establish the Thesis of Contingent Identity. In the final section, I will propose what still needs to be done before the Thesis of Contingent Identity can be successfully defended and, I will argue, this is precisely the point over which the Thesis of Contingent Identity might successfully be refuted. The question of contingent identity remains unsettled, but in the end, I hope to have shown the direction in which a settlement might be found. First, my reply to the Modal Property Objection.

1.2 How to Answer the Modal Property Objection

1.2.1 'qua' and Relativizing Modal Properties

The Objection, as it is presented here and as it is commonly found in the literature, is stated in a casual and intuitive manner, affording the greatest appeal and persuasive power.⁹ A

⁷The Modal Property Objection is often formulated with an appeal to Leibniz's Law rather than the Principle of Identity. This is controversial. I will rely on the Principle of Identity and leave out discussion of Leibniz's Law altogether. See Cartwright (1987).

⁸A thorough and full shattering, of course, one that breaks the ice statue into many pieces. It is commonly accepted that entities like statues can survive the replacement of small pieces and the normal process of wear and tear. Though perhaps even this is in doubt. Merricks (1999) argues that someone who holds that constitution is identity—like perhaps the defender of Co-incident Identity—is committed to mereological essentialism and that even the thesis of Contingent Identity cannot save him.

⁹Besides Gibbard and Noonan, see also, for example, Salmon (1986, pp. 115–116, note 6) and, more recently, Corcoran (1999, pp. 1–2) for typical presentations of the objection.

close look at the Objection, however, reveals that, in light of the metaphysics proposed by the Thesis of Contingent Identity, its casual and intuitive manner is misleading. Certainly, the Objection is valid on its face, but on at least an unvarnished reading, it merely begs the question against the Defender of contingent identity.

The Objection, remember, moves from the premises,

PREMISE 1: Ice has the property *could survive a shattering*,

and,

PREMISE 2: Swan lacks the property *could survive a shattering*,

to the conclusion,

CONCLUSION: Swan and Ice are not identical.

But notice, the Defender of contingent identity will *of course* deny the two premises. After all, Premises 1 and 2 are true only if Swan and Ice are actually distinct: it is possible for Ice to *have* a property ϕ which Swan *lacks* only if Ice *has* the property ϕ and Swan *does not have* the property ϕ and this in turn can be true only if Ice and Swan are distinct individuals. (If Swan and Ice are identical—if they are the same individual—how could it have a property which it does not have?)

According to the Defender of the Thesis of Contingent Identity, however, Swan *is* Ice: the story of Swan and Ice is a story in which a single individual, alternatively called ‘Swan’ and ‘Ice’, might have been both of two distinct individuals. It obviously follows, therefore, that the Defender will not concede the premises: according to him, the story of Swan and Ice is *not* a story in which Ice has a property which Swan lacks. Of course, if Ice *does* have a property which Swan lacks, then the Objection is perfectly sensible. But whether it does or not is the point at issue. It’s no good to postulate as a premise that Ice has a property which Swan lacks, for this is the very point in contention between the Objector and the Defender. The Modal Property Objection, as it stands, cannot hope to move the Defender of contingent identity.

But if the Defender rejects Premises 1 and 2, if the Defender denies that Ice has a property which Swan lacks, then how can he account for the events in the story? Indeed,

the Objector claims that the story of Swan and Ice contains incontrovertible *grounds* for the premises. The story tells us that Ice has the property,

(p1) *could survive a shattering*

and that Swan has the property,

(p2) *could not survive a shattering.*

Thus, while we are not explicitly told that,

(2) Ice has a property which Swan lacks

it can be inferred by appealing to the Law of Contradiction:

LAW OF CONTRADICTION: The same property cannot at the same time belong and not belong to the same subject in the same respect.¹⁰

Therefore, concludes the Objector, given the evidence in the story, (2) is true and the Modal Property Objection is successful.

How does the Defender of contingent identity reply? He cannot tolerate violations of the Law of Contradiction, a law which Aristotle calls the “most certain of all principles”. And he contests neither,

(3) Ice has the property *could survive a shattering,*

nor

(4) Swan has the property *could not survive a shattering,*

¹⁰Aristotle, *Metaphysics*, 1005b. Perhaps, to be perfectly clear and to make the Objector’s appeal to the Law of Contradiction more perspicuous, we should write the negation of (p1) as “it is not the case that *x* could survive a shattering”. However, the version in the text, (p2), expresses the same property, while being more simple and familiar.

which are true *ex hypothesi*. Yet, nonetheless, at the same time the Defender maintains that,

(5) Swan is Ice

is also true. But it does not seem that he can simultaneously maintain all these theses together, as they appear to entail a contradiction.

There is, however, a long and distinguished history in philosophy of arguing that seeming contradictions are not contradictions at all. Socrates tells how, without growing or shrinking he can be taller and shorter than Theatetus.¹¹ He is like the six foot tall basketball player who is both tall and not tall—tall relative to the team's five foot tall water boy, and not tall relative to the team's seven foot super star. In truth, the idea of an individual with seemingly incompatible properties is not as bizarre as at first it might sound. Take for instance the city of London. Recalling Kripke's puzzle about belief, it looks as though London has both the property,

(p3) *believed pretty by Pierre*

and the property,

(p4) *not believed pretty by Pierre.*

Or, recalling again our analogy with Hammurabi, it looks as though Venus has the properties,

(p5) *believed visible at night by Hammurabi*

and,

(p6) *not believed visible at night by Hammurabi.*

¹¹Plato, *Theatetus*, 155.

Perhaps just *how* London and Venus have their unusual sets of properties will need some explaining, but on at least one reading of their respective puzzles, it seems plausible that they do. Indeed, we encounter seemingly contradictory properties at almost every turn; explaining in what sense or *in what respect* they are or can be satisfied by a single individual is the challenge.

In the same tradition, the Defender of contingent identity contends that one individual can simultaneously satisfy both *could survive a shattering* and *could not survive a shattering*. Arguing this way, he insists, is not the first step in entertaining a contradiction, but the first step in defending the Thesis of Contingent Identity and replying to the Modal Property Objection. Exploiting the metaphysics of contingent identity, he can explain how an ice statue can have the properties *being shatterable* and *not being shatterable* in much the same way as Socrates explained how he could have the properties *being taller than Theatetus* and *not being taller than Theatetus*, all the while incurring, as in the latter case, no violations of the Law of Contradiction. Socrates has the property *taller than Theatetus* relative to a time in Theatetus' youth (when Theatetus hadn't yet reached his full height) and the property *not taller than Theatetus* relative to a time in Theatetus' adulthood; the basketball player has the property *tall* relative to water boy, and the property *not tall* relative to the super star. To explain seeming violations of the Law of Contradiction, as in these examples, property possession may be relativized to places or individuals or times. The Law of Contradiction provides that the same property cannot *at the same time* belong and not belong to the same subject *in the same respect*. The examples of Socrates and the basketball player exploit the qualifications *at the same time* and *in the same respect*; Socrates is not *taller than Theatetus* and *not taller than Theatetus* at the same time; the basketball player is not *tall* and *not tall* in the same respect.

The Defender of contingent identity can implement a similar strategy. He can relativize modal property possession to *possibilities* of a kind, or more accurately, to different *aspects* of a possibility.¹² To explain, recall that, in evaluating simple claims attributing a modal property, *might have won the 1992 election*, for example, to an individual, Al Gore, one standardly looks to Al Gore's possibilities: if Al Gore, or Al Gore's counterpart, possibly satisfies *won the 1992 election*, then Al Gore actually satisfies *might have won the 1992*

¹²This type of approach is suggested in Stalnaker (1986) and developed in detail in Chapter 2. As is apparent, I am considerably indebted to Stalnaker's ideas and work.

election. The complication in the case of Swice, is that in some possible world, Swice is represented by each of *two* individuals, Perishes and Persists. What the Defender of contingent identity needs—and exploits—is a way of selecting *which* of these possible individuals is to be relevant in evaluating a particular claim. The Defender can then relativize modal predication to these *ways of selecting*, or, as they are more commonly called, *ways of individuating* Swice. Following this strategy, the Defender argues that, relative to one way of individuating Swice, Swice has the property *could survive a shattering*, but relative to another way of individuating Swice, Swice has the property *could not survive a shattering*: in the metaphysical picture the Defender proposes to explain the story of Swan and Ice. Swice might have been each of two individuals, one which survives a shattering and one which does not. Accordingly, with respect to one way of individuating Swice—the one which chooses Swice’s ice attributes as salient—Swice has the property *could survive a shattering*; with respect to a different way of individuating Swice—the one which chooses Swice’s statue attributes as salient—Swice has the property *could not survive a shattering*. In other words, Swice could survive a shattering *qua portion of ice*, but could not survive a shattering *qua statue*.

On this view, Swice satisfies seemingly contradictory properties relative to different ways of individuating Swice. In one respect Swice could survive a shattering, in another respect it could not.¹³ If Swice’s statue-like attributes are relevant, then no, Swice could not survive a shattering; if Swice’s ice-like attributes are relevant, then yes, Swice could survive a shattering. But Swice does not satisfy the properties *could survive a shattering* and *could not survive a shattering* in the same respect.

This is the point on which on which the Modal Property Objection equivocates. The truth of

(6) Ice has the property *could survive a shattering*

¹³Of course, Swice, like Al Gore, London, and everything else, does not have any impossible properties. In particular, Swice does not satisfy the contradictory property *could survive and not survive a shattering*: relative to no way of individuating Swice does it have the property *could survive and not survive a shattering*.

There may also be some concern over exactly what kind of entity a *way of individuating* is. When the technical details of the semantics are spelled out, a way of individuating is represented as a possible world, counterpart function pair, what I call an *aspect* of a possibility. The exact technical details, however, are beyond the scope of the present paper. I attend to them in Chapter 2.

and

(7) Swan has the property *could not survive a shattering*

are together grounds for

(2) Ice has a property which Swan lacks

only if Ice and Swan, that is, only if Swice (for we must not forget that we are talking about only one individual) has its contradictory properties in the same respect. Only then is an application of the Law of Contradiction appropriate. But as we have seen, Swice satisfies the properties *could survive a shattering* and *could not survive a shattering* in different respects. In particular, Ice has the property *could survive a shattering* qua portion of ice, and Swan has the property *could not survive a shattering* qua statue. So according to the Defender of contingent identity, (6) and (7) are unambiguously glossed by,

(8) Ice has the property *could survive a shattering* qua portion of ice

and

(9) Swan has the property *could not survive a shattering* qua statue.

Whatever the referents of 'Swan' and 'Ice', the fact that Ice has such and such a property *qua portion of ice* and Swan has the negation of that property *qua statue* is not evidence that Swan and Ice are distinct.¹⁴ The Law of Contradiction allows an individual to satisfy a property and its negation as long as the properties are satisfied in different respects (or at different times) and '*qua*'s' function in (8) and (9) is explicitly to specify different respects in which (contradictory) properties are satisfied.¹⁵

¹⁴When the *Manchester Examiner* wrote, "Their censures are not directed at the Church *quà* Church, but against the Church *quà* Establishment," they had a single institution in mind and doubtless did not think themselves to have shown that 'Church' actually refers to *two* institutions. (*Manchester Examiner*, 4 April, 1886.) The extent to which '*qua*' is helpful to—or perhaps even required by—all predications, not just modal ones, is an interesting question and would reward further study.

¹⁵I suggest that the semantics for the device '*qua*', which otherwise may seem quite mysterious, be under-

The mistake in the Modal Property Objection is in assuming that the truth of (6) and (7) establish the truth of (2). The Defender shows how this is in error. If (6) and (7) are read as (8) and (9), as the Defender suggests, then they do not entail (2). In this way the Defender of contingent identity can explain his endorsement of (6) and (7) together with his rejection of (2), all the while without violating the Law of Contradiction, and thus block the Modal Property Objection.

Perhaps an analogy with Hammurabi will be helpful here again. Suppose Hammurabi's advisors try to convince him that Hesperus is actually Phosphorus. Hammurabi, however, raises an objection. He argues that Hesperus is plainly not Phosphorus, for Hesperus has a property which Phosphorus lacks: Hesperus has the property *believed visible at night by Hammurabi*, and Phosphorus lacks the property *believed visible at night by Hammurabi*. If Hesperus is Phosphorus, then Hesperus and Phosphorus must have all of their properties in common; but they don't. Therefore, Hesperus is not actually Phosphorus. (Notice in this connection the similarity between *de re* belief properties such as *believed visible at night by Hammurabi*, and modal properties such as *could survive a shattering*.)

Obviously, the advisors are not convinced. First, they point out that the astronomical evidence does not support the claim that Hesperus *has* a property which Phosphorus *lacks*. Certainly, they agree,

(10) Hammurabi believes that Hesperus is visible at night

is true, and likewise,

(11) Hammurabi does not believe that Phosphorus is visible at night

is true. Nevertheless, they (rightly) contend, (10) and (11) together do not entail,

(12) Hesperus has a property which Phosphorus lacks.

stood along the lines proposed in the text: '*qua*' is a tool for explicitly specifying which of an individual's aspects are to be salient in the evaluation of a predicate. In particular, '*qua*' specifies which of an individual's aspects one should evaluate a given predication relative to. I should stress that these aspects are not sortals, but ways of individuating individuals within a particular possibility. This function needs elaboration and emendation; I attend to it in more detail in Chapter 2.

At best, the advisors say, Hammurabi has shown the following:

(13) Hesperus has the property *believed visible at night by Hammurabi*,

and

(14) Phosphorus has the property *not believed visible at night by Hammurabi*.¹⁶

But his use of the Law of Contradiction in deriving,

(15) Hesperus is not Phosphorus,

is fallacious, based on an equivocation. The properties *believed visible at night by Hammurabi* and *not believed visible at night by Hammurabi* are not both true of Hesperus and Phosphorus (i.e., Venus) in the same respect. Pressed to clarify how Venus can have such seemingly contradictory properties, the advisors suggest that Venus has the property *believed visible at night by Hammurabi* qua Hesperus, and that Venus has the property *not believed visible at night by Hammurabi* qua Phosphorus. In other words, Venus has the property *believed visible at night by Hammurabi* in one respect, and the property *not believed visible at night by Hammurabi* in another respect. There is no violation of the Law of Contradiction. The general strategy of relativizing property possession to different possibilities or respects, perhaps with the help of the ‘*qua*’ device, can help Hammurabi’s advisors square the acknowledged truth of (13) and (14) with the truth of,

(16) Hesperus is Phosphorus.

In this way, Hammurabi’s advisors can explain how (10) and (11) can be true, but (12) false. By pointing out the different respects in which Venus has seemingly contradictory

¹⁶And indeed, though unbeknownst to him, Hammurabi has also shown that Phosphorus has the property *believed visible at night by Hammurabi* and that Hesperus has the property *not believed visible at night by Hammurabi*, for Hesperus and Phosphorus are the same planet.

properties they have defended their proposal (that Hesperus is Phosphorus is Venus) against Hammurabi's argument that the proposal is incoherent. Of course, they might still be wrong (Hesperus and Phosphorus might really be distinct), but whether they are will be settled by astronomy, not by Hammurabi's argument.

The Defender of contingent identity and Hammurabi's advisors have much in common. Both present proposals, aimed at solving similar puzzles according to which a single individual is represented in another possible world by a pair of distinct individuals. Both respond to an objection (of the same nature) on the grounds that, most charitably interpreted, the objection rests upon an equivocation (least charitably interpreted, it begs the question). And both justify their respective views by showing in what sense an individual can satisfy seemingly incompatible properties.

To sum up a bit, the thesis of Contingent Identity, according to its Defender, solves the puzzle of Swan and Ice. Of course, he still might be wrong (more on this in a moment), but the Modal Property Objection doesn't establish this. Moreover, to its credit, the thesis of Contingent Identity accords well with the strongly held intuitions the puzzle invokes. Recall that we began with compelling intuitions, seemingly in competition: on the one hand, we have the intuition that a portion of ice, shaped in a certain way to resemble a swan and perhaps with that intent, *is* a statue of a swan; on the other hand, we have the intuition that shattering an ice statue destroys the statue but merely scatters the portion of ice. The Thesis of Contingent Identity and its accompanying metaphysics allow us to retain both of these intuitions, dispelling the illusion of competition. Swan and Ice, the Defender argues, are identical, one and the same statue, but should I shatter it, then they would be distinct; the shattering would destroy the statue and merely scatter the ice.¹⁷ This sounds,

¹⁷In Section 1, I remarked, "Surely whether or not Swan and Ice are identical can't depend on whether or not I slip on the way to the furnace (can it?)." We are now in a better position to answer. If the Thesis of Contingent Identity is true, then whether or not Swan and Ice are identical does indeed depend on whether or not I shatter the ice statue on the way to the furnace. This is not so implausible as the Objector's rhetoric makes it sound. If I shatter the ice statue then Swan and Ice are distinct; if I don't shatter the ice statue, then Swan and Ice are identical. This (it seems to me) intuitive and plausible picture is just what it means for Swan and Ice to be contingently identical. Consider a similar example. Hugh Chandler (1975) proposes a refinement on Hobbes' famous ship of Theseus. Imagine a certain ship, call it *a*, which undergoes gradual plank replacement until, after a time, it has had all of its planks replaced. Call the resulting ship *c*. There is a prima facie case for the claim that *a* and *c* are the same ship. Imagine also that while *a*'s planks are being replaced the original planks are collected and assembled into another ship, call it *b*, distinct from *c*. Seeing as *a* and *b* are constituted from the same planks in precisely the same arrangement, there is a strong prima facie case for the claim that *a* is the same ship as *b*. One way to avoid the contradiction that these claims seem to entail is to argue that *c* is, as Chandler puts it (using Wiggins' phrase), the "dominant claimant' for identity with *a*," with the idea that "the spatio-temporal continuity relation is dominant over

intuitively and pre-reflectively at any rate, right.¹⁸

1.2.2 Individuating Cues

Here is a potential problem for this theory. If, as the Defender of contingent identity contends, Swan *is* Ice, and ‘Swan’ and ‘Ice’ are just other names for Swice, and if Swice could survive a shattering then, at least in some respect, Swan must also be able to survive a shattering. That is,

(17) Swan could survive a shattering

is true. But isn’t (17) intuitively and obviously false? In fact, the story of Swan and Ice presumes that a shattering destroys Swan, and surely this is right. The Defender agrees.

By now, the answer is probably clear. According to the Defender of contingent identity, Swan *could* survive a shattering, at least in some respect. If Swan is Ice, and Ice could survive a shattering, then Swan too could survive a shattering. The crucial phrase, of course, is “in some respect”. But in what respect is it true that Swan could survive a shattering? As we have seen, relative to a way of individuating Swice which counts Swice’s ice-like attributes as salient, Swice could survive a shattering. Similarly for Swan. After all, Swan just is Swice. Relative to a way of individuating Swan which counts Swan’s ice-like attributes as salient, Swan could survive a shattering: that is, Swan could survive a shattering *qua* portion of ice.

If this seems awkward, if it seems unnatural or counterintuitive to say that Swan could survive a shattering, it is because ‘Swan’ is not an innocent name. Rather, it’s sense builds

the same-parts-same-plan as justification for an identity claim.” According to this view, **a** and **c** are the same ship and the relationship between **a** and **b** is recessive: “In the absence of a dominant claimant, **a** and **b** are the same ship.” (Chandler (1975, pg. 365) and Wiggins (1967, pg. 37)).

Now imagine the possibility according to which **a**’s planks aren’t replaced as **a** is disassembled and then reassembled into **b**. Under these circumstances, and in the absence of a dominant claimant, ‘reassembled’ is the right word: **a** is the same ship as **b**. If this is right, it follows that **a** and **b** are contingently identical: whether or not **a** and **b** are identical depends upon whether or not I replace **a**’s planks as I remove them.

¹⁸It is natural to wonder whether the Thesis of Contingent Identity can be extended to a Thesis of Temporal Identity. Indeed, the story employed to motivate The Thesis of Contingent Identity might also motivate a Thesis of Temporal Identity: Suppose I drop and shatter the ice statue. During the period before I drop the statue, how are Swan and Ice related? It is true that Swan, but not Ice, will shortly cease to exist, but does this entail that Swan and Ice are not *now* identical? I think that a case can be made for temporary identities analogous to the case for contingent identities, but there are several disanalogies between the two cases, and a defense of temporary identity will differ a good deal from the defense of contingent identity. (See Stalnaker (1986) for some discussion.)

in a way of individuating Swice, namely the way that picks out Swice's statue-like attributes. In formulating the puzzle, 'Swan', we are told, is the name of a swan statue. The puzzle employs a name for the swan statue that is easy to remember and associate with certain attributes. It is not a coincidence that 'Swan' invokes Swice's statue-like attributes and with them a way of individuating Swice according to which those very attributes are relevant in evaluating modal predications. With the use of 'Swan' we naturally, and without noticing, direct out attention to Swice's statue features. No wonder then that (17) is intuitively false: if our interest is in Swice's statue-like attributes, as our use of 'Swan' in (17) indicates, then (17) is false. Swice could not survive a shattering in that respect. This is as it should be. If I present the ice statue and ask you, "Could Swan survive a shattering?" you will tell me that it could not, interpreting my use of the name 'Swan' to reflect my interest in the ice statue's *statue* qualities; the name 'Swan' acts as a cue to my interests and helps you to select the appropriate way of individuating Swice relative to which you should answer my question. Likewise, were I to ask, "Could Ice survive a shattering?" you would tell me that it could, interpreting my use of the name 'Ice' to reflect my interest in the ice statue's *ice* qualities; the name 'Ice' acts as a cue to my interests and helps you to select the appropriate way of individuating Swice relative to which you should answer my question.

The individuating cues provided by the names 'Swan' and 'Ice' are also cancelable. In the true sentence,

(18) Swan could survive a shattering *qua* portion of ice,

our use of '*qua*' serves to cancel the individuating cue invoked by the name 'Swan'. In (18) we are explicitly told how to individuate Swan: the '*qua*' clause instructs us that Swan's ice-like attributes are relevant in the evaluation of (18). Similarly, again, for Ice. While intuitively,

(19) Ice could survive a shattering

is true,

(20) Ice could survive a shattering *qua* statue,

is false. The '*qua*' clause instructs us that Ice's statue-like attributes are relevant in the evaluation of (20).

Not all names, however, incorporate or evoke individuating cues. What if we use a neutral name for our ice statue, one that invokes neither its statue-like nor its ice-like qualities, a name like 'Swice', for example? Or what if we were to designate the ice statue with a simple demonstrative like 'this' or 'that'? How would you answer me were I to ask, "Could Swice survive a shattering?" I suspect that you would answer something along the lines of, "That depends on what you have in mind," or even, "I'm not sure. What do you mean?" Without the kind of clue provided by the names 'Swan' and 'Ice', it's not at all clear how to individuate Swice—am I interested in its statue-like or its ice-like qualities, in Swice *qua* statue or Swice *qua* portion of ice?¹⁹ Comparably, if someone were to ask, "Was Socrates taller than Theatetus?" without supplying a time with respect to which we should answer (young Socrates? mature Theatetus?) how would we reply?²⁰ I suspect we might say, "That depends on *when* you have in mind." If the question was, "Was the mature Socrates taller than the mature Theatetus?" then the answer would be easy; the expressions 'the mature Socrates' and 'the mature Theatetus' function as cues to which time frame I have in mind, and relative to which you should make your answer.

Finally, with the help of supervaluations, we might refine our picture even further.²¹ Let us say that Swice is shatterable just in case Swice could survive a shattering relative to *every* way of individuating Swice; Swice is not shatterable just in case Swice could survive a shattering relative to *no* way of individuating Swice; and it is neither true nor false that Swice could survive a shattering if, relative to some way(s) of individuating Swice, it could survive a shattering, but relative to others it could not. Hence, with this refinement in hand, we can see that it is neither true nor false that Swice could survive a shattering. Accordingly, this in turn explains our hedging (remarked upon in the previous paragraph) in response to the questions, "Could Swice survive a shattering?" or "Could that [indicating the ice statue] survive a shattering?" (Adapting and adopting the same procedure for the case of

¹⁹Notice that the name 'Swice' is not ambiguous: it's not that 'Swice' names either of two individuals. 'Swice' is a name for a single actual individual. The confusion and difficulty arise because 'Swice' also names two *possible* individuals as well. See the Chapter 3 for some discussion of rigid designation which is relevant here.

²⁰We might, and most often do, assume a time frame, perhaps from the context.

²¹Stalnaker first proposes this move in (1986). For more details, see also Chapter 2.

Socrates and Theatetus, it is neither true nor false that Socrates is taller than Theatetus, which explains our difficulty with, “Was Socrates taller than Theatetus?”) These results seem to me quite plausible. The metaphysical and (particularly) the semantical framework developed by the Defender of contingent identity capture and nicely explain our linguistic behaviour and, I think, our pre-reflective intuitions.²²

1.3 Remainders

The Thesis of Contingent Identity escapes the Modal Property Objection: friends of the Thesis should not be persuaded by the Objection. This alone, however, does not *establish* the Thesis of Contingent Identity. Indeed, other objections loom: for example, those based on the transitivity of identity, and the thesis that names are rigid designators. I think these objections can be met, but this, too, is not enough.²³

The Defender of contingent identity argues that not only is the puzzle of Swan and Ice best *explained* by the Thesis of Contingent Identity, but the puzzle also *shows* that the Thesis of Contingent Identity is true. Others of course will disagree, defending instead a different metaphysical view of the relationship between Swan and Ice. This is a metaphysical quarrel and should be decided by comparing the plausibility, fruitfulness, and implications of rival metaphysical theories. This has not been my task in the present paper. Instead, this paper’s target is those critics of contingent identity who argue that the Modal Property Objection shows that the Thesis of Contingent Identity is incoherent. It does not. The weighing and comparing of rival metaphysical views remains.

As a final note, let me add a consideration weighing in favour of the Thesis of Contingent Identity. There are several deeply problematic questions or areas of philosophy which bear a striking resemblance to the problem of Swan and Ice and upon which a successful defense of the Thesis of Contingent Identity might shed some light. These questions typically involve either metaphysical puzzles about identity or mistakes involving identity and reference. Examples abound in the literature: metaphysical puzzles like the ship of Theseus and

²²Though I must acknowledge the success of Gibbard’s (1975) account in handling certain lexical cues (like ‘Swan’ and ‘Ice’), the point in the text marks a striking difference between Gibbard, H.W. Noonan, and myself. How would they answer the question, “Could Swice survive a shattering?” How would ‘Swice’ affect the referent of the predicate? How would Gibbard evaluate “Swice is shatterproof”? Here again I think we see the dangers of offering a semantics of contingent identity without a metaphysics. For more on Gibbard and Noonan, see the Appendix. See also Chapter 3 for some discussion of Gibbard and rigid designation.

²³See Chapter Three for replies to the objections from transitivity and rigid designation.

its modalized cousin; problems relating to mereological essentialism; Kripke's Puzzle and related questions about belief (remember Hammurabi); the perplexing semantics of identity; and puzzles that arise from mistakes of reference.²⁴ Champions of the Thesis of Contingent Identity might help philosophers progress toward a better understanding of these issues.

²⁴Stalnaker (1986, particularly, pp. 124–126) recounts several such puzzles. For more on the semantics of identity and its puzzles, see Crimmins (1998).

1.4 Appendix

Alternative Replies to the Modal Property Objection: Gibbard and Noonan

Allan Gibbard and H. W. Noonan answer the Modal Property Objection by offering non-standard accounts of modal predication which aim to block the Objection and reconcile contingent identity with the apparent contradictions the Objection exposes. I will argue, however, that this is not enough to immunize contingent identity against the Modal Property Objection. Gibbard and Noonan provide semantic replies to the Objection based on logic, language, and semantics, interpreting attributions of modal properties in such a way that no contradiction follows from the claim that Swan and Ice are contingently identical. In the process, however, Gibbard and Noonan compromise the metaphysics they had hoped to defend. While their replies are broadly metaphysical—addressing sense and reference, predication, what makes true sentences true—they ignore the metaphysical issues at the heart of contingent identity—persistence, constitution, and, in particular, the relation between Swan and Ice and their possibilities. Certainly, their proposals allow us to speak consistently of something called “contingent identity”, but it is not the robust Thesis of Contingent Identity, helpful in solving certain persistent metaphysical puzzles. In fact, we don’t learn very much from Gibbard and Noonan about the individuals (individual?) Swan and Ice themselves, or how they’re related.

Gibbard’s and Noonan’s replies go wrong, but they go wrong, I will argue, in an interesting way. They don’t have, or at any rate never present, a clear account of the metaphysics of contingent identity. What metaphysical picture emerges, according to Gibbard and Noonan, from the story of Swan and Ice? Insufficient clarity in this point leads to confusion over what exactly the thesis is which Gibbard and Noonan are defending. Furthermore, confusion over the metaphysics of contingent identity adds credence to the Modal Property Objection. If it is not evident at the outset that ‘Swan’ and ‘Ice’, according to the Defender of contingent identity, refer to a single individual—an individual which might have been each of two individuals—then the premise of the Modal Property Objection claiming that Ice has a property which Swan lacks may escape the criticism it deserves. For the same reason, the effect of the names ‘Swan’ and ‘Ice’ is enhanced: *of course*, Ice could survive a shattering and Swan could not; one never thinks to ask if *Swan* could survive a shattering

and *Ice* not. Without the right sort of metaphysical backbone, Gibbard's and Noonan's theories are unduly influenced by the Modal Property Objection and the replies they offer ultimately defend the wrong sort of metaphysics. First, Gibbard.

1.4.1 Gibbard

In "Contingent Identity", Allan Gibbard claims that the most serious problem for the contingent identity is the Modal Property Objection. Responding to the Objection occupies Gibbard for the bulk of his paper and his strategy is drastic.

Recall that the Objection proceeds by identifying in the story of Swan and Ice a property which Ice has but Swan lacks, namely, the property,

(p1) *could survive a shattering*

and then appealing to the Principle of Identity to distinguish Swan from Ice.²⁵

Gibbard's reply to the Objection, simply, is to argue that (p1) does *not* express a property, at least not a property in the traditional sense, the sense required by the Modal Property Objection.. Following Gibbard, we might say that the Modal Property Objection is unsound: its two major premises are false. The alleged offending property isn't really a property at all.²⁶

This response is not as *ad hoc* as it might at first seem. Gibbard points out that in order for a putative property to *be* a property it must be true or false of objects independently of how those objects are designated. Surely, this is right: an individual's name or designation cannot affect whether that individual has or lacks some property. But, Gibbard contends, this is exactly the point at issue in the question of whether the putative property expressed by (p1) is truly a property.²⁷ I think this is what Gibbard has in mind: If the right solution to the puzzle of Swan and Ice is that Swan and Ice are contingently identical, then,

(5) Swan is Ice

²⁵Gibbard actually employs a slightly different version of the Objection, using an example involving a statue ("Goliath") made of clay ("Lumpl") and the property *being necessarily identical to Lumpl*. See Gibbard (1975, pg. 201).

²⁶Well, not a property in the relevant sense, as we shall see.

²⁷Gibbard (1975, pg. 201).

is true, and,

(19) Ice could survive a shattering

is true, but,

(17) Swan could survive a shattering

is false. It is plain, according to Gibbard, that the progression (5), (19), (17), shows that the putative property, *could survive a shattering* does not apply or fail to apply to individuals independently of how they are designated. How else are we to explain the failure of inference from (5) and (19) to (17)? If (5) is true—if Swan *is* Ice—then Swan and Ice have all their properties in common; but if this is right then how can we explain the truth of (19) but the falsehood of (17)? The names in (19) and (17) must refer *obliquely* and so deflect the predication from their individuals. Hence, for Gibbard, the question of whether or not (*p1*) expresses a property of individuals amounts to the question of whether or not contingent identity is tenable. On Gibbard's view, (*p1*) expresses a property only if Swan and Ice are *not* actually identical: to assume that (*p1*) expresses a property is to assume that contingent identity is false. This is the sense in which, according to Gibbard, whether or not (*p1*) expresses a property is the question at issue. For Gibbard, assuming it does amounts to begging the question.²⁸

²⁸It is interesting to note that the metaphysical rivalry between the Thesis of Essential Individuality and the Thesis of Contingent Identity has, in fact, far-reaching influence in the literature on contingent identity. This influence is apparent, once we have been alerted to look for it. For instance, consider Gibbard once again. Recall that Gibbard argues that if we allow modal contexts like,

(21) *x* could survive a shattering

to express properties in the traditional sense then we will be forced to give up contingent identity. I disagree. The Defender of contingent identity can allow contexts like (21) to express genuine modal properties by relativizing modal property possession. Nevertheless, Gibbard's argument is interesting and it reflects the influence and competition of the Thesis of Contingent Identity and the Thesis of Essential Individuality which lurk just beneath the surface of his discussion. Gibbard argues that if we permit (21) to express a property in the traditional sense then, from the truth of

(19) Ice could survive a shattering

and

Of course, it remains for Gibbard to explain what *(p1)* *does* express if it doesn't express a property. His answer is that *(p1)* expresses a property after all, only not a property in the traditional sense—a property of individuals—but rather a property of concepts or Fregean senses. Gibbard adopts a position familiar in the literature: names within modal contexts, like 'Swan' in (17) and 'Ice' in (19), do not refer to their objects, but to their concepts or senses. Consequently, modal properties (properties like that expressed by *(p1)*) are properties of concepts or senses, rather than of individuals.

Returning to the Modal Property Objection, I mentioned earlier that, following Gibbard, we could reasonably argue that the Objection is unsound: Premises 1 and 2,

PREMISE 1: Ice has the property *could survive a shattering*,

PREMISE 2: Swan lacks the property *could survive a shattering*,

are false. It is more accurate to say, when viewing the Objection from Gibbard's perspective rather than in the spirit in which the Objection is intended, that Gibbard finds the Objection invalid: Premises 1 and 2 do not say what one might have thought they did and, together with the Principle of Identity, do not imply the conclusion that Swan and Ice are not identical. Premise 1 attributes a certain property to one thing (a particular ice-concept) and Premise 2 attributes that same property to a *different* thing (a particular statue-concept).

(22) Swan could not survive a shattering

we will be forced to infer

(2) Ice has a property which Swan lacks.

If this is right, then we must conclude, hand in hand with the Modal Property Objection, that Swan and Ice are not actually identical and the Thesis of Contingent Identity is false. Now, I have already argued that the inference from (19) and (22) to (2) is illegitimate in this context but I think part of its appeal and superficial plausibility (and perhaps a reason the inference has escaped wider criticism) stems from a tacit acceptance of the Thesis of Essential Individuality. If we assume, all else being equal, that the Thesis of Essential Individuality is true then, as I have argued, the solution to the puzzle of Swan and Ice based on contingent identity is unsuccessful. Therefore, on the assumption that the Thesis of Essential Individuality is true, Gibbard is right: if we permit contexts such as (21) to express genuine modal properties then we'll have to accept that the contingent identity is false. Thus, Gibbard's strategy to defend contingent identity—denying that modal contexts like (21) express properties in the traditional sense—is a reasonable one given the assumption that the Thesis of Essential Individuality is true. But would Gibbard really grant such an assumption were it made explicit? I expect not. The naive Modal Property Objection, in licensing the move from (19) and (22) to (2), betrays the profound background influence of the Thesis of Essential Individuality and, in accepting the persuasive force of the Modal Property Objection, at least for the sake of argument and subject to subsequent response, Gibbard implicitly accepts the Thesis of Essential Individuality.

The conclusion, which is not about concepts at all but about individuals, cannot be reached from the premises and so the argument is invalid. Gibbard has blocked the Modal Property Objection.

Gibbard's approach to modality requires a non-standard approach to modal logic and semantics. Without getting into all the details, he ingeniously constructs a semantic theory, loosely based on earlier work by Carnap and Bressan, which allows us to express all the sorts of things, including contingent identities, that we want to.²⁹ According to the theory, names in modal contexts refer to concepts; properties in modal contexts must make compensatory shifts (after all, the property of being able to survive a shattering neither applies nor fails to apply to statue-concepts); variables are subject to what Quine has called a "curious double interpretation"—variables which occur in modal contexts take concepts for values, and those which occur outside modal contexts take objects.³⁰ It is a workable approach and provides an answer to the Modal Property Objection but the price we pay—in terms of modal intuitions and semantics, and the metaphysics of properties—is a heavy one.

In fact, upon reflection, there ought to be some concern that, in adopting Gibbard's approach to contingent identity, the price we pay is *altogether* too heavy. Gibbard has accomplished a semantical task and provided us with the means to speak consistently of contingent identities, avoiding the seeming contradictions alleged by the Modal Property Objection. But has he thrown the metaphysical baby out with the semantical bath water?

Recall that, according to Gibbard,

²⁹See Gibbard (1975, pg. 203).

³⁰See Gibbard (1975, pg. 206). To get an idea of how Gibbard's system will look, consider this example. Say Ice has the property given by the open sentence:

(i) x is shatterproof.

We might formalize (i), according to Gibbard, as follows. In non-modal contexts, let 'E' symbolize the predicate *exists*, 'I' the predicate *is a portion of ice*, and 'S' the predicate *is shatterproof*. A Gibbard style formalization produces,

(ii) $(\exists y)[y = x \ \& \ Iy \ \& \ \Box(Ey \rightarrow Sy)]$.

Following Gibbard and making explicit the reference shifts undertaken by the variables and predicates, (ii) might be read as, "There is an ice-portion concept y that is a concept of some individual x and it is the concept of something shatterproof in any possible world in which it is the concept of anything." Attributing the property expressed by (ii) to Ice is what we mean, according to Gibbard, when we say, "Ice could survive a shattering". A bit convoluted, perhaps. See also Gibbard (1975, pp. 205–211 and pp. 214–220).

(5) Swan is Ice

together with,

(19) Ice could survive a shattering

and,

(22) Swan could not survive a shattering

do not entail a contradiction because, in sentences (19) and (22), the names 'Ice' and 'Swan' do not refer to the individual named in (5). In fact, it might appear that Gibbard is not truly defending contingent identity at all. In what sense is it true that Swan and Ice are identical but possibly each of two distinct individuals? It seems instead that what Gibbard has described is a case in which the names 'Swan' and 'Ice', though actually co-referential, might refer to distinct individuals, rather like 'Ben Franklin' and 'the Postmaster General of the United States'. For Gibbard, 'Swan' and 'Ice' actually name a particular ice statue, but they might have named such and such a statue-concept and such and such an ice-concept. Hence, the sentence "Swan is Ice" is contingently true not because the single individual variously referred to by 'Swan' and 'Ice' might have been each of two things—in fact, we learn nothing about that individual's possibilities—but rather "Swan is Ice" is contingently true because the names 'Swan' and 'Ice' might have referred to two different things. If this is what it means for Swan and Ice to be contingently identical, then there doesn't seem to be any relevant difference between this sort of contingent identity and the easy and trivial contingent identity of Ben Franklin and the Postmaster General of the United States.

Of course, the easy and trivial sort of contingent identity won't help us to sort out the puzzling relationship between Swan and Ice. Perhaps, with Gibbard's help, we can consistently *say* that while Swan and Ice are identical, Ice could survive a shattering but Swan could not. Surely, though, this alone shouldn't satisfy the Defender of contingent identity. If the Defender is right, then the story of Swan and Ice is best explained by something more than the fact that 'Swan' and 'Ice' might have named things other than what they actually name. The answer to the puzzle of Swan and Ice, the Defender contends,

is that Swan and Ice might have *been* two distinct things. Gibbard's account of contingent identity might be consistent, but it is doubtful whether it is robust enough to sort out the metaphysics behind the puzzle of Swan and Ice.

The trouble with Gibbard's account is that it overlooks the important metaphysical elements of contingent identity, particularly the relationship between Swan and Ice and their possibilities, in favour of less important metaphysical elements, those concerning reference, language, and semantics. The Thesis of Contingent Identity, properly understood, has a robust metaphysical component which a successful defense cannot ignore. Of course, Gibbard is engaged in metaphysics. But his approach focuses on the semantics of 'Swan' and 'Ice' rather than the individuals Swan and Ice. The danger in relying primarily or exclusively upon—one is tempted to say 'merely' upon—semantical explanations and defenses of contingent identity is that one may confuse, compromise, or even altogether lose the metaphysics he or she purports to defend. Gibbard is open to this criticism. His account of contingent identity needs to address the fundamental metaphysics of contingent identity.

1.4.2 Noonan

In "Indeterminate Identity, Contingent Identity, and Abelardian Predicates," H.W. Noonan offers a reply to the Modal Property Objection in defense of contingent identity.³¹ Noonan's approach differs from Gibbard's but, in very large measure, shares its spirit. Recall that Gibbard's method of blocking the Objection is to argue that putative modal properties do not express properties of individuals, but of concepts: a name within a modal context refers to its concept or sense, rather than its object. Modal properties of the sort the Modal Property Objection depends upon, like that expressed by,

(p1) could survive a shattering

are no longer problematic because the properties' constitutive modal contexts affect the reference of the names occurring in them.

Like Gibbard, Noonan seeks to disarm the Modal Property Objection by taming troublesome modal properties like that expressed by *(p1)*, but departing from Gibbard, he argues

³¹Noonan (1991).

that the modal context alters the *predicate's* reference rather than the name's reference. According to Noonan, the subject of a modal predication affects its predicate's reference. Noonan argues that modal predicates are, in his terminology, 'Abelardian'. The quintessential example of an Abelardian predicate is Quine's famous *was so-called because of his size*. Noonan explains:

Clearly, this predicate [*was so-called because of his size*] is Abelardian: it stands for the property *being called 'Giorgione' because of his size* when attached to the name 'Giorgione' and the property *being called 'Barbarelli' because of his size* when attached to the name 'Barbarelli'.³²

Noonan uses the notion of Abelardian predicates to explain what is wrong with the inference from,

(23) Giorgione was so-called because of his size

and,

(24) Giorgione is Barbarelli

to

(25) Barbarelli was so-called because of his size.

Sentences (23) and (24) are obviously true, but (25), the product of substituting identicals in (23), is false. Noonan contends though, that the phrase "was so-called because of his size" as it occurs in (23) and (25) denotes different predicates. The names 'Giorgione' in (23) and 'Barbarelli' in (25) affect which predicate is applied to them, and, hence, it is clear how the inference to (25) is invalid. Perhaps from (23) and (24) we can infer,

(26) Barbarelli was called 'Giorgione' because of his size

³²Noonan (1991, pg. 186).

but not,

(27) Barbarelli was called 'Barbarelli' because of his size

and thus not

(25) Barbarelli was so-called because of his size.

Noonan argues that the very same sort of Abelardian reference shifting takes place with modal predicates. The property expressed by,

(p1) *could survive a shattering*

stands for the property (for example),

(p7) *could be shattered and nevertheless remain a swan statue*

when attached to the name 'Swan', and it stands for the property,

(p8) *could be shattered and nevertheless remain a portion of ice*

when attached to the name 'Ice'. In this light, the Modal Property Objection is no longer persuasive. It is invalid. The Objection's conclusion,

CONCLUSION: Swan and Ice are not identical,

does not follow from the Premises,

PREMISE 1: Ice has the property *could survive a shattering*.

PREMISE 2: Swan lacks the property *could survive a shattering*.

The properties referred to by "could survive a shattering" in Premises 1 and 2 are different

properties, despite their apparent similarity. For Noonan, Premise 1 is best paraphrased by,

PREMISE 1_N: Ice has the property *could be shattered and nevertheless remain a portion of ice*,

and Premise 2 is best paraphrased by,

PREMISE 2_N: Swan lacks the property *could be shattered and nevertheless remain a swan statue*.

But notice, these premises contain *different* properties and together do not entail the conclusion that Swan and Ice are not identical. In this way, Noonan defends the contingent identity from the Modal Property Objection.³³

However, Noonan, like Gibbard, is open to the criticism that his semantics has compromised his metaphysics. According to Noonan, remember, a name in a modal context affects the reference of its predicate. Hence, while he accepts that,

(5) Swan is Ice

and,

(19) Ice could survive a shattering

are true, he maintains that no contradiction follows from the fact that

(17) Swan could survive a shattering

is false: the expression “could survive a shattering” as it occurs in (19) and (17) denotes *different* properties. With this in mind, it might appear as though, far from the unconventional metaphysics of contingent identity, Noonan’s is at heart a conservative view of necessity: according to Noonan, in fact *no* property possibly distinguishes Swan and Ice,

³³Noonan does not provide a formalization of his theory though it is clear how his answer would go.

and indeed it's hard to see how any property *could* distinguish Swan and Ice. But then in what sense are Swan and Ice possibly distinct?

Hence, on this interpretation anyway, it seems as though Swan and Ice are necessarily—and not just actually—identical. Plainly, this isn't contingent identity. Perhaps, Noonan, like Gibbard, has shown us how to consistently *say* that while Swan and Ice are identical, Ice could survive a shattering and Swan could not. But this alone is unlikely to satisfy the Defender of contingent identity or help with the puzzle of Swan and Ice. If the answer to the puzzle is that Swan and Ice are contingently identical, as Noonan argues (and the Defender agrees) then surely it would be very strange if, when we say that Swan and Ice are identical even though Ice could survive a shattering but Swan could not, we were committed to there being *no* property that possibly distinguishes Swan and Ice. Yet this seems to be Noonan's suggestion. It is contingent identity in name only. The metaphysics Noonan had intended to defend is compromised by the proposals he makes in its defense.

The weakness with Noonan's account of contingent identity—as with Gibbard's before—is that he fails to address the central metaphysical issues of contingent identity. How are Swan and Ice related? What metaphysical picture emerges from the story of Swan and Ice? Instead, Noonan concentrates on avoiding the Modal Property Objection by (loosely) semantic means. We learn that the names 'Swan' and 'Ice' affect the reference of the predicates to which they are attached, and hence that when we say that Ice has a property which Swan lacks we are in fact referring to different properties. But we don't learn enough about the individuals Swan and Ice. If they are actually the same individual, do they not have *both* of these properties? How? Why not? Reading Noonan, we are never to know. He concentrates on the means of avoiding the Modal Property Objection, not on explaining contingent identity. Unfortunately, those 'very means of avoiding the Objection seem to require a metaphysical picture at odds with the Thesis of Contingent Identity.

In the end, Noonan ultimately seems committed to the view that Swan and Ice are simply identical: nothing actually or possibly distinguishes them. Gibbard seems committed to the view that Swan and Ice are contingently identical, but only in the easy and trivial sense in which Ben Franklin and the Post Master General of the United States are contingently identical, a view which might be called 'contingent co-reference' rather than 'contingent identity'. Neither view, I contend, adequately represents contingent identity and neither satisfactorily solves the puzzle of Swan and Ice. Though perhaps Gibbard and Noonan

can evade the Modal Property Objection, theirs are not successful defenses of contingent identity.

Chapter 2

Making Semantic Sense of the Contingent Identity Conjecture

2.1 Introduction and Two Goals

Call the following metaphysical conjecture the *Contingent Identity Conjecture*:

CIC: One individual might have been each of two individuals.

The purpose of this paper is to propose and defend a semantics for modal logic which accommodates the CIC.

Let me begin with two preliminary remarks. First, one might reasonably wonder about the motivation behind our project. Why go to the trouble and complication of revising our standard modal semantics and logic? Indeed, Williamson argues that, though “any metaphysical caprice can be indulged in some more or less deviant formal system,” he reminds us of the “depth to be gained in metaphysics from orthodoxy in logic.”¹ Perhaps. But we should also be mindful of the depth in metaphysics *presupposed* by orthodoxy in logic. In fact, certain metaphysical puzzles have solutions which, while otherwise plausible (to some), are ruled out by the metaphysical commitments of orthodoxy in logic. Examining and questioning these metaphysical commitments can help us toward a solution to some metaphysical puzzles, or, at the very least, help us to see more clearly why a proposed solution fails.

¹Williamson (1999). In the cited passage, Williamson is actually reminding us that *the work of David Wiggins* “is a reminder of the depth to be gained in metaphysics from orthodoxy in logic”.

Second, the expression “contingent identity” is something of a touchstone in the literature. It is used to describe cases of so-called “contingent identity” from the trivial to the absurd. Sentences like “Bill Clinton is the President of the United States” have been called contingent identities, but even if they are statements of identity at all—and there is good reason to doubt this—then they are *contingent* identities in a trivial and uninteresting sense; true because “the President of the United States’ is an accidental designator and might have named someone other than Bill Clinton. The CIC postulates one individual which might have *been* two individuals, not merely one individual which might have had different names or descriptions. It is the former phenomenon it labels *contingent identity*, not the latter.

Similarly, the CIC is not committed to the absurd hypothesis that *two* individuals are identical but possibly distinct. Identity is the relation that holds between a thing and itself and nothing else. The CIC does not deny this, but rather posits the curious modal fact that under certain circumstances one individual might have been each of two individuals. “Contingent Identity” is really a poor name for what it describes and its continued use has more to do with the history of certain metaphysical puzzles than the idea that identity might really be contingent.² I’ll have more to say about this later in the paper.

Preliminaries aside, in the present paper I will propose a semantics for modal logic which accomplishes two goals: first, I want the semantics to be able to model simple cases of contingent identity, even simple cases of one individual’s possibly being each of two individuals; and second, the semantics must incorporate an account of predication which handles the problems that unavoidably arise in simple cases of contingent identity. Finally, I’ll address some concluding remarks on the subject of which modal logic is the appropriate logic of metaphysical necessity.

²Ramachandran (1990) has suggested the name “contingent uniqueness” and Forbes (1990) the name “contingent unity”. Bowing to tradition, I’ll continue to use the potentially misleading name “contingent identity”. Perhaps “contingent identity”, like “Dartmouth”, has lost (is losing, or ought to lose) its original connotation.

2.2 The Trouble with a Kripke-style Semantics

2.2.1 Basics

Beginning in 1963, Kripke proposed a semantics for modal logic which, with some refinement, has become the standard.³ It is unable, however, to accommodate the CIC and it is instructive—and helpful for our purposes—to see why not.

Begin with a standard formal language containing sentence letters, predicates, and individual variables, \forall , \neg , $\&$ $=$, and \Box .⁴ A Standard Kripke-Style model is an ordered quadruple $\langle W, R, D, v \rangle$:

W = a set of worlds

R = a relation on that set (accessibility)

D = a function which takes each $w \in W$ into a set of individuals D_w . U is the universal set, the set of all possible individuals ($\cup D_w$, for all $w \in W$).

v = a valuation function which, relative to a possible world w , assigns values to the primitive descriptive expressions of the language—truth values to sentences letters, and n-tuples of members of U to n-place predicates.

The truth of a sentence ϕ (simple or complex, open or closed) is defined recursively relative to a world w and an assignment function s in the usual way. The assignment function assigns elements of D_w to the variables; $s^{[d/x]}$ is the assignment function that is exactly like s except that it assigns d to x .⁵

$$V_w^s(P) = v_w(P) \text{ for all sentence letters } P.$$

$$V_w^s(Fx_1 \dots Fx_n) = 1 \text{ iff } \langle s(x_1), \dots, s(x_n) \rangle \in v_w(F)$$

$$V_w^s(\neg\phi) = 1 \text{ iff } V_w^s(\phi) = 0, \text{ and } 0 \text{ otherwise.}$$

$$V_w^s(\phi\&\psi) = 1 \text{ iff } V_w^s(\phi) = 1 \text{ and } V_w^s(\psi) = 1, \text{ and } 0 \text{ otherwise.}$$

³Kripke (1963).

⁴To avoid complications, I will omit individual constants. For more on the role of individual constants and contingent identity, see Chapter 3.

⁵This material is adopted and adapted from Stalnaker (1995) and also from notes from a seminar Stalnaker taught at MIT in 1995.

$V_w^s(\forall x\phi) = 1$ iff $V_w^{s[d/x]}(\phi) = 1, \forall d \in D_w$, and 0 otherwise.

$V_w^s(\Box\phi) = 1$ iff $V_{w'}^s(\phi) = 1, \forall w' : wRw'$, and 0 otherwise.

Of course, the value of a sentence ϕ is defined relative to a possible world and an assignment function as above whether ϕ is open or closed. (If ϕ is closed, then, relative to a possible world, ϕ receives the same value relative to *all* assignment functions. If ϕ is the open sentence Fx then, relative to a possible world w and an assignment function s , ϕ receives the value 1 iff the individual assigned by s satisfies Fx .) But for convenience, we might talk about the value of an open sentence *independent* of an assignment function. Thus, we say that, relative to a possible world, an open sentence ϕ of one free variable determines a subset of the domain, namely those individuals which satisfy it:⁶

$$V_w(\phi) = \{d \in D_w : V_w^{s[d/x]}(\phi) = 1\}$$

The standard two place identity predicate, “=”, also receives a value:

$$V_w(=) = \{ \langle d, d \rangle : d \in D_w \}.$$

As I mentioned above, a Standard Kripke-Style semantics (the “Standard semantics”), like the one outlined above, is not equipped to handle the truth of the Contingent Identity Conjecture. The difficulty is that the Standard semantics makes metaphysical assumptions about the individuals in the domains of the various possible worlds and how they are related. These assumptions manifest themselves in the way in which the semantics assigns extensions (sets of individuals) to modal predicates. This procedure bars the standard semantics from accommodating contingent identities, at least in the sense required by the CIC.⁷

2.2.2 Trouble

To see how and why the Standard semantics is unable to accommodate the CIC, suppose that the Conjecture is true. Suppose, that is, that one individual might have been each of

⁶An open sentence of two free variables determines a subset of *pairs* of individuals of the domain: those pairs which satisfy it. Similarly, an open sentence of n free variables determines a subset of n -tuples of the domain.

⁷The Standard semantics cannot accommodate contingent identities in the sense required by the Contingent Identity Conjecture, the sense sometimes called *genuine* or *robust* contingent identities. As mentioned at the outset, there are, of course, other senses of contingent identity—the trivial sense, for example—which the Standard semantics can accommodate perfectly well. See, for example, Hughes & Cresswell (1968, Chapter 11) in which a version of the trivial sense of contingent identity is accommodated in a version of the Standard semantics.

two individuals. The Standard Kripke-style semantics is not capable of handling sentences which refer to or appeal to this curious modal fact. For example, in the Standard semantics the extension of the predicate $\Diamond Sx$ is determined by the following generalization:

$$V_{@}(\Diamond Sx) = \{d \in D_{@} : V_w^{s[d/x]}(Sx) = 1 \text{ for some } w \text{ s.t. } @Rw\} \quad (2.1)$$

However, given the simplest picture of contingent identity—there are two possible worlds $@$ and w , accessible to themselves and each other, and one actual individual might have been each of two possible individuals—it's not clear how we're to evaluate (or even understand) (2.1).

Intuitively, (2.1) says that, relative to some assignment function s , $\Diamond Sx$ is true of some individual $d \in D_{@}$ iff Sx is true of that same individual in some accessible possible world, i.e. iff Sx is true of $d \in D_w$ for some w such that $@Rw$.

But in the picture of contingent identity we have described, one individual is possibly two distinct individuals. If this is right, then how can we make sense of such an individual's modal properties according to the Standard semantics? (2.1) says that, relative to some assignment function s , $\Diamond Sx$ is true of some actual individual d iff in some (accessible) w , Sx is true relative to an assignment function which is everywhere like s except that it substitutes d for each occurrence of x . So $\Diamond Sx$ is true of some $d \in D_{@}$ if Sx is true of *that very same* d only now as an element of some D_w such that $@Rw$. This means that $d(\in D_{@})$ must *itself* be an element of D_w and Sx must be true of *it*, i.e., true of d the element of D_w *and* $\in D_{@}$. But then how can the Standard semantics represent the possibility of d 's being each of two individuals in w (the CIC)? It cannot. The curious sort of modal fact expressed by the CIC is not the sort of modal fact that the Standard semantics has been constructed to represent—it doesn't have the resources or requisite apparatus. In fact, there is no way to accommodate the CIC in the Standard semantics because the Standard semantics—in the very way in which it is formulated—assumes that the CIC is false.

2.3 An Alternative Approach

2.3.1 Counterpart Semantics

The trouble with the Standard semantics, we noted, was that it makes certain metaphysical assumptions about the individuals in the domains of the various possible worlds. We must abandon these assumptions if we are to accommodate the Contingent Identity Conjecture. The usual approach—a version of counterpart semantics—will help us here.

First, the basics. Modify the standard semantics in the familiar way by requiring the domains of the various possible worlds to be disjoint. Next, for each individual in the domain of some possible world, we specify a *counterpart function* which relates that individual to individuals in the domains of other possible worlds, its *counterparts*. Thus, let c be a counterpart function so that $c(\alpha, w)$ picks out α 's counterpart in w .⁸ An individual's modal properties are determined by what is true of that individual's counterparts: what might have been true of some individual is what is true of one of its counterparts.⁹

Two remarks about the counterpart function are in order. First, I want to emphasize that our adoption of a counterpart semantics is not motivated by any substantive (and controversial) metaphysical view on the nature of individuals. In particular, it is not motivated by the desire to accommodate the hypothesis that no individual can exist in more than one place at once. David Lewis, notoriously, defends a version of modal realism and an accompanying counterpart semantics in which this hypothesis is treated seriously.¹⁰ I do not wish to enter the possibilist/actualist debate and do not adopt a counterpart semantics out of metaphysical considerations of the likes of Lewis's. On the contrary, the counterpart semantics offered here is metaphysically neutral and intended to help clarify the metaphysical commitments of the Standard semantics. In fact, the Standard semantics can be seen as a special case of our version of counterpart semantics by requiring certain restrictions on the counterpart function. If we require the counterpart function to be both transitive ($c(c(d, @), w) = c(d, @)$) and symmetric ($d \in w$ and $c(d, @) = e$ then $c(e, w) = d$) then individuals in the Standard semantics can be identified with equivalence classes of individuals in our counterpart semantics. Each semantic theory will validate the same sets of sentences,

⁸With certain restrictions on c : $c(\alpha, @) = \alpha$, and $c(\alpha, w) = \beta \rightarrow \beta \in D_w$.

⁹Counterpart semantics comes in many stripes. See Lewis (1986), Hazen (1979), and Stalnaker (1986) for some examples.

¹⁰See Lewis (1986).

all else being equal.¹¹ Of course, the point of adopting a counterpart semantics is that there may be metaphysical reasons for relaxing some of the restrictions on the counterpart function, or, by the same token, the decision to enforce certain restrictions—even to adopt the Standard semantics—may require a metaphysical defense. The decision to accommodate, or fail to accommodate, the CIC is just such a case. Arguing for this conclusion is one of this paper’s themes.¹²

Second, again in contrast to Lewis, our counterpart function is not grounded in relative similarity (or, indeed, in any such relation). For Lewis, some individual’s counterpart in a world (if any) is the individual in that world (if any) which most closely resembles it, an interpretation rooted in his metaphysics. Our counterpart function is stipulated, and other possible worlds defined in terms of it. Paraphrasing Kripkean rhetoric, counterpart functions are stipulated, not discovered. We begin with an individual (or set of individuals) and propose a possible world as a function of it: “Imagine a world in which I shattered this ice statue of a swan...”

Finally, with the apparatus in hand, we change the function which assigns extensions to singular terms (individual constants and variables)—first introduced in section 2.1—to reflect our adoption of counterpart functions:

$$V_w^s(x) = c(s(x), w)$$

Our changes to the semantics are reflected in the way in which extensions are assigned to modal predicates (formerly, given by the generalization (2.1)):

$$V_{@}(\Diamond Sx) = \{d \in D_{@} : V_w^{s[c(d,w)/x]}(Sx) = 1 \text{ for some } w \text{ s.t. } @Rw\} \quad (2.2)$$

¹¹See Stalnaker (1995).

¹²We might need to restrict, or choose to restrict, our counterpart function in other ways as well. For example, we may hypothesize and wish to respect essential relations between actual individuals. In such cases, not just any pairing of counterparts, not just any counterpart function, will be in Hazen’s (1979) phrase *admissible*. If the father/daughter relation is essential, that is, if my daughter could not have been anyone else’s daughter, then her counterpart in some world must have my counterpart in that world for her father. Any other pairing is inadmissible (if she could not have been Wayne Gretzky’s daughter, then she cannot have his counterpart for her counterpart’s father). See Hazen (1979). I do not know if the father/daughter relation—or any other—is essential in this sense, but if it is, it can be respected by exploiting the admissibility device. Indeed, a counterpart semantics coupled with the admissibility device can be used to explore and discuss the essentiality of any relation. In the one limit case, in which all relations obtain essentially and nothing could have been other than it is, there is only one admissible way of specifying counterparts: the way that reflects everything the way that it is. In the other limit case, the counterpart function is unconstrained. Perhaps neither case is metaphysically palatable, but the counterpart semantics is neutral on the question, at least at the outset, and is intended to provide a framework within which these questions can be posed. Thanks to Vann McGee for helpful discussions on this and other material.

Intuitively, (2.2) says that, relative to some assignment function s , $\Diamond Sx$ is true of some individual ($d \in D_{@}$) iff Sx is true of that individual's *counterpart* in some accessible possible world, i.e. iff Sx is true of $c(d, w)$ for some w such that $@Rw$. Assuming we restrict the counterpart function in the correct way, exactly the same sentences will be true in our counterpart semantics as were true in the Standard semantics.

2.3.2 Relaxing the Restrictions

In adopting a counterpart semantics, however, we have increased our expressive flexibility. In order to accommodate the CIC, we relax the requirement that the counterpart function must define an equivalence class, and we don't limit an individual to at most one counterpart in any possible world. Accordingly, to represent the possibility that one individual, a , might have been each of two individuals, b and c , we stipulate that in some (accessible) possible world, a has *two* counterparts, b and c . Recalling our intuitive language of the previous section, if an individual is represented as existing in some world in virtue of having a counterpart in that world, then we can represent the possibility of an individual's being each of two things by stipulating that in some world that individual has *two* counterparts.

Of course, in the case of an individual with two counterparts in some world, a simple counterpart *function* relating that individual to its counterparts will no longer do. Rather, we ought to say that a is related to its counterparts b and c by a counterpart relation, or—better for our purposes—a *set* of counterpart functions, and, pending further treatment, we can let context settle between them.

Therefore, the simplest model of contingent identity looks like this: there are two possible worlds, $@$ and w accessible to themselves and each other. $D_{@} = \{a\}$ and $D_w = \{b, c\}$. There is a counterpart function c such that $c(a, w) = b$ and another f such that $f(a, w) = c$. Also, $c(b, @) = a$ and $c(c, @) = a$.¹³

Our basic semantic picture accomplishes the paper's first goal: we can suppose that the CIC obtains, and model simple cases of contingent identity. For example, according to the familiar story, under certain circumstances, an individual ice statue of a swan, Swice (a), might have been each of two distinct individuals, Persists (b) and Perishes (c). This is depicted in our model by the fact that Swice has two counterparts in w , Perishes and

¹³This description is incomplete, of course: every individual is also its own counterpart, but for our purposes, we can ignore this complication.

Persists.

But accomplishing our first goal leads directly to the challenge of answering our second. Permitting cases of contingent identity—and modeling them as we have done—poses difficult problems for the semantics of predication. Witness: Recall our simple model of contingent identity and suppose that b and c are distinguished by the property Sx . Suppose, that is, that the following stipulations are true.

$$V_w(Sx) = \{b\} \tag{2.3}$$

$$V_w(\neg Sx) = \{c\} \tag{2.4}$$

$$V_{@}(Sx) = \emptyset \tag{2.5}$$

Given (2.3), (2.4), and (2.5), what is in the actual extension of $\Diamond Sx$? What is

$$V_{@}(\Diamond Sa) = ? \tag{2.6}$$

The trouble is that there is no unique, unambiguous counterpart function which takes a into a counterpart in w . Instead, we have stipulated that a is to be related to its w counterparts by a *set* of counterpart functions. In general, we can allow pragmatic considerations to settle disputes, but how does this work? And how can we represent it formally? In virtue of one counterpart function—the one that picks b as a 's w counterpart—there is an accessible possible world in which Sx is true of a 's counterpart, and, hence, $\Diamond Sx$ is true of a . However, in virtue of another counterpart function—the one that picks c as a 's w counterpart—there is no accessible possible world in which Sx is true of one of a 's counterparts, and, hence, $\neg\Diamond Sx$ is true of a . But are *both* $\Diamond Sx$ and $\neg\Diamond Sx$ true of a ? If so, how?

Answering these questions is our second goal, the chief difficulty facing the defender of contingent identity, and the central concern of this paper.

2.3.3 A First Approximation

Intuitively, how might we evaluate (2.6)? Taking up our example again, suppose Sx stands for the predicate x *survives a shattering* and, accordingly, $\Diamond Sx$ stands for the predicate x *could survive a shattering*. Then, recalling the story, Persists survives a shattering and

Perishes does not. What of Swice? Could it survive a shattering or not?¹⁴ The dilemma is that Swice is related to its w counterparts by a set of counterpart functions, one member of which picks out Persists, the other Perishes, and in virtue of which both $\Diamond Sx$ and $\neg\Diamond Sx$ seem true of Swice. How can this be?

Foollowing (a somewhat modified) Gibbard, we may—and should, I think—reply, that Swice *qua* Persists (*qua* ice, that is) survives a shattering, but that Swice *qua* Perishes (*qua* statue) does not.¹⁵ That is, Swice-the-statue could not survive a shattering, but Swice-the-portion-of-ice could. This is not, of course, to suggest that Swice is somehow *two* things, but rather that it can be understood, individuated, or presented in different ways. According to one way of individuating Swice, it could survive a shattering; according to another, it could not. This seems exactly the kind of thing we’re likely to say, and indeed, it seems to me the correct sort of response. With counterpart functions playing the role of *ways of individuating*, we can gloss this idea by arguing that relative to one way of individuating Swice, Swice could survive a shattering, relative to another, it could not; and, of course, relative to no way of individuating Swice could it survive and fail to survive a shattering.

The basic intuition, therefore, when confronted with sentences which are ambiguous or indeterminate, sentences like “Swice is possibly S ”, is to relativize them to determinate counterpart functions. As a first approximation at regimenting this idea, we might say that $\Diamond Sx$ is true of some individual a if there is a counterpart function c such that Sx is true of $c(a, w)$ for some accessible w . Accordingly, we modify (2.2)...

$$V_{@}(\Diamond Sx) = \{d \in D_{@} : V_w^{s[\exists c(d,w)/x]}(Sx) = 1 \text{ for some } w \text{ s.t. } @Rw\} \quad (2.7)$$

At first glance (2.7) seems to give us the right results. $\Diamond Sx$ is true of Swice since there

¹⁴In the literature, contingent identity is typically discussed as the contingent identity of “Swan and Ice”, of “Goliath and Lump!”, of “statue and clay”. (See, for example, Gibbard (1975) and Thomson (1998).) But notice the sort of confusion which easily results from talking in this way. *Of course* Ice could survive a shattering. And *of course* Swan could not. So how could they be identical, contingently or otherwise? The trouble with names like “Swan” and “Ice” is that they are naturally (and often) understood to incorporate or invoke individuating (i.e. counterpart) functions which can complicate and distort sentences in which they occur. This sort of understanding is just the kind of pragmatic consideration we count on to help disambiguate predications. Nevertheless, in cases like “Swan and Ice” and “Goliath and Lump!”, pragmatic considerations might also cloud the issue. I discuss these ideas, and the objection to contingent identity which naturally arises from them, in Chapter One.

¹⁵See Gibbard (1975). Gibbard’s approach to contingent identity is different from my own (see Chapter 1 for some criticism), but I think he is right, or, at the very least, on the right track, in his use of *qua*. Gibbard, however, offers no details on its semantic function. In the text, I suggest that *qua* functions as a tool for relativizing individuals to counterpart functions.

is some counterpart function c such that, for some accessible possible world w , Sx is true of $c(\text{Swice}, w)$ and relative to c , Swice is shatterable. Similarly, $\neg\Diamond Sx$ is true of Swice since there is some counterpart function f such that, for every accessible possible world w , $\neg Sx$ is true of $f(\text{Swice}, w)$ and relative to f , Swice is not shatterable. Of course, there is no counterpart function relative to which the complex predicate $(\Diamond Sx \& \neg\Diamond Sx)$ is true of Swice.¹⁶ These results echo our intuitions regarding Swice and sentence (2.6), canvassed in the preceding paragraphs. But the success is short lived. A semantics which yields (2.7), our first approximation, has insurmountable problems.

2.3.4 Trouble with the First Approximation

As Stalnaker points out in (1986), the trouble with our first attempt at accommodating the CIC, our First Approximation semantics, is that it greatly distorts the usual function of our logic. While it might seem strange at first that both $\Diamond Sx$ and $\neg\Diamond Sx$ are true of Swice, we can explain—perhaps with the *qua* device—how this is so and why, on reflection, it seems reasonable. However, though it may seem reasonable that both $\Diamond Sx$ and $\neg\Diamond Sx$ are true of Swice, it cannot seem reasonable for $(\Diamond Sx \& \neg\Diamond Sx)$ to be true of Swice, for no individual satisfies a contradictory property (though it may—at different times or in different ways—satisfy contradictory properties). The semantics reflects this, but the prohibition that bars the move from the truth of $\Diamond Sx$ and $\neg\Diamond Sx$ to $(\Diamond Sx \& \neg\Diamond Sx)$ is uncomfortable and unnatural.

Moreover, the quantifiers don't function normally in our First Approximation semantics. In particular, \forall and \exists are no longer interchangeable in the usual way: $\forall xFx \leftrightarrow \neg\exists x\neg Fx$ fails. (Both $\forall x\Diamond Sx$ and $\exists x\neg\Diamond Sx$ are true in our model.)

The problem with our first approximation is that, in order to allow for the possibility of an individual's having multiple counterparts in a single possible world, we introduced a quantifier into our method of assigning extensions to predicates—reflected in (2.7)—which twists the standard rules of logic. We must refine our First Approach or else abandon the project of accommodating the CIC.

¹⁶In the interests of clarity, it is helpful in these circumstances to employ *abstraction*. So while we might be able to explain in what sense Swice has the property $\hat{x}\Diamond Sx$, and also the property $\hat{x}\neg\Diamond Sx$ there is no sense in which Swice has the property $\hat{x}(\Diamond Sx \& \neg\Diamond Sx)$ for nothing can satisfy a contradictory property. Abstraction is a useful variable binding tool when it is ambiguous whether a particular string of symbols, for instance " $(\Diamond Sx \& \neg\Diamond Sx)$ ", expresses a predicate or the conjunction of two open sentences. See Stalnaker (1977).

2.4 Specification Semantics

2.4.1 Counterpart Functions and Possible Specifications

The basic idea behind our First Approximation semantics was to accommodate an individual's curious—and seemingly incompatible—modal properties by relativizing property possession to counterpart functions (intuitively, ways of specifying an individual, perhaps employing the *qua* device) and thus to solve the problems which the CIC poses for the semantics of predication.

The trouble for the First Approximation arose from the manner in which we carried out the relativizing. The existential quantifier smuggled into (2.7) distorts our logic and forces us to abandon the approach. If the cost of contingent identity is a drastic change in our logic, it is too high.

Specification Semantics—a refinement of our First Approach which I will now sketch—follows the same general strategy of relativizing property possession to counterpart functions which we followed in our First Approximation. It is not, however, subject to the same debilitating objections. Instead of trying to incorporate counterpart functions into the notion of predication (as in our First Approximation) Specification Semantics makes allowances for the troublesome counterpart functions from within the notion of possibility itself. Intuitively, Specification Semantics treats different descriptions of a possibility, or different ways of talking about it, as constituting *different* possibilities or, more accurately, different *aspects* of the same possibility. This move has two important consequences. First, it avoids the pernicious existential quantifier which compromises our First Approximation, and thus preserves the elements of our standard logic which the earlier approach sacrifices. The price we must pay to accommodate the CIC is primarily one of complexity, not one of contortion. Second, it reflects a small but important difference in the motivating intuitions of the two theories. Part of the intuition behind the move to accommodate counterpart functions from within the notion of possibility is a recognition that, in evaluating particular modal sentences, our interest is often directed toward an individual and its counterparts, modes of presentation, properties *qua* this or that—rather than just toward a possible world—and it is relative to these that an evaluation is pertinent. In other words, building counterpart functions into the notion of possibility allows us to relativize property possession to different

aspects of possibilities, not just to possibilities *simpliciter* as they are usually construed.¹⁷

The mechanics of Specification Semantics follow this basic outline. Start with the usual sort of counterpart semantics, and the usual sort of model (section 3.1). Our aim is to replace the old set W with a new set W^* . W^* is comprised of ordered pairs, members of the old W paired together with counterpart functions; a set of possible worlds paired with possible counterpart specifications. Property possession is then relativized to members of this new set, allowing us the means to talk about different *aspects* of the same possibility.

Specifically, we modify the original counterpart semantics in the following way: First, define a *Global Counterpart Function*, or *CPF*: A *CPF* takes each (specified) $d \in D_w$ for each (specified) $w \in W$ and returns some $i \in D_{w'}$ — d 's counterpart in w' —for some w' . Two quick remarks: first, a *CPF* can be partial; we might not specify (or not completely specify) some individual's counterparts; and second, as before, the *CPF* is stipulated, not discovered.

Notice that some individual(s) d , in some possible world(s) w , may have two or more counterparts in that world. In such cases, d is related to its counterparts in w by a *set* of counterpart functions. Accordingly, each member of such a set is a member of a *different CPF*. Thus, for each $d \in D_w$, each $w \in W$, and each member f of each of set of counterpart functions in which d occurs as an element of the range, $f(d, w)$ is an element of the range of some *CPF*.

Consider an example. Take again our simplest picture of contingent identity from section 3.2. To refresh, there are two possible worlds, @ and w accessible to themselves and each other. $D_{@} = \{a\}$ and $D_w = \{b, c\}$. There is a counterpart function c such that $c(a, w) = b$ and another f such that $f(a, w) = c$ — a is related to its w counterparts by a set of counterpart functions. Also, $c(b, @) = a$ and $c(c, @) = a$.¹⁸ From this simple model we can define two *CFs*:

$$CPF_1 = \{ \langle \langle a, w \rangle, b \rangle, \langle \langle b, @ \rangle, a \rangle, \langle \langle c, @ \rangle, a \rangle \}$$

¹⁷The added semantical flexibility afforded by focusing on aspects of possibilities, rather than on possibilities *simpliciter*, is exploited in the literature, more or less implicitly by Hazen (1979) and Stalnaker (1986), and in a different application by Lewis (2000).

¹⁸Once more, we ignore the complications arising from the fact that each individual is its own counterpart.

and

$$CPF_2 = \{ \langle \langle a, w \rangle, c \rangle, \langle \langle b, @ \rangle, a \rangle, \langle \langle c, @ \rangle, a \rangle \}$$

Finally, for each $w \in W$ and for each unique CPF we create the pair $\langle w, CPF \rangle$. Let W^* be the set of all such pairs. The valuation function V assigns values relative to members of W^* — V assigns functions from members of W^* into extensions. In our simple model W^* looks like this:

$$W^* = \{ \langle @, CPF_1 \rangle, \langle @, CPF_2 \rangle, \langle w, CPF_1 \rangle, \langle w, CPF_2 \rangle \}$$

Let's label the members of W^* with capital Greek letters— A, B, Γ, Δ in this case—and call them *possible specifications*. (Say that two possible specifications are R related iff their possible world components are.) Notice that possible specifications (the members of W^*), unlike simple possible worlds (the members of W), are not simple *possibilities* as they are usually construed. Instead, they are possibilities rather more subtly drawn: pairing possible worlds with counterpart specifications allows us to distinguish not just different possibilities, but in cases of ambiguity, different aspects of the same possibility.

How does the addition of CPF s and the set W^* change the semantic rules for the system? When we adopted the counterpart alternative to the Kripke-style Standard Semantics we only had to alter the rule for the valuation function (V) to suit the new counterpart apparatus. (Recall: the original rule, $V_w^s(x) = s(x)$, became $V_w^s(x) = c(s(x), w)$ in the alternative semantics.) When we considered our First Approximation Semantics, together with the change in the rule for the valuation function, we modified the rule that specifies for a given open sentence what counted as satisfying it. But this change had far reaching negative consequences on our logic. In embracing the Specification Semantics, we again effect the changes to the valuation function, required to accommodate counterparts. But we do not need to change any of the other rules. We must only realize that the 'worlds', the w 's, relative to which (together with an assignment function) the valuation function assigns values to the expressions of the language are not elements of W , i.e., possible worlds, but elements of W^* , i.e., possible specifications.¹⁹

¹⁹Incidentally, this provision answers a question about the rule for the necessity operator, \Box , in the Specification Semantics. When an individual is limited to at most one counterpart in any possible world, the rule for \Box is straight forward: $\Box Fa$ is true iff F is true of a 's counterpart in every R related world in which a has a counterpart. However, if we allow an individual to have multiple counterparts in other possible

A quick glance confirms that our new Specification Semantics produces results in accordance with our intuitions, at least in so far as they are informed by the CIC. In our simple model of contingent identity, $\Diamond Sx$ and $\neg\Diamond Sx$ are both true of a depending on which aspect of a 's modal possibilities we're interested in—relative, that is, to different counterpart functions.

$$V_A(\Diamond Sx) = \{a\} \quad (2.8)$$

$$V_B(\neg\Diamond Sx) = \{a\} \quad (2.9)$$

But at the same time, there is no aspect of a 's modal possibilities, to put it awkwardly, according to which a satisfies the contradictory property $(\Diamond Sx \& \neg\Diamond Sx)$ (or more clearly, $\hat{x}(\Diamond S \& \neg\Diamond S)x$).

$$V_{\forall w \in W^*}^s(\Diamond Sx \& \neg\Diamond Sx) = \emptyset \quad (2.10)$$

Putting the point differently, in the familiar story, we might say that $\Diamond Sx$ is true of Swice relative to the possible specification A (that is, $\Diamond Sx$ is true of Swice *qua* the possible specification which counts Swice's ice qualities as salient), and $\neg\Diamond Sx$ is true of Swice relative

worlds, we have a choice to make regarding the rule for necessity. We can say either that $\Box Fa$ is true iff F is true of *all* of a 's counterparts in every R related world in which a has a counterpart; or else we can say that $\Box Fa$ is true iff, given a way of choosing counterparts for a , F is true of all of a 's counterparts *according to that way of choosing them* in every R related world in which a has a counterpart. The first version of the rule allows both the possible world and the counterpart function to vary; the second allows only the possible world to vary while keeping the counterpart function fixed. The Specification Semantics involves the second choice, which seems to me preferable.

Consider this variation on our famous example. According to the story, a certain ice statue of a swan called 'Swice' might have been, if I'd shattered it, each of two distinct possible individuals: Perishes, a shattered swan statue, and Persists, a scattered portion of ice. It might seem reasonable to suppose that Persists is essentially made of ice but that Perishes is only accidentally made of ice. (It is plausible that the swan statue, but not the portion of ice, might have been made of marble.) If this is right, then Swice, on one way of individuating it—that is, relative to one possible specification—is *necessarily* made of ice, but, on a different way of individuating it—relative to a different possible specification—is only *accidentally* made of ice. We might analogously answer Quine's question concerning whether his mathematician cyclist is necessarily two legged and only accidentally rational, or necessarily rational and only accidentally two legged. The mathematician *qua* mathematician is necessarily rational; the mathematician *qua* cyclist is necessarily two legged. Which of an individual's aspects are counted as salient determines a way of individuating and, hence, relative to that way of individuating, which of that individual's properties are necessary or accidental. (See Quine (1960, Section 41).) The version of the rule for \Box incorporated into the Specification Semantics, according to which the counterpart function is held fixed while the possible worlds vary, accommodates this duality. The alternative version of the rule, in which both the counterpart functions and the possible worlds vary, does not. See in this connection Lewis's (2000). My ideas have many points in common with those expressed by Lewis, and the Specification Semantics, devoid of Lewis's possibilist commitments, may be a helpful lens through which to view them.

to the possible specification B (that is, $\neg\Diamond Sx$ is true of Swice *qua* the possible specification which counts Swice's statue qualities as salient). Similarly, $(\Diamond Sx \& \neg\Diamond Sx)$ is not true of Swice relative to any possible specification (that is $(\Diamond Sx \& \neg\Diamond Sx)$ is not true of Swice *qua* anything whatsoever). In this way we can make sense of how an individual ice statue, had I shattered it, would have been each of two individuals—one which survives the shattering and one which does not—and how this is reflected in the actual ice statue's modal properties: relative to one aspect of the possibility in which I shatter the statue it could survive, relative to the other, it could not.

Moreover, our new Specification Semantics escapes the problems which befell our First Approximation. The prohibition on inferring

$$(\Diamond Sa \& \neg\Diamond Sa) \tag{2.11}$$

from the truth of

$$\Diamond Sa \tag{2.12}$$

and

$$\neg\Diamond Sa \tag{2.13}$$

is less mysterious and uncomfortable than it was in our First Approximation. (2.12) and (2.13) are true relative to *different* possible specifications ($V_A^s(\Diamond Sa) = 1$ but $V_B^s(\neg\Diamond Sa) = 1$) and cannot be legitimately combined into (2.11). Denying that (2.11) follows from (2.12) and (2.13) is no more troublesome or *ad hoc* than denying that,

It is and it is not possible for me to catch the train now,
follows from,

It is possible for me to catch the train now,
and,

It is not possible for me to catch the train now,
when the latter two sentences are uttered at different times. Keeping in mind our refinement of possible worlds into possible specifications, the fallacy made in inferring (2.11) from (2.12) and (2.13) is analogous to the fallacy made in inferring,

In some possible world Humphrey wins and fails to win the election,
from,

In some possible world Humphrey wins the election,
and,

In some possible world Humphrey fails to win the election.

Similarly, without the pernicious hidden existential quantifier of the First Approximation, the rules governing the inter-definability of quantifiers apply normally in our Specification Semantics. In our model, it is not objectionable that both $\exists x \neg \Diamond Sx$ and $\forall x \Diamond Sx$ are true, since they are true relative to different possible specifications. And, of course, the sentence $\neg(\neg \exists x \neg \Diamond Sx \leftrightarrow \forall x \Diamond Sx)$ is not satisfiable relative to any possible specification.

2.4.2 Grained Models and Supervaluations

As we have seen, Specification Semantics accommodates the CIC by incorporating disambiguating counterpart functions into the notion of possibility itself, forming a set W^* of possible world counterpart function pairs, and sentences are evaluated relative to these pairs. Thus, when confronted with a sentence attributing an ambiguous modal predicate ('Swice is shatterable', for instance) we look to the specified counterpart function(s) in the possible world counterpart function pair—relative to which the sentence is evaluated—to choose the aspect of a possibility relevant to the evaluation and hence disambiguating the predicate. But can't we ask, what about Swice *simpliciter*? Is $\Diamond Sx$ true of Swice *simpliciter*? What if we haven't stipulated a *CPF* for Swice relative to which we are meant to evaluate sentences attributing modal properties? How do we proceed in the absence of a determinate way of individuating Swice?

Of course, in the present semantics, such a situation cannot arise: it is an essential feature of our models that they contain *CPFs* and that sentences are evaluated relative to them. But this is an unnecessary and burdensome requirement. Must we always specify which of an individual's counterparts pertains? Pragmatic considerations may help, of course: we can frequently leave disambiguation up to the context. But we cannot count on the context to handle all cases and requiring speakers to clearly indicate which of a set of counterpart functions they intend to invoke requires too much of our speakers.

A simple but powerful addition to our semantics, first suggested by Stalnaker in (1986), solves the problem. Distinguish between *fine* and *course grained* models. Call the Specification Semantics sketched here so far 'fine grained'. Call the fragment of the fine grained

semantics which omits the *CPF*s from the elements of W^* , ‘coarse grained’.

The members of a coarse grained W^* , bereft of counterpart functions, are simply equivalent to the possible worlds of the standard semantics, equivalent, that is, to W . And given any coarse grained model, we can construct the set of all its fine grained refinements by pairing each coarse grained possible world with each determinate *CPF* for each individual in the coarse grained domain: given a coarse grained set W , we can construct a new fine grained set W^* . This is just what we have done in section 4.1.

We may now introduce supervvaluations to evaluate the truth values of modal sentences when no particular *CPF* is specified, either explicitly or by the context. Say that a sentence is true in the coarse grained semantics just in case it is true on all of its fine grained refinements; false if it is false on all of its fine grained refinements; and neither true nor false if it is true on some (at least one) of its fine grained refinements, and false on others.

Following this procedure, the sentence,

$\diamond Sa$

in the absence of a stipulated *CPF* relative to which a determinate evaluation can be made, is neither true nor false, having some true fine grained refinements and some false. For the same reason, the sentence,

Swice is shatterable,

is also neither true nor false.²⁰

This result accords well, I think, with our (CIC informed) modal intuitions. If you hold up an ice statue and ask me, “Is this shatterable?” How should I answer? “Well,” I might say, “what do you have in mind, the statue’s ice features, or it’s swan features?” If you tell me you have in mind its ice features, I’ll reply “Yes”; if you tell me you have in mind its statue features, I’ll reply “No”. My question amounts to asking you from which possible

²⁰Suppose, in line with much of the literature on contingent identity (see 9 above), that “Swan” and “Ice” are both additional names for Swice. Then the sentence “Swan is shatterable” should have the same truth value as “Swice is shatterable”. Yet it might seem that “Swan is shatterable” is surely false—no nether true nor false—and that this is both puzzling and worrying. If “Swan” and “Swice” are co-referential what accounts for the difference between “Swan is shatterable” and “Swice is shatterable”? The answer is that while “Swice” and “Swan” agree in reference, they differ in *sense* (or mode of presentation, or ingredient sense) and this explains why the names embed differently in modal contexts: “Swan” embodies (incorporates or invokes) an individuating function which picks out Swan’s statue-like counterparts in other possible worlds; “Swice” has no such commitment. This reply is only a sketch. For more on the interaction of names and the CIC, see Chapter 1 and Chapter 3.

specification you mean me to make my evaluation; your answer amounts to invoking a counterpart function for the ice statue which identifies the qualities you are interested in and picks out the relevant counterpart. If you dig in your heels and reply, shaking the statue, “No. I mean *this*,” then your question has no obvious and simple answer for it is neither true nor false that Swice is shatterable. Swice could survive a shattering and it could not survive a shattering relative to different aspects of the same possibility. Perhaps I’ll reply, “Well, it is neither true nor false that Swice is shatterable”, or more colloquially, “Yes and No”. I think this is a common sort of response, and it seems to me exactly the right sort of thing to say, at least if we are at all moved by the intuitions motivating the CIC.²¹

2.5 Expressing the Contingent Identity Conjecture

It is one thing to accommodate the CIC—providing the semantic means to discuss the metaphysics of contingent identity and to articulate and develop particular instances—it is another thing to express, in the object language, the CIC itself. To this point, we have relied on intuitive and metalinguistic statements of the Conjecture, characterizing it as the thesis that one individual might have been each of two individuals. It is natural to wonder if the Conjecture can be expressed formally in the object language.

Given that the CIC concerns *contingent* identity, at least in the sense discussed in section 1, a sentence denying the *necessity* of identity seems an obvious candidate to express it. Fortunately, however, it does not. The necessity of identity (NI).

$$\forall xy(x = y \rightarrow \Box(x = y))$$

is valid in the Specification semantics proposed here.²² If the assignment function assigns the same individual to both x and y (as it must if (NI)’s antecedent is to be true) then whichever

²¹As I mention in Chapter 1, this sort of response is not open to Gibbard (or Noonan).

²²In fact, this is inaccurate. (NI) is valid in neither the Standard semantics nor in the Specification semantics presented here because not all individuals need exist necessarily. A related principle, which Stalnaker in (1995) calls the principle of the essentiality of identity,

$$\forall xy(x = y \rightarrow \Box(Ex \rightarrow x = y))$$

(where Ex stands for ‘ x exists’) is valid in both semantic theories. For our purposes we will ignore the complications which arise from the possibility that not all individuals exist necessarily. See Stalnaker (1995).

way one picks a counterpart for x will be a way of picking the *same* counterpart for y (x is y), and hence (NI) will be true from the perspective of every possible specification. Moreover, seeing as (NI) is provable in even the weakest systems of modal logic, it is fortunate that the Specification semantics validates it.

As Stalnaker shows in (1986), a sentence closely related to (NI), its inner necessitation (NNI),

$$\forall xy \Box(x = y \rightarrow \Box(x = y))$$

is not valid in (many) models that permit contingent identity. In our simple model of contingent identity, b and c share a counterpart in $@$, but they are distinct in w , and hence, b and c satisfy the negation of (NNI); call it (NotNNI),

$$\exists xy \Diamond(x = y \& \Diamond(x \neq y)).$$

Yet the falsifiability of (NNI) is not damaging to the Specification semantics and the case for contingent identity—as the falsifiability of (NI) would have been had it turned out to be possible—for, in contrast to (NI), (NNI) is *not* provable in the weakest systems of modal logic. In particular, Stalnaker has shown that (NNI) requires the Converse Barcan formula (CBF),

$$\Box \forall x Fx \rightarrow \forall x \Box Fx$$

for its proof, and the (CBF) is valid only if we make certain assumptions about modal predication and the relations among the individuals in the various domains, assumptions which the Specification semantics does not make.²³ (In particular, in our present case, to validate the (CBF), we must assume that the counterpart function is transitive: we must assume that an n -iterated modal predicate—a predicate prefaced by n ‘ \Box ’s or ‘ \Diamond ’s—is satisfied by an individual d if d ’s n th counterpart— d ’s counterpart’s counterpart’s counterpart. . . n times—satisfies the corresponding non modal predicate. So, on this assumption, for ex-

²³Stalnaker (1995). Another sentence,

$$\forall xy (\Diamond(x = y) \rightarrow \Box(x = y))$$

which looks like the denial of the CIC is provable without the (CBF), but only with the help of the B axiom schema. This sentence is closely related to the necessity of distinctness and, like it, is falsifiable in a semantics which accommodates the CIC. I will discuss the necessity of distinctness and the B axiom schema in the next section.

ample, $\exists x \diamond \diamond Fx$ is true in @ iff for some $d \in D_{@}$, $c(c(d, w), w')$ is F for some w, w' such that $@Rw$ and wRw' . The Specification semantics does not make this assumption; rather $\exists x \diamond \diamond Fx$ is true iff for some $d \in D_{@}$, $c(d, w')$ is F for some w, w' such that $@Rw$ and wRw' .)²⁴

In any event, (NotNNI) does not express the CIC, at least not directly. Instead, (NotNNI) expresses an kind of *reflected* contingent identity: a pair of distinct possible individuals might have been identical (they have a common counterpart in the actual world). Thus (NotNNI) expresses a case of *fusion*. By contrast, the CIC describes a case of *fission*: one individual might have each of two individuals (one individual has two counterparts in some accessible possible world). Examples of fusion may well accompany instances of the CIC, but such cases do not capture the full notion of contingent identity. In fact, (NotNNI) is valid in some models that *bar* cases of contingent identity, for example those models that allow fusion but forbid fission (when, for example, the accessibility relation is asymmetric).

The difficulty we encounter in trying to express the CIC is that we are misled by its name into thinking it is primarily a conjecture about *identity*. Identity is the relation that holds between an individual and itself, and this relation cannot fail to be necessary. Yet the occurrence of 'identity' in the phrase 'Contingent Identity Conjecture' prompts us to seek an object language expression of the Conjecture involving the '=' sign. But as we have found, this strategy does not succeed. The Specification semantics validates (NI), the denial of which seemed the most obvious way to express the CIC. Furthermore, though (NNI) may fail in models permitting contingent identity, its denial, (NotNNI), at best expresses *reflected* contingent identity. Of course, to say that the CIC is not a conjecture about identity, is not to say that the Conjecture in no way concerns identity: it is a conjecture about what an individual might have been, and it is often characterized (however misleadingly or

²⁴ Again, I have ignored the complications which arise from the possibility that an individual might not exist in some possible world. As Kripke showed in (1963), (CBF) requires the assumption that, whenever $@Rw$, every member of $D_{@}$ has a counterpart in D_w , and so (CBF) fails in cases in which some $d \in D_{@}$ does not exist in w . Stalnaker's necessary essentiality of identity (NEI),

$$\forall xy(x = y \rightarrow \Box(Ex \rightarrow x = y))$$

avoids this problem. Like (NNI), (NEI) requires a version of the Converse Barcan formula for its proof, namely, the Qualified Converse Barcan formula (QCBF),

$$\Box \forall x Fx \rightarrow \forall x \Box (Ex \rightarrow Fx).$$

And like the (CBF) the (QCBF) is valid only if we make the same assumptions about modal predication and the relations among the individuals in the various domains. See Kripke (1963) and Stalnaker (1995).

inaccurately) as the thesis that some identity statements between rigid designators might hold contingently.²⁵ But as soon as we try to formally express the Conjecture in terms of the '=' sign, we run into trouble. In the Specification semantics, identity functions normally, so we cannot express the CIC by denying (NI). The sentence $(x = y \& \diamond(x \neq y))$ is unsatisfiable: where the assignment function assigns the same individual, d , say, to both x and y , it should be no surprise that d is necessarily self-identical. Yet, at the same time, the CIC is a hypothesis about a *single individual*. In the case of (NotNNI), $\diamond(x = y \& \diamond(x \neq y))$ is satisfiable only where the assignment function assigns *different* individuals to x and y —two possible individuals fuse in the actual world—and this isn't contingent identity, but reflected contingent identity or a version of *contingent distinctness*. Putting the point loosely, in our simple model of contingent identity, either the variables x and y are assigned the same individual, in which case $x = y \& \diamond(x \neq y)$ is false and so *ipso facto* does not express the CIC; or else the variables x and y are assigned different individuals in which case $\diamond(x = y \& \diamond(x \neq y))$ is true, but again does not express the CIC.

Perhaps we should abandon our attempts to express the CIC in terms of identity. The challenge in building a semantics to accommodate the CIC came not from problems arising with respect to the function of identity, but rather from problems arising with respect to the function of predication, and this should provide some clue as to how we might express it. It is reasonable, therefore, to focus our attention on expressing the CIC in terms of predication rather than identity. Observing this idea, we might describe the CIC, metalinguistically, as the following hypothesis: some individual a might be F and some individual b might be G , and a and b are the same individual, and F and G are different aspects of the same possibility. Helping our selves to the apparatus of second order modal logic, we can formalize this hypothesis:

$$\diamond \exists x \exists F (\diamond Fx \& \neg \diamond Fx) \tag{2.14}$$

Notice that (2.14) is true *only if* the CIC is true. Some individual d can satisfy $\diamond Fx$ on the one hand, and $\neg \diamond Fx$ on the other only if it satisfies them with respect to different *aspects* of the same possibility, only if d has two counterparts in some possible world, one of which satisfies F , the other of which does not. Thus, though it may not express the CIC directly, (2.14) entails the CIC.

²⁵For more on rigid designation and the CIC, see Chapter 3.

Of course, as is immediately obvious, (2.14) is a substitution instance of,

$$\diamond\exists x\exists F(Fx\&\neg Fx). \quad (2.15)$$

If we formulate the Law of Contradiction by,

$$\neg\diamond\exists x\exists F(Fx\&\neg Fx) \quad (2.16)$$

then one of the consequences of the present view is that certain instances of the Law of Contradiction, as expressed by (2.16), are not true. In particular, one cannot innocently substitute intensional properties into (2.16) *salva veritate*. Exceptions to (2.16), however, are well known. Socrates is both taller than Theatetus and not taller than Theatetus, when evaluated at different times; the Hemlock is both healthy and not healthy, when evaluated in different respects. These examples are not puzzling, and suggest that (2.16) is a poor regimentation of the Law of Contradiction. By contrast, Aristotle's presentation of the Law includes qualifications which explain the examples. He expresses the Law of Contradiction as follows:

The same attribute cannot at the same time belong and not belong to the same subject in the same respect.²⁶

The phrases "at the same time" and "in the same respect" provide room for the cases of Socrates and the Hemlock. Similarly, too, for the CIC. An individual which satisfies both $\diamond Fx$ and $\neg\diamond Fx$ --Swice, perhaps--does not satisfy them both in the same respect; it satisfies them relative to different aspects.

Accordingly, (2.16) should be distinguished from the Law of Contradiction. Adopting the abstraction apparatus to disambiguate, (2.16) should be distinguished from,

$$\neg\diamond\exists\hat{x}\exists F(F\&\neg F)x, \quad (2.17)$$

and (2.14) from,

$$\diamond\exists\hat{x}\exists F(\diamond F\&\neg\diamond F)x. \quad (2.18)$$

Sentences, (2.17) and (2.18) are false, whatever the status of the CIC. In (2.17) and (2.18)

²⁶Aristotle, *Metaphysics*, 1005b.

there is no room to admit the caveats “at the same time” or “in the same respect”. Thus (2.17), closed to exceptions, is a better regimentation of the Law of Contradiction. But then notice: (2.14) is no longer the negation of an instance of the Law of Contradiction. The champion of the CIC, like everyone else, cannot tolerate contradictions. Regarding (2.14) as true, contrary to fist impressions, does not compel him to.²⁷

As a final remark in this section, our observations concerning the difficulty of expressing the CIC in terms of identity reinforces the position, first broached in section 1, that “contingent identity” is a poor name for the phenomenon it describes. How much is contingent identity really about *identity*? Identity is simply the relation which holds between everything and itself. This is not what the CIC challenges. To be sure, the CIC postulates a certain metaphysical picture according to which one individual *might have been* each of two individuals, and the expression “might have been” is the subjunctive past perfect of “is”, and “is” is just identity. But the questions about identity raised by the CIC are not questions about the function and semantics of the identity symbol “=”. They are, instead, questions about ontology, persistence, and constitution. The sentence ($d = e$) is true in a possible world just in case the counterpart of d in w is the counterpart of e in w , just in case, that is, d and e are *the same individual*. This is, as David Wiggins says, “part of the necessary structure of reality,” and “completely invariant across possible worlds.”²⁸ The possibility, if it is a possibility, that one individual might have been each of two individuals does not change this. Instead, it opens the discussion to questions about what it means to be *the same individual*, what being the same individual from time to time, place to place, and possibility to possibility amounts to. This is the sense in which contingent identity is about identity and we must be careful not to equivocate between the two senses. The CIC is a metaphysical thesis, not a thesis about the logic or semantics of identity. Certainly, the metaphysical picture the CIC paints naturally leads to certain semantical and logical objections—prominent in the literature—based on Leibniz’s Law and the transitivity of identity. But these objections are misguided and can be met.²⁹ The CIC may well be false, but if so it will be for metaphysical and not logical reasons. In the next section, I will consider what impact accommodating the CIC has on the question of which modal logic is

²⁷For more on the uses of abstraction see Section 3, note 14 and the reference mentioned there.

²⁸Wiggins (1996, pg. 233).

²⁹See Chapters 1 and 3.

the appropriate logic of metaphysical necessity.

2.6 The Necessity of Identity, the Necessity of Distinctness, and Symmetry

As the reader will have noticed, I remarked in the previous section that (NotNNI),

$$\exists xy \diamond (x = y \& \diamond (x \neq y))$$

valid in our simple model of contingent identity, expresses a version of contingent distinctness. In that model, *a* has two counterparts *b* and *c* in some accessible possible world such that, though they are actually identical (they share a counterpart (*a*) in the actual world), they are possibly distinct. Thus, our model shows that the necessity of distinctness (ND),³⁰

$$\forall xy (x \neq y \rightarrow \Box (x \neq y))$$

is invalid in a semantics which accommodates the CIC.

It follows, therefore, that (NI) and (ND) have different standing with respect to our Specification semantics: the former is valid while the later is not. While perhaps somewhat surprising, this is neither an arbitrary nor a contentious discovery. The dissimilarity between (NI) and (ND) with respect to their semantic treatment is mirrored by the dissimilarity between them—long familiar in the literature—with respect to their syntactic treatment. (NI), the weaker thesis, is provable in K plus identity.³¹ By contrast, the proof of (ND), in addition to K plus identity, requires the B axiom schema ($\neg\phi \rightarrow \Box\neg\phi$)—which in turn is valid only if the accessibility relation is symmetrical.³² This result, together with the falsifiability of (ND) in the Specification semantics, shows that the logic of metaphysical

³⁰Remembering, once again, the required caveat about necessary existence.

³¹Ruth Barcan Marcus first proved (NI) in (1947). This version of that proof is adapted from Williamson (1999, pg. 4). (My thanks to Michael Glanzberg for a very helpful discussion of this proof.)

- | | | |
|-----|---|----------|
| (1) | $x = y \rightarrow (\Box x = x \rightarrow \Box x = y)$ | Identity |
| (2) | $x = x$ | Identity |
| (3) | $\Box(x = x)$ | RN, 2 |
| (4) | $x = y \rightarrow \Box(x = y)$ | PC 1,3 |

³²See Williamson (1999, note 7) for the proof that (ND) is not provable in KT4= or weaker systems. Here

necessity cannot include the B axiom schema if it is to accommodate the CIC.³³

Though the incompatibility of the CIC and (ND) is unsurprising, the incompatibility of the CIC and the B axiom schema might appear at first as a drawback to the present system. This need not be so. Indeed, B doesn't seem particularly well motivated, from a metaphysical perspective, in the first place. If ϕ is possibly necessary, is it therefore true? My modal intuitions give out.³⁴

Put the question another way: if I might have been a contender or I might have been a longshoreman then is it true that, had I been a longshoreman, it is possible that I might have

is the proof of (ND) in KTB=.

- | | |
|---|--------------|
| (1) $x = y \rightarrow \Box(x = y)$ | (NI) |
| (2) $\neg\Box(x = y) \rightarrow \neg(x = y)$ | PC |
| (3) $\Box\neg\Box(x = y) \rightarrow \Box\neg(x = y)$ | RN, K, PC, 2 |
| (4) $\Diamond(x = y) \rightarrow \Diamond\Box(x = y)$ | PC 3 |
| (5) $\Diamond\Box(x = y) \rightarrow (x = y)$ | B |
| (6) $\Diamond(x = y) \rightarrow (x = y)$ | PC 4, 5 |
| (7) $x \neq y \rightarrow \Box(x \neq y)$ | PC 6 |

Notice that the proof of $\Diamond(x = y) \rightarrow \Box(x = y)$ mentioned in note 19 is contained here. Steps (1)-(5) yield the result:

$$(1) \quad \Diamond(x = y) \rightarrow \Box(x = y) \quad (\text{PC 1,5})$$

³³Williamson (1999) argues that (ND) is provable without the B axiom schema, but with the addition of a metaphysically neutral *actually* operator. If he is right, then (ND) is on equally sure footing as (NI) and this would make trouble for the CIC. How metaphysically neutral is an *actually* operator? This is an interesting question and a less obvious one than it might seem, but addressing it would take us too far afield. It nevertheless deserves attention.

³⁴Wiggins's intuitions have an easier time with the equivalent schema,

$$\phi \rightarrow \Box\Diamond\phi.$$

If ϕ is true, he asks, "how could it *help* but be the case that $[\phi]$ is possible?" ((Wiggins 1996, pg. 232).) I am less sure. Certainly, if ϕ is true, then ϕ *must* be possible. But what sense of "must" and "could" are we using? As Wiggins himself points out, these terms admit a great deal of flexibility. On a perfectly plausible and natural reading of "must", the sentence "If ϕ is true, then ϕ must be possible" says no more than,

$$\phi \rightarrow \Diamond\phi$$

If ϕ is true, then, *of course* it is possible. This schema, however, is equivalent to the metaphysically well motivated T axiom schema (to which we'll turn in a moment). Wiggins needs the stronger claim that if ϕ is true it is *necessary* that it's possible. The scope is important. We must not confuse Wiggins's version of the B axiom schema, $\phi \rightarrow \Box\Diamond\phi$, with either the sequence,

$$\vdash \phi \Rightarrow \vdash \Diamond\phi$$

or the sentence,

$$\Box(\phi \rightarrow \Diamond\phi).$$

Both are plausible regimentations of Wiggins's intuition—"how could it *help* but be the case that $[\phi]$ is possible?"—but they are regimentations in which the necessity operator (the "how could it help but be") takes wide scope; they require only the T axiom schema, and, in the later case, the necessitation rule. Neither is equivalent to the B schema. In so far as I am persuaded by Wiggins's intuitions, it is the intuitions behind T, not B, which move me.

been a contender? Nothing compels me to think so. In fact, for B to be plausible, we need the same assumption we needed in order to validate the (CBF)—namely, we must assume the transitivity of the counterpart function: in evaluating $\diamond\diamond Fd$ the counterpart of record is *d's counterpart's counterpart* in some relevantly accessible possible world. We need not make this assumption—i.e., we do not have to assume that my counterpart's counterpart in some world is my counterpart in that world also—and in our Specification semantics, as we have seen in connection with the (CBF), we do not. What makes us think we should? Perhaps residue of the Standard semantics, but no compelling metaphysical intuition.³⁵

Compare the B axiom schema with the familiar T axiom schema,

$$\Box\phi \rightarrow \phi$$

which imposes reflexivity on the accessibility relation. Clearly, T seems better motivated, metaphysically, than B. If ϕ is metaphysically necessary, then surely it is true. If I *had* to be a longshoreman, then presumably it is no surprise that I *am* a longshoreman. The T axiom schema is plausibly a part of the logic of metaphysical necessity.

The status of the other major axiom schema, 4,

$$\Box\phi \rightarrow \Box\Box\phi$$

which requires the accessibility relation to be transitive, is less clear. If ϕ is metaphysically necessary, is it then necessarily necessary? Hugh Chandler argues that the axiom schema 4 is open to counter examples: the ship of Theseus, he claims, could have been made from slightly different parts, but not from different parts *altogether* and hence successive applications of 4 will lead us from truth into falsehood. If this is right, then the logic of metaphysical necessity cannot include the 4 axiom schema either. Of course, one might doubt the claim that it is impossible for an entity to originate from different parts altogether and so escape Chandler's challenge to 4. Either way, the axiom schema 4 seems neither as well motivated as T nor as suspect as B.

³⁵Notice also that since the same assumption is required to motivate both the (CBF) and the B axiom schema, and that this assumption is rejected by the specification semantics, it is no accident that the semantics invalidates both (NNI) and (ND): (NNI) requires the (CBF) for its proof, and (ND) requires B for its proof. This testifies to the similarity between (NNI) and (ND) and it supplies some explanation for our intuition that the CIC and (ND) are incompatible.

These considerations indicate that the appropriate logic of metaphysical necessity is KT plus identity (or perhaps S4, depending on your view of the status of 4, but certainly not S5). If we adopt this system, together with the Specification semantics proposed here, we can accommodate the CIC and make sense of the metaphysics of contingent identity.

Chapter 3

The Contingent Identity

Conjecture, Transitivity and Rigid Designation

3.1 Introduction and Preliminaries

The goal of this chapter is to address two prominent objections to the Contingent Identity Conjecture (henceforth, the ‘CIC’). The first, which I will call the Objection from Transitivity, argues that the CIC is incoherent because it violates the transitivity of identity. The second, which I will call the Objection from Rigid Designation, argues that the CIC is unattractive, if not incoherent, because it is incompatible with the thesis that names are rigid designators. I will argue that the friend of the CIC can meet both Objections: the CIC does not violate the transitivity of identity and it is compatible with the thesis that names are rigid designators.

My strategy is to examine the objections from within a theory proposed to explain the metaphysics and semantics of contingent identity. The challenge is to assess how successful the objections are against the account of contingent identity developed in the first two chapters. To this end, I will begin with a few preliminary remarks, presenting the essential elements from those chapters: first the metaphysics of contingent identity and second its formal treatment.

3.1.1 The Metaphysics of Contingent Identity

Consider the following familiar metaphysical puzzle. Let ‘Swan’ name a particular ice statue of a swan, and let ‘Ice’ name the portion of ice out of which it is made.¹ Imagine that the statue was created by pouring water into a mold and freezing it, creating Swan and Ice at the same instant. Imagine also that I later destroy the statue by melting it instantly, thus destroying Swan and Ice at the same instant. Under these circumstances it is natural and convenient to regard Swan and Ice as identical, i.e. it is natural and convenient to regard ‘Swan’ and ‘Ice’ as referring to *the same thing*. At least, let us assume so much.

However, instead of melting the statue, I might have dropped and shattered it and such a shattering would destroy Swan, but merely scatter Ice. Thus, if we regard Swan and Ice as identical in the first story, we must regard them as *contingently identical* based on the testimony of the second story.

In Chapter One, I refined this view and defended it from several objections. I argued that if the hypothesis that Swan and Ice are contingently identical is to escape the charge of incoherence and yet remain a credible candidate to describe the relation between Swan and Ice it must be a particular *metaphysical* thesis. It’s not just the fact that ‘Swan’ and ‘Ice’ might have *named* two different things that makes Swan and Ice contingently identical: this is an uncontroversial thesis about names. Rather, according to the friend of contingent identity the story shows that Swan and Ice might have *been* two different things, a statue which is destroyed when shattered, and a portion of ice which is scattered when shattered. This does not mean, of course, that two objects, Swan and Ice, are actually identical but possibly distinct. Such a view is incoherent nonsense. No two objects can stand in the identity relation, whether it is contingent or not. Identity is the relation that holds between everything and itself and nothing else.

Instead, in Chapter One, I argued that the friend of contingent identity can defend the view that the story of Swan and Ice is a story in which one individual might have been each of two individuals. According to this view, ‘Swan’ and ‘Ice’ name the same individual ice statue of a swan, which, had I shattered it instead of melting it, would have been each of

¹Judith Jarvis Thomson first presented the example of Swan and Ice in a seminar at MIT. (See also Thomson (1998).) It is based on an example of Allan Gibbard’s from (1975). I follow Gibbard in the use of ‘portion’. A portion of ice can be broken and scattered into many parts and yet still remain the same portion. A piece of ice, on the other hand, let us say, cannot survive being broken; the piece is destroyed and replaced by several new pieces.

two individuals, perhaps one named ‘Swan’ and one ‘Ice’. Giving the actual ice statue a single unambiguous name, ‘Swice’, we can state the thesis of contingent identity as follows: Swice might have been both Swan and Ice. Of course, this view is tenable only if it is plausible that one individual might have been each of two individuals. And this thesis I call the Contingent Identity Conjecture:

CONTINGENT IDENTITY CONJECTURE: One individual might have been each of two individuals.

The friend of contingent identity, I argue, should turn her attention to establishing and defending this conjecture.

3.1.2 Semantics for the Contingent Identity Conjecture

The CIC poses its friends significant formal challenges. In Chapter Two I outlined a semantics for quantified modal logic based on the work of Robert Stalnaker ((1986) and (1995)), Allan Hazen (1979) and David Lewis (1986), which accommodates the CIC and allows us to make sense of the metaphysics of contingent identity. The semantics, which I call Specification Semantics, is a metaphysically neutral version of counterpart theory in which individuals are not restricted to having (at most) one counterpart in any possible world. As usual, individuals from the domains of the various possible worlds are related to their counterparts by a counterpart function, and in cases in which an individual has multiple counterparts in some world it is related to its otherworldly counterparts by a set of counterpart functions.

However, the potential for an individual to have multiple counterparts makes trouble for the standard account of modal predication. When does an actual individual a with two counterparts b and c in some (accessible) possible world—one which has the property F , one which lacks it—have the property $\Diamond F$?

To solve this problem, I introduced the notion of a *possible specification*, which takes the place of a *possible world*, relative to which sentences of the language are evaluated. A possible specification is a conventional possibility—as represented by a possible world—more finely tuned. It is a possible world, counterpart function pair: associate with each possible world all the determinate ways of picking counterparts for each individual in its domain. The counterpart function portion of a possible specification specifies which member of an

individual's set of counterpart functions is relevant to the evaluation of a sentence containing that individual. (Answering the question from the preceding paragraph, relative to the possible specification which pairs the actual world with the counterpart function that identifies *b* as *a*'s counterpart, *a* has the property $\Diamond F$; relative to the possible specification which pairs the actual world with the counterpart function that identifies *c* as *a*'s counterpart, *a* lacks the property $\Diamond F$.) This oversimplifies a good deal, but the intuitive idea behind the mechanics of possible specifications is to relativize the evaluation of sentences not just to possible worlds, as in the standard semantics, but to the more fine grained *aspects* of possible worlds. Picking up once again the story of Swan and Ice, is Swice shatterable or not? Relative to the aspect of the possibility under which we conceive of Swice as a statue, no, Swice cannot survive a shattering; relative to the aspect of the possibility under which we conceive of Swice as a portion of ice, yes, Swice can survive a shattering. All of this complicated machinery underpins and explains our pre-theoretic use of '*qua*' for which it is a kind of shorthand. Swice cannot survive a shattering *qua* statue; but Swice can survive a shattering *qua* portion of ice.²

We might also choose to leave our semantics *coarse* grained. If we associate with each indeterminate predication the set of all the determinate—i.e. fine grained—refinements of it, we can introduce supervaluations to evaluate the truth value of a sentence when no determinate possible specification is available or given. Say that a sentence is *true* just in case it is true on all of its fine grained refinements; *false* if it is false on all of its fine grained refinements; and *neither true nor false* if it is true on some (at least one) of its fine grained refinements, and false on others. Back to Swan and Ice, according to our coarse grained picture it is neither true nor false that Swice is shatterable since, on one fine grained refinement, Swice (i.e. Swice *qua* portion of ice) is shatterable while on another it is not.

The choice of fine grained or coarse grained evaluation is made occasion by occasion and left to context. The sentence, "Swice is shatterable" must be evaluated in the coarse grained semantics: no possible specification, in particular no determinate counterpart function for Swice, is specified. By contrast, the sentence "Ice is shatterable" is evaluated in the fine grained semantics: the name 'Ice' embodies an individuating cue specifying which of Swice's aspects is relevant to an evaluation. Specifically, 'Ice' invokes a counterpart function, and

²See Chapter Two for details. See also Gibbard (1975) and Lewis (2000) in this connection

hence a possible specification, for Swice relative to which it is true that Swice (Ice) can survive a shattering.³

Adopting the Specification semantics for quantified modal logic allows us to accommodate the CIC and speak coherently and usefully of the possibility that one individual might have been each of two individuals. Or, at least, so I have argued. This is the point of departure for the present paper.

However, against this picture there remain two prominent and persuasive objections, the Objection from Transitivity and the Objection from Rigid Designation. With the preliminary material in hand, I turn now to tackle them.

3.2 The Objection from Transitivity

3.2.1 Objection and reply

In the guise of arguing for the necessity of distinctness, Kripke (1972) presents an early version of the Objection from Transitivity:

Suppose $x \neq y$; if x and y were both identical to some object z in another possible world, then $x = z$, $y = z$, hence $x = y$.⁴

Adapting the Objection to the example of Swan and Ice, and rephrasing it for convenience and clarity, the argument goes like this:

Suppose the Contingent Identity Conjecture is true, and suppose we exploit it to explain the relation between Swan and Ice. Swice, had I shattered it, might have been each of two things, one called 'Swan' and one called 'Ice'. Then the following sentences all appear to be true:

(28) Swice = Ice.

³Gibbard exploits the '*qua*' device to similar effect in (Gibbard 1975), though he does not explicitly recognize the influence exerted by the names he uses ('Goliath' and 'Lumpl'). (See Chapters One and Two for some discussion and criticism of Gibbard.) Lewis (2000) mentions the impact of names in general, and 'Goliath' and 'Lumpl' specifically. "Even the two names, . . . , are evocative. 'Lumpl' evokes a counterpart relation on which Goliath/Lumpl does have counterparts that survive squishing. 'Goliath' evokes a counterpart relation on which it does not." (Lewis 2000, pp. 4-5) Lewis discusses this phenomenon and an associated use of '*qua*' in the context of an issue closely related to the material in this paper.

⁴(Kripke 1972, pg.114n). The formulation of the Objection in Stalnaker (1986, pg. 132) is particularly clear.

(29) Swice = Swan.

(30) Swan \neq Ice.

However sentences (28), (29), and (30) cannot all be true together on pain of violating the transitivity of identity. Therefore, the CIC which licenses the truth of each of (28), (29), and (30) must be false.

The Objection from Transitivity clearly poses a problem for the CIC. On the one hand, it appears that the Conjecture's defender must accept the truth of (28), (29), and (30). The story of Swan and Ice, she contends, describes a case in which one individual (Swice) might have been each of two individuals (Swan and Ice); in other words, (28), (29), and (30) are true. At the same time, no one—not even the Defender of contingent identity—can tolerate violations of the transitivity of identity. Identity is the equivalence relation which holds between, and only between, every individual and itself. Any relation which violates transitivity simply isn't the identity relation. If the friend of the CIC really means identity by 'identity' then the relation she refers to must be transitive. Friends of the CIC are therefore faced with an dilemma: it looks like they must accept (28), (29), and (30) as true, but at the same time they cannot endorse rejecting the transitivity of identity which the acceptance of (28), (29), and (30) seems to mandate. What is to be done?

The answer is that the objection rests on an equivocation: sentences (28), (29), and (30) are *not* all true in the manner required by the Objection from Transitivity; hence, an explanation of the relation between Swan and Ice based on the CIC does not require abandoning the transitivity of identity. But what is this appeal to *manners* of being true? Is the friend of the CIC committed to *manners* of truth, whatever that might mean?

In the Specification semantics, as in the Standard semantics, identity sentences, like all other sentences, are evaluated relative to a possible world (and an assignment of values to the variables). Sentences (28), (29), and (30) are not all true relative to the same possible world. Relative to the actual world—or equivalently, from the *perspective* of the actual world—sentences (28) and (29) are both true. According to the story, the actual ice statue Swice is, in the world in which I drop it, both of Swan and Ice. Thus, we can unambiguously re-write (28) and (29) as:

(31) Relative to the actual world, Swice = Ice

and,

(32) Relative to the actual world, Swice = Swan.

What about sentence (30)? From the perspective of the actual world sentence (30) is false: in the actual world, the two possible individuals Swan and Ice *are* Swice. We can express, unambiguously, the falsity of (30) by:

(33) Relative to the actual world, Swan = Ice.

It ought to be no surprise that (33) is true. After all, according to the thesis of contingent identity, Swan *actually is* Ice—they are actually the same individual. Thus, what appeared to be a violation of the transitivity of identity—as evidenced by the truth of (28), (29), and (30)—dissolves when (28), (29), and (30) are unambiguously read as (31), (32), and (33).

Still, on a natural reading, sentences (28)–(30) and (31)–(33) seem to say that while Swan actually is Ice, Swan and Ice might have been distinct, and there is something deeply puzzling about this. Part of our puzzlement stems from the powerful and tendentious influence of the names ‘Swan’ and ‘Ice’ and leads directly to the Objection from Rigid Designation. I will address the Objection from Rigid Designation in the next section, where I will argue that according to the friend of the CIC, the story of Swan and Ice is not a story in which Swan and Ice though actually identical might have been distinct, notwithstanding their contingent identity. But, for the moment, in considering the Objection from Transitivity, it is helpful to think of evaluating sentences (31), (32), and (33) from within the framework of a neutral counterpart theory (such as that developed in Chapter 2) which abstracts away from the influence names. An identity sentence, $a = b$ for example, is true in a world w if, relative to w , the counterpart function assigns the same individual to both a and b . If a is an element of w and b is an element of w' and a and b are counterparts, then—since every individual is its own counterpart—the counterpart of a in w is the counterpart

of b in w , namely a . Putting this in terms of Swice and Swan and Ice, the counterpart of Swice in the actual world is Swice, and the counterpart of Ice in the actual world is Swice, therefore sentence (31) is true. Similarly, *mutatis mutandis*, for sentence (32). Moreover, this shows clearly why sentence (33) is true: Ice's actual world counterpart is Swice and, likewise, Swan's actual world counterpart is Swice. Hence, sentence (33) is true: from the perspective of the actual world, Swan *is* Ice.

What about from the perspective of the possible world in which I drop Swice before melting it? For convenience, call this world the *drop world*. From the perspective of the drop world, clearly

(30) Swan \neq Ice

is true: Swan and Ice are distinct individuals, a statue which shatters and is destroyed, and a portion of ice which is scattered and persists. What about sentences (28) and (29)? Sentence (28) is true from the perspective of the drop world if Swice's counterpart in the drop world is Ice. But Swice, by hypothesis, does not have just a *single* counterpart in the drop world, but instead Swice has *two* counterparts in the drop world, Ice and Swan. Relative to one counterpart function for Swice, Ice is Swice's drop world counterpart; relative to another counterpart function for Swice, Swan is Swice's drop world counterpart. Hence, recalling from section 3.1.2 our semantic decision as to how to deal with indeterminate predications, sentence (28) is neither true nor false from the perspective of the drop world. Similarly, *mutatis mutandis* for sentence (29). Again, no violation of transitivity follows.⁵

Robert Stalnaker (1986) and Timothy Williamson (1999) present the same response as I have presented to the Objection from Transitivity.⁶ It is interesting and, I think, informative to view their responses in the present context in which each may help to clarify the other. I'll (very) briefly review their arguments.

⁵We could have made a different decision when we decided to make indeterminate predications neither true nor false: we could have decided to make them false, or perhaps some third truth value. Also notice that on the fine grained semantics mentioned above there is no violation of transitivity either, but this time while sentence (30) is true, one of either sentence (28) or (29) will be false, preserving the transitivity of identity again.

⁶Williamson's response is not offered in the context of a defense of contingent identity—quite the contrary. He advances it in a footnote, an aside to Kripke's formulation of the Objections in support of the necessity of distinctness. See Williamson (1999, pg 14, note 9)

Stalnaker argues that the problem with the argument in the Objection from Transitivity “becomes clear when we ask which possible world it is given in, or relative to.”⁷ From the point of view of the actual world, he writes, while sentences (28) and (29) are true, sentence (30) is false:

it is true in [the actual world] that the individual that in [the drop world] is [Ice] is identical with the individual that in [the drop world] is [Swan].

From the point of view of the drop world, while sentence (30) is true, sentences (28) and (29) are problematic:

What these identity statements do is identify each of [Swan] and [Ice] with the individual that in [the actual world] is identical with [Swice]. But the description *the individual that in [the actual world] is identical with [Swice]* is, in [the drop world] an improper description.

According to the friend of the CIC, there are two such individuals. Hence, sentences (28) and (29) are, in the drop world, according to Stalnaker, “either false, truth-valueless, or ambiguous” depending on which decision one makes in their semantics. (The Specification semantics took the decision that such sentences are neither true nor false.)

Williamson envisions a similar reply to the Objection from Transitivity:

The argument [of the Objection] treats identity as though from a perspective outside any particular possible world; [the friend of the CIC] may deny the existence of such a perspective.⁸

If sentences, even identity sentences, must be evaluated from the perspective of some possible world, then, as we have seen, because the sentences (28), (29), and (30) are not all true from the perspective of the same world, they don't together constitute a violation of the transitivity of identity.

3.2.2 Perspective

It is plain that the three replies to the Objection from Transitivity canvassed here, Stalnaker's, Williamson's, and my own, are three species of the same argument. The common

⁷This passage and the others which follow are taken from Stalnaker (1986, pg. 132).

⁸Williamson (1999, pg 14, note 9).

thread which unites them is the emphasis placed upon the notion of *perspective*. One way to sharpen this notion is to argue that our observations concerning sentences (31), (32), and (33) show that identity is not a two place relation, but a three place relation. On this view, an identity statement written,

$$(34) a = b$$

expressing the proposition that a and b are the same individual, ought to be written,

$$(35) a \stackrel{w}{=} b$$

expressing the proposition that, relative to some possible world w , a is the same individual as b . Identity, unambiguously expressed by $\stackrel{w}{=}$, is transitive:

$$\text{if } a \stackrel{w}{=} b \text{ and } b \stackrel{w}{=} c, \text{ then } a \stackrel{w}{=} c.$$

But this will not be true in general when the third place in the relation, the superscript w above the identity sign, varies. Thus, the combined truth of the ill formed (28), (29), and (30) do not constitute a violation of transitivity. Correcting them exposes the equivocation in the Objection from Transitivity. As indicated by (31), (32), and (33), sentences (28), (29), and (30) ought to be written:

$$(36) \text{Swice} \stackrel{\textcircled{g}}{=} \text{Ice}$$

$$(37) \text{Swice} \stackrel{\textcircled{g}}{=} \text{Swan}$$

$$(38) \text{Swan} \stackrel{w}{\neq} \text{Ice}$$

The third place in the identity relation does not remain constant over (36), (37), and (38), and hence their combined truth does not violate the transitivity of identity.

Notice that the ' $\stackrel{w}{=}$ ' notation merely replicates the role of the ' w ' subscript from the

valuation function V in the formal semantics. Hence,

$$\ulcorner a \stackrel{w}{=} b \urcorner \text{ iff } V_w(a = b) = 1$$

The identity relation $\stackrel{w}{=}$ is just identity, and not some other relation going by the same name. We can speak of identity equally as a three place relation or as the two place relation, relative to a possible world, described in the formal semantics, and we can freely translate between the two.

I have no objection to construing identity as ' $\stackrel{w}{=}$ ' provided we realize that identity is not thereby singled out from other relations. The appeal to ' $\stackrel{w}{=}$ ', or equivalently to *perspectives*, is not an *ad hoc* appeal made in response to the threat posed by the Objection from Transitivity. In fact, some notion of perspective is central to any semantics in which a valuation function assigns truth values to sentences relative to possible worlds (or their functional equivalents). *All* sentences receive their truth values relative to possible worlds or perspectives. Identity sentences are not privileged. This is not to espouse any sort of relativism about truth. Truth in another possible world is just what would be true were that world the actual world. Truth in the actual world is the only truth there *is*. Moreover, it is a mistake to think there is some Other Perspective, an Absolute Perspective, outside all possible worlds. The actual world is the only possible world there is, and truth (absolute truth, if you like) is truth in the actual world.⁹ When Williamson writes that the friend of contingent identity can stave off the Objection from Transitivity by simply denying the existence of a perspective outside of any particular world, the move sounds suspect, or worse, unprincipled. But he is right. The Absolute Perspective is the perspective of the actual world.

In our day to day linguistic practice, outside the strictly regimented confines of a formal language, most often the perspective of a possible world relative to which a sentence is evaluated remains implicit. However, failing to mention which possible world some sentence is true with respect to does not free it from all possible worlds. "Ben Franklin is the inventor

⁹This is not entirely accurate. Possibilist possible worlds theorists can employ two notions of *truth* (and *existence* and *identity*—and perhaps others—as well) one of which is world relative, the other not. For them, there may well be a perspective outside of any particular possible world. This does not mean that possibilism and contingent identity are incompatible, but possibilist defenses of contingent identity will have to take a different form from the one presented here. See Lewis (1986). For our purposes I will restrict my attention to actualist theories of possible worlds.

of bifocals,” we typically say, omitting explicit reference to the actual world. But if it is true that Ben Franklin invented bifocals, then, of course, it is actually true (absolutely true, if you like) that Ben Franklin invented bifocals. Nevertheless, even in our day to day linguistic practice we often explicitly mention the perspective relative to which some sentence is true (or better: would be true were that world the actual world). Consider this example. Suppose Al Gore claims to be the inventor of bifocals. In this context, we might truly say, “If Al Gore is right, then Ben Franklin is not the inventor of bifocals.” The phrase, *if Al Gore is right* invokes the perspective of Al Gore’s belief world, relative to which Ben Franklin is not the inventor of bifocals.¹⁰ A historian, however, might correct us: “No, actually Ben Franklin is the inventor of bifocals,” or equally, “No, Ben Franklin is the inventor of bifocals.” The two sentences may differ in force, but they invoke the same perspective and share the same truth conditions. Notice the explicit mention of a perspective of evaluation in the first, and its implicit presence in the second.

Perhaps underlying the Objection from Transitivity is the belief that *identity* statements are special and can be evaluated independently of any perspective. Those who offer the Objection might agree that ordinary sentences—whatever they might be, sentences like “Ben Franklin is the inventor of bifocals”—are evaluated relative to the perspective of some possible world, but identity sentences between rigid designators are not. Perhaps identity statements *ought* to be privileged. I think the suggestion here is that identity sentences involving rigid designators on either side of the identity sign are true or false simpliciter, rather than true or false relative to some possible world. I will turn to discuss the relationship between the CIC and the thesis that names are rigid designators in the next section, but it is important to ask in the present context what this version of the Objection from Transitivity would mean. On one interpretation, the claim that identity statements between rigid designators are true or false simpliciter is just the claim that such identity statements should be evaluated relative to *no* possible world, but what does this mean? Neither the formal semantics, nor our day to day linguistic practice provide an explanation. Perhaps the claim is that all identity statements should be evaluated relative to the actual world. But then what would we say about the sentence,

¹⁰More accurately, it invokes the perspective of a possible world compatible with the way Al Gore believes the actual world is.

(39) Superman = Clark Kent

which intuitively seems true? I think we would like to be able to say that (39) is true relative to the possible worlds in which the exploits of Superman take place, or are represented as taking place.¹¹ More plausibly, the claim that identity statements between rigid designators are true or false simpliciter is just the thesis that such identity statements are either necessarily true or necessarily false. On this view, an identity statement which is true or false from the perspective of some possible world is true or false from the perspective of *all* possible worlds. In identity statements involving rigid designators, the '=' notation is superfluous collapsing in all cases to simply '='. But this idea is unlikely to move the friend of the CIC. If the CIC is true then there will be cases in which some identity statements which are true from the perspective of one world will be false from the perspective of another. In the story of Swan and Ice, for example, if the friend of the CIC is right, then

(28) Swan \neq Ice

is true from the perspective of the drop world, but false from the perspective of the actual world. Postulating that all identity statements are either necessarily true or necessarily false is not an argument against the CIC, it's just denying it. What the Objection from Transitivity needs is an *argument* showing that identity statements are either necessarily true or necessarily false but one is not offered as part of the Objection from Transitivity. One is offered as part of the Objection from Rigid Designation, and I'll turn to that next, but the Objection from Transitivity as it stands is either unsound or simply the denial of the CIC.

3.3 Two Objections from Rigid Designation

The Objection from Rigid Designation begins with Kripke's familiar notion of a rigid designator which he explains in the following way:

Let's call something a *rigid designator* if in every possible world it designates the same object. . . ; . . . a designator rigidly designates a certain object if it designates

¹¹Compare Stalnaker (1978) and (1988) and Crimmins (1995).

that object wherever the object exists;¹²

In clarifying this thesis, it is important to distinguish a name's designating *with respect to* a possible world from a name's designating *in* a possible world. A rigid designator, according to Kripke, designates the same object *with respect to* every possible world in which it exists. The name is considered as uttered in the actual world where it is assigned its referent and, if the name designates that referent and nothing else in every possible world in which it exists, then the name is a rigid designator. It is unimportant to this thesis how the name is used *in* some possible world. Perhaps the inhabitants of some world call Ben Franklin 'George Washington', but this does not mean that 'Ben Franklin' is not a rigid designator: according to Kripke, 'Ben Franklin' names the same individual in every world in which he exists, even if in some of those worlds he is called 'George Washington'. (Notice that the distinction between a name's designating *with respect to* and *in* a possible world accomplishes the same task for names as the notion of *perspective* does for sentences in general.)

The thesis that names are rigid designators can be expressed more clearly by explicitly recognizing the distinction between designating with respect to and designating in a possible world. Jason Stanley (1997b, pg. 131) provides a lucid statement. A proper name is a rigid designator if and only if...

... in every metaphysically possible world in which the actual referent of the name exists, the reference of that proper name, when evaluated with respect to that world, is the same as its actual one, and in every metaphysically possible world in which the actual referent does not exist, the proper name does not designate anything else.

Kripke and others have persuasively defended the view—some would say, *established* the view—that names are rigid designators, and this thesis has found wide acceptance in the literature. To motivate the Objection from Rigid Designation, assume for our purposes that Kripke is right and that names are rigid designators.

¹²Kripke (1972, pp. 48-49).

3.3.1 The Objection from Rigid Designation, I

The trouble for the CIC is that the Conjecture, it is argued, is incompatible with the thesis that names are rigid designators.¹³ This argument has typically proved compelling, even to defenders of contingent identity. Call the following objection, roughly as presented by Gibbard, the Objection from Rigid Designation: Suppose, in accord with the CIC, that both of the following sentences are true:

(40) Relative to the actual world, Swan = Ice

(41) Relative to the drop world, Swan \neq Ice

Then, the Objection goes, the names 'Swan' and 'Ice' cannot be rigid designators. Allan Gibbard gives the argument:

For suppose [(40)] is true. Then the names ['Swan' and 'Ice'] both denote the same thing in [the actual world]. Hence, if they are both rigid designators, they both denote that thing in every possible world in which it exists, and denote nothing otherwise. Since they each denote something in [the drop world], they must denote the same thing in [the drop world] and thus [(41)] must be false.¹⁴

Gibbard, who defends a version of contingent identity, finds this argument persuasive. In reply, he rejects Kripke's notion of rigid designation and offers in its place his own account of how names designate. According to Gibbard, and in keeping with his overall project, names designate rigidly *with respect to a sortal*. He argues that none of the evidence which Kripke presents tells against his alternative account, and indeed his alternative account fits the evidence better. I think Gibbard is mistaken here and his mistake has metaphysical roots: his failure to explain the metaphysics of contingent identity characterizes his approach to rigid designation.¹⁵ However, a slight adjustment to Gibbard's account, made with

¹³Kripke (1971) and Kripke (1972) contain the *loci classici* of this argument. Indeed, Kripke argues that the fact that names are rigid designators *shows* that there are no contingent identities of the relevant kind. Interestingly, Chandler (1975) argues that the fact that there are contingent identities of the relevant kind *shows* that not all names are rigid designators. As the text reveals, I don't think either argument establishes its conclusion.

¹⁴Gibbard (1975, pg. 194).

¹⁵See Chapter One for criticism of Gibbard's approach to contingent identity.

help from the apparatus of the Specification semantics, improves his theory. The resulting account, which provides an answer to the Objection from Rigid Designation, claims that if names are rigid designators they are *possible specification* rigid, rather than possible world rigid. First, I'll examine Gibbard's account; and second, I'll address the slight adjustment to it.

Faced with the Objection from Rigid Designation and unwilling to give up his version of contingent identity, Gibbard proposes to revamp the theory of rigid designation.

According to Gibbard, names designate rigidly *relative to a sortal*. He explains:

...it makes no sense to call a designator rigid or non-rigid by itself. A designator may be rigid with respect to a sortal: it may be statue-rigid, as ['Swan'] is, or it may be [ice-portion]-rigid, as ['Ice'] is. A designator, for instance, is *statue-rigid* if it designates the same statue in every possible world in which it exists and designates nothing in any other possible world. What is special about proper names like ['Swan'] and ['Ice'] is not that they are rigid designators. It is rather that each is rigid with respect to the sortal it invokes. ['Swan'] refers to its bearer as a statue and is statue-rigid; ['Ice'] refers to its bearer as [an ice portion] and is [ice-portion]-rigid.¹⁶

Indeed, Gibbard cites Kripke, and the linguistic evidence Kripke amasses, in his favour.

What Kripke says ... shows no more than I have already accepted: that it makes sense to call a designator rigid with respect to a sortal, like *statue*, *number*, or *man*. "... we can perfectly well talk about rigid and non-rigid designators. Moreover, we have a simple, intuitive test for them. We can say, for example, that the number of planets might have been a different number from the number it in fact is." The designator 'the number of the planets', then, is non-rigid. "If we apply this intuitive test to proper names, such as for example 'Richard Nixon', they would seem intuitively to come out as rigid designators. ... It seems that we cannot say 'Nixon might have been a different man from the man he in fact was,' unless, of course, we mean it metaphorically."¹⁷

¹⁶Gibbard (1975, pg. 195).

¹⁷Gibbard (1975, pp 198-199) and also Kripke (1971, pp 148-149)

Gibbard concludes that it does not make sense to call a designator 'rigid' except with respect to the sortal it invokes and he presents an account of rigid designation based on this idea.

It is not easy to see what issue is at stake between Gibbard and Kripke. As Gibbard says, "the matter has to be settled by working out rival systems and comparing their implications."¹⁸ Gibbard's system has some advantages: "We speak and think," he rightly points out, "of 'the same person' but not of 'the same entity'."¹⁹ On the other hand, I am not certain how Gibbard can account for the rigidity of demonstratives: Kripke clearly thinks we can point to an ice statue and ask, "What might have happened to *that*, had events been different?" The demonstrative *that*, as Kripke argues, is plainly rigid, but it seems to evoke no sortal.²⁰ In any event, I am not certain how such a comparison between Gibbard and Kripke would go. (The adjustment I will shortly propose does not suffer from these defects.)

Nevertheless, there is a deeper issue than simple linguistic practice underpinning Gibbard's theory. There is, I think, something of a metaphysical failure as well. Why is it that Gibbard feels compelled to rework the notion of rigid designation? Gibbard explicitly tells us: "According to the theory here," he writes, "it makes no sense to call a designator rigid and leave it at that, because it makes no sense to call things in different possible worlds identical and leave it at that: identity across possible worlds makes sense only with respect to a sortal."²¹ This is in stark contrast to Kripke for whom there is no problem with calling individuals in different possible worlds identical and leaving it at that. For Kripke, possible worlds are stipulated as functions of individuals. "We do not begin with worlds," he says, "and then ask about criteria of transworld identification; on the contrary, we begin with objects, which we *have*, and can identify, in the actual world. We can then ask whether certain things might have been true of the objects."²² According to Kripke, the so-called

¹⁸Gibbard (1975, pg. 199).

¹⁹Gibbard (1975, pg. 199).

²⁰See Kripke (1972, pg. 49, note 16): "Demonstratives can be used as rigid designators, and free variables can be used as rigid designators of unspecified objects." This passage challenges both Gibbard's Kripke exegesis and his account of rigid designation. Perhaps Gibbard could say that the relevant sortal in such cases is supplied by context (but what sortal could an 'unspecified object' invoke?). Still, Gibbard may have more serious difficulties. Some putative examples of contingent identity involve only a single relevant sortal - for example, Chandler's (1975) modalized ship of Theseus. I'm not sure how Gibbard's account can handle such cases. (Galois (1986, pg. 66, note 10) also mentions this problem.)

²¹Gibbard (1975, pg. 198) This explains why Gibbard's theory has trouble with demonstratives: no sortal, no identity across possible worlds. When Kripke says we can point to a statue (or even a person) and ask, "What might have happened to *that* (or him)?" Gibbard must reply that he can literally "find no sense in the question" (See for example, Gibbard (1975, pg. 199))

²²Kripke (1972, pg. 53)

problem of cross world identity isn't really a problem at all.

Kripke's view seems especially plausible and it is surprising that Gibbard should deny it, but he claims to have a counter example: the case of Swan and Ice.²³ It begins with a stipulation, as Kripke requires, but, Gibbard proposes, ends in a genuine problem of cross world identification. The stipulation: suppose that I create an ice statue of a swan by pouring water into a mould and freezing it, and before I have a chance to melt it, I drop it and shatter it. According to Gibbard, this forces a problem of cross world identification: "It might be tempting to ask which of the two [things, the shattered statue or the scattered ice] is the one thing which in the actual world I made and then [melted]. To that question though, there is no plain answer."²⁴ This is a mistake. If the CIC is true then surely the right answer to Gibbard's question is that neither of them is the one thing which I actually made and melted; rather, *each* of the two things--the shattered statue and the scattered ice--is in the actual world the one thing which I made and then melted. It is here that Gibbard's failure to provide a metaphysical explanation of contingent identity is most keenly felt.²⁵ He believes that contingent identity is incompatible with Kripke's intuitive--and plausible--depiction of possible worlds and hence that it is at odds with Kripke's thesis that names are rigid designators. But this is contingent identity as he accounts for it, and I have argued that this accounting is inadequate; the incompatibility of Gibbard's version of contingent identity with Kripke's thesis that names are rigid designators only underscores the point.

A slight adjustment to Gibbard's interpretation of the thesis that names are rigid designators yields an improved account--one that better meshes both with Kripke's intuitive view of possible worlds and with the Contingent Identity Conjecture. First, we abandon Gibbard's metaphysics for contingent identity (though it is unclear what exactly that metaphysics might be)²⁶ and adopt instead the metaphysics of the CIC sketched in section 3.1.1.²⁷ Next, we adopt the fine grained Specification semantics sketched in section 3.1.2.

²³For Gibbard, the case concerns the statue and the clay rather than the statue and the ice.

²⁴Gibbard (1975, pg. 200).

²⁵See Chapter One.

²⁶See Chapter 1 for criticism of Gibbard's account of contingent identity

²⁷Shelve for the moment any reservations you may have about the truth of the CIC. If some version of contingent identity can help us to describe the puzzling relation between Swan and Ice--and many other similar and related puzzles--I have argued that the version of contingent identity based on the CIC is our best candidate. The task of the present paper, however, is not to establish the Conjecture, but rather to see how far we can take it

Finally, if we replace Gibbard's notion of sortal relativity in virtue of which names designate rigidly relative to a sortal, with our familiar notion of relativity to possible specifications, we will find that names are possible specification rigid, rather than, as in Gibbard's case, sortal rigid.

Thus, the name 'Swan' designates the same individual in every possible specification in which it exists, and similarly for 'Ice'.²⁸ Relative to the possible specification which specifies Swan's drop world counterpart to be the shattered statue, 'Swan' designates both the actual ice statue and the individual which, in the drop world (and according to the specified counterpart function), is the actual ice statue, namely, the shattered statue.

Of course, by the same token, relative to the same possible specification, 'Ice' also designates both the actual ice statue and the individual which, in the drop world (and according to the specified counterpart function), is the actual ice statue, namely (again), the shattered statue. If this seems counterintuitive (or false) it is thanks to the profound influence of the name 'Ice' which naturally evokes a counterpart function all on its own. But if the name 'Ice' is really a genuine name—and not a disguised description—we ought to be able to ignore the evoked counterpart function in favour of our specified counterpart function. To put the point another way, if 'Ice' is really a genuine name, then

(42) In some possible world, Ice is not made of ice

is true.²⁹ If we balk at this it is either because we are swayed by the counterpart function naturally, but not necessarily, associated with the name 'Ice', or else we are treating 'Ice' as a disguised description, something like 'the individual made from ice' and

(43) In some possible world, the individual made out of ice is not made out of ice

²⁸In fact, this is not exactly true. In the Specification semantics, the individual domains of the various possible worlds are disjoint. Individuals exist in only one world but are represented as existing in other worlds in virtue of having counterparts in them. In the text I gloss over this technicality. To be technically right, I should have written that 'Swan' designates the same individual in every possible specification in which it is *represented* as existing. Stalnaker in (1984) calls this 'quasi-rigidity'.

²⁹Setting aside worries about essential properties.

is obviously false.³⁰

At all events, the resulting theory of rigid designation according to which names are specification rigid resembles Gibbard's theory of sortal rigidity but is superior in at three important respects. First, it provides for the rigidity of demonstratives where Gibbard's theory does not. In the sentence, "What might have happened to *that*, had events been different?" the '*that*' is specification rigid: it refers to its actual referent (relative to a counterpart function) in every possible specification in which it exists.

Second, the theory that names are specification rigid accommodates cases in which a name evokes *no* sortal (or cases in which a name evokes multiple sortals). In the sentence, "Swice is shatterable" the name 'Swice' evokes no sortal—and so would be difficult for Gibbard's theory to handle—but it nonetheless specification rigid: relative to a counterpart function, it denotes the same individual in every possible world in which it exists.³¹

And third, the theory that names are specification rigid is compatible with Kripke's intuitive view that possible worlds are stipulated as functions of individuals. Gibbard's problem of cross world identification – which of the two things, the shattered statue or the scattered ice, is the one thing which in the actual world I made and then melted? – which led Gibbard to reject Kripke's intuitive conception of possible worlds is no problem at all in the Specification semantics. As we have seen, if the CIC is true, then *both* the shattered statue and the scattered ice are in the actual world the one thing which I made and then melted.

In the end, the theory that names are specification rigid answers the Objection from Rigid Designation by reinterpreting Kripke's theory of rigid designation to bring it into harmony with the CIC. This is Gibbard's strategy for dodging the Objection but the approach I have advocated has a more modest effect on Kripke's original position. However, whether we interpret names as *possible world rigid*, or as *possible specification rigid*, a second objection to contingent identity, closely related to the first, emerges from the thesis that names are rigid designators.

³⁰Compare in this connection Lewis's remarks quoted above in note 3. How and why names evoke counterpart functions – and in virtue of what – are interesting questions which might be raised in the context of the debate over the issue of whether names have any content and if so what. I should like to explore these questions.

³¹In the case of "Swice is shatterable" the *context* might evoke a sortal – the portion of ice sortal – but this move, though interesting, is unavailable to Gibbard. A better example might be, "Swice could survive a little wear and tear" in which neither the name nor the context evokes a sortal

3.3.2 The Objection from Rigid Designation, II

Kripke's intuitive test for rigidity appears to pose a problem for the CIC. According to Kripke, rigid expressions differ from non-rigid ones in the following way: Suppose 'a' designates rigidly, and 'b' designates non-rigidly. Then "a might not have been a" is false, but "b might not have been b" is true. The objection to the CIC issues from this test. Kripke explains:

If names are rigid designators, then there can be no question about identities being necessary because "a" and "b" will be rigid designators of a certain man or thing x. Then even in every possible world, a and b will both refer to this same object x, and to no other, and so there will be no situation in which a might not have been b. That would have to be a situation in which the object which we are now calling "x" would not have been identical with itself.³²

Apply this argument to the story of Swan and Ice. Suppose 'Swan' and 'Ice' are rigid designators of an ice statue of a swan. Then in every possible world 'Swan' and 'Ice' refer to the ice statue, and hence there will be no situation in which Swan might not have been Ice, for that would be a situation in which the ice statue would not have been identical with itself. Yet if Swan and Ice are contingently identical, then it would appear to follow that Swan might not have been Ice. Therefore, either 'Swan' and 'Ice' are not rigid designators or else their identity is necessary.³³ This presents the friend of the CIC with an uncomfortable choice. How does she respond? Her answer exposes first - and once again - the dramatic influence of names, and second a curious feature concerning the *possible* referents of names. The simple answer to the objection is that if the friend of the CIC is right, then the story of Swan and Ice is *not* a story in which Swan might not have been Ice.

Recall once more the metaphysical picture painted by the CIC to explain the relation between Swan and Ice. According to the friend of the CIC, the story of Swan and Ice depicts a situation in which Swan and Ice are contingently identical: which means, following the CIC, that 'Swan' and 'Ice' name one individual which might have been each of two distinct individuals, one (as it happens) named 'Swan' and the other 'Ice'. Equivalently, according

³²(Kripke 1971)

³³Incidentally, this is exactly the sort of argument - an argument that identity statements between rigid designators are necessary - that the Objection from Transitivity is missing. If it succeeds, if all identities are necessary, then the Objection from Transitivity is persuasive but gratuitous.

to the story, an actual individual, co-referred to by the names 'Swan' and 'Ice', is each of two individuals in the drop world, one (as it happens) named 'Swan' and the other 'Ice'. But notice, this is *not* a situation in which Swan might not have been Ice. That is to say, it is not a situation in which, speaking *with respect to* the drop world, Swan is not Ice. Certainly, speaking *in* the drop world Swan is not Ice. But how names are used in the drop world has no bearing on whether 'Swan' and 'Ice', as used in the actual world, are rigid designators. In fact, if the friend of the CIC is right, then *each* of 'Swan' and 'Ice', when evaluated with respect to the drop world, actually name *both* of the shattered statue and the portion of ice. This is indeed a curious state of affairs, and I will turn to its elaboration in a moment, but first I want to consider how it came to seem so natural to say, following the Objection from Rigid Designation, that the story of Swan and Ice depicts a case in which Swan might not have been Ice. There are two reasons: first, the Objection from Rigid Designation, like the Objection from Transitivity, embodies a misleading equivocation; and second, the prejudicial influence of the names 'Swan' and 'Ice' distorts the metaphysical picture the friend of contingent identity intends to defend. First, the equivocation.

Describing the story of Swan and Ice as a story in which Swan might not have been Ice confuses or conflates evaluation *with respect to* and possible world and evaluation *in* a possible world. This is the Objection's equivocation. When setting out the story we naturally chose to use the names 'Swan' and 'Ice' for the distinct drop world individuals our actual ice statue of a swan-- which we also referred to as 'Swan' and 'Ice'-- might have been. 'Naturally' because, for reasons and with consequences I will presently discuss, 'Ice' seemed a good name for the portion of ice which survived a shattering, and 'Swan' seemed a good name for the swan statue which did not. This only muddied the waters. Since, *when evaluated in the drop world*, Swan is not Ice, it is all too easy to argue that, *when evaluated in the actual world*, Swan might not have been Ice. But this does not follow. The claim,

(44) Evaluated in the drop world, "Swan and Ice are distinct individuals" is true,

is altogether different from the claim,

(45) Evaluated with respect to the drop world, "Swan and Ice are distinct individuals" is true.

To establish,

(46) Evaluated in the actual world, “Swan might not have been Ice” is true,

we need the truth of (45), not (44), and of course (45) is false: as Kripke points out, nothing can fail to be self-identical.

Analogously, imagine a possible world in which *Huckleberry Finn* was not written by Mark Twain, but by two collaborators whom, in that possible world, happen to be called ‘Mark Twain’ and ‘Samuel Clemens’. Evaluated in that non-actual possible world,

(47) Mark Twain is not Samuel Clemens

is true. But this does not entail that, evaluated in the actual world,

(48) Mark Twain might not have been Samuel Clemens

is true. Sentence (48) is false. Mark Twain is Samuel Clemens; nothing might not have been itself. Inferring (48) from (47) illegitimately collapses the distinction between evaluation *with respect to* a possible world and evaluation *in* a possible world. The Objection from Rigid Designation commits a fallacy of equivocation by failing to respect this distinction.

In addition, the names ‘Swan’ and ‘Ice’ exert a powerful and prejudicial influence on the metaphysical picture the friend of the CIC proposes to solve the puzzle of Swan and Ice. Naturally, we suppose that the drop world counterpart of Swan is the drop world referent of ‘Swan’, and likewise for Ice. These counterpart functions are evoked by the very names ‘Swan’ and ‘Ice’, and contributed to our selecting them as names for Swan and Ice in the first place. It is unsurprising then that we thought that the story of Swan and Ice describes a case in which Swan might not have been Ice: after all, Swan’s counterpart is distinct from Ice’s. But this is sloppy. At the outset we hypothesized (stipulated) that Swan and Ice are *identical*—are *the same ice statue*. Obviously, its counterparts can’t be distinct from its counterparts. Its counterparts are distinct from each other, yes: but Swan and Ice have the same two counterparts. The CIC does not describe a case in which Swan might not have

been Ice, but a case in which Swan and Ice—the single ice statue of a swan—might have been each of two distinct individuals.

The Objection from Rigid Designation based on Kripke's intuitive test for rigid designators establishes that if 'a' and 'b' are rigid designators then there will be no situation in which *a* might not have been *b*. But this does not tell against the CIC. Assuming *a* and *b* are contingently identical in the sense required by the CIC, does not require us concomitantly to assume that *a* might not have been *b*; and hence 'a' and 'b' are free to designate rigidly. There is no incompatibility between the CIC and the thesis that names are rigid designators.

What all of this inescapably points to is the idea that each of 'Swan' and 'Ice', when evaluated with respect to the drop world, designate *both* the shattered statue *and* the scattered portion of ice, i.e. evaluated with respect to the drop world, each of 'Swan' and 'Ice' designate both the drop world's Swan, and the drop world's Ice. This is highly unusual and, at the very least, controversial. As Stanley writes, "proper names designate, at most, one thing in each possible world."³⁴ Let me elaborate.

There is one world relative to which the evaluation of a name does not differ whether the evaluation is made with respect to it or in it. This is the world in which the name, under normal circumstances, is used. Call this world the *utterance world*. The utterance world will normally be the actual world, but in special cases, typically cases involving belief attribution, it need not be.³⁵ I want to advance the thesis that names might rigidly refer to more than one non-utterance world individual but to only, at most, one utterance world individual. Call this thesis the thesis of Multiple Possible Referents. In the Swan and Ice example, I propose that 'Swice', when evaluated with respect to the drop world, refers to both of the two possible individuals Swice might have been. Of course, 'Swice-*qua*-portion-of-ice', evaluated with respect to the drop world, refers to the drop world individual named 'Ice'; and 'Swice-*qua*-swan-statue', evaluated with respect to the drop world, refers to the drop world individual named 'Swan'. But 'Swice' simpliciter, relative to no counterpart function, refers to both the drop world individual named 'Ice' and the drop world individual named 'Swan'. This is just to say that, in the drop world, Swice *is*, or is represented by,

³⁴(Stanley 1997a, pp. 565–566)

³⁵With some ambiguity, we might have called the utterance world the *perspective world*. Recall the example, "If Al Gore is right, then Ben Franklin is not the inventor of bifocals."

both Swan and Ice.

I should emphasize that, on this view, the reference of the name 'Swice' is not ambiguous. If Dr. Jones and his father both study archaeology, then, in the sentence,

(49) Dr. Jones studies archaeology,

the name 'Dr. Jones' refers ambiguously. An utterance of (49) refers to a single individual, either Dr. Jones or his father, Dr. Jones. 'Swice', evaluated with respect to the drop world, is not ambiguous. If I ask,

(50) Could Swice survive a shattering?

it would be wrong to think that 'Swice', evaluated with respect to the drop world, ambiguously refers to *one* of either the drop world's Swan or the drop world's Ice but not the other. If Swice might have been each of two individuals, then 'Swice', evaluated with respect to the drop world, names both of those individuals.

Similarly, 'Swice' does not refer to a set, or a group of individuals. I might name my favourite deck of cards 'Charlie' and say "Charlie brings me good luck". I would thereby refer to the collection of cards, not to each card as an individual; 'Charlie' has a single referent. By contrast, the reference of 'Swice', evaluated with respect to the drop world, is not a single individual, whether a set or a group, but instead *each* of two possible individuals. If the CIC is right, then 'Swice' has multiple possible referents.

Of course, I should also emphasize that the thesis of Multiple Possible Referents is tenable only if we have some semantic account of predication for quantified modal logic which can accommodate it. For example, given a name which refers to two distinct possible individuals, we need a rule to tell us when the actual referent of the name satisfies some possibly indeterminate modal predication. As we have seen, the Specification semantics provides just such a semantic account of predication.

Notice that the thesis of Multiple Possible Referents also provides an answer to the first Objection from Rigid Designation. Recall that the first Objection reasoned that if 'Swan' and 'Ice' are rigid designators then since they each denote something in the drop world they must denote the same thing in the drop world. However, in light of the thesis of Multiple

Possible Referents, we can see that the requirement that 'Swan' and 'Ice' name the same thing *in the drop world* is too stringent. All that rigidity requires is that 'Swan' and 'Ice' when evaluated *with respect to* the drop world designate whatever they actually designate. What they actually designate is, in the drop world, each of two individuals.

To lend plausibility to the thesis of Multiple Possible Referents, consider what we might say in a similar and related case.

Biblical scholars believe that the book of Genesis is the work of several distinct authors. Genesis 2, they believe, was written by a single author whom they dub 'J'. They say things like, "J is the oldest biblical author" and "J's style is engaging". Now consider the possibility that the scholars are mistaken about the authorship of Genesis 2, and the book was actually written by *two* people, A and B.³⁶ Of course, upon this discovery, the scholars will revise their beliefs and update their list of Biblical authors. They will no longer refer to whomever wrote Genesis 2 by 'J': the description, "the author of Genesis 2" which they thought had picked out one individual, had not. There are two authors, and each of them will get their own name. But in the period *before* the scholar's mistake is discovered, to whom, if anyone, do they *actually* refer by 'J'? Clearly, they believe they are referring to the unique author of Genesis 2, but who is the actual referent?

There are many plausible answers to this question and a thorough examination would lead us far afield.³⁷ I will sketch four alternatives: (1) 'J' ambiguously refers to either A or B; (2) 'J' determinately refers to either A or B; (3) 'J' refers to no one; and (4) 'J' refers to both A and B. The best answer--option (4), I will argue--supports a version of the thesis of Multiple Possible Referents.

Option (1), 'J' ambiguously refers to either A or B, is, I think, obviously false. When the scholars say, "J's style is engaging," they don't have one of A or B in mind, intend to refer to him, and fail to. This is not like the case of the Drs. Jones. When I say, ambiguously, "Dr. Jones studies archaeology," *one* of the Joneses is the referent I intend, but the audience doesn't know which one. In the case of J, the person the scholars believe

³⁶This thought experiment is actually a simplified version of historical events. At one time, biblical scholars had generally thought that the book of Genesis was the work of two authors, whom they called 'J' and 'E'. Sometime later, research revealed that, among the books attributed to E, several had been written by someone else whom the scholars called 'P'. Thus, as it turned out, a series of chapters from the book of Genesis which experts believed to have been written by one author, E, were in fact written by two, E and P.

³⁷The thesis of Multiple Possible Referents touches on central issues in the abundant literature on reference. I think the thesis has important implications for several of these issues and will reward a comprehensive study.

they are referring to does not exist. They intend to refer to the author of Genesis 2, and it is a mistake to think that this is ambiguous between A and B. A and B *both* wrote Genesis 2.

Option (2), ‘J’ determinately refers to either A or B, is also false. If I believed that Moses wrote the books of Genesis when in fact several of the books were written by others, my use of ‘Moses’ in “Moses wrote the books of genesis,” would still refer to Moses, I’d just be wrong in one of my beliefs about him. I have a large body of beliefs about Moses—that he led the Israelites out of Egypt, parted the Red Sea, and so on -- and the reference of the name is fixed and well confirmed before I learn of my error regarding who wrote the books of Genesis. The difference in the case of J is that I have no beliefs about him apart from those connected with his supposed authorship of Genesis 2; and I’ve never even heard of A or B. What is it in virtue of that my use of ‘J’ is supposed to refer to one of A or B but not the other?³⁸

Option (3), ‘J’ refers to no one, is unattractive. Certainly, the person the scholars *believe* they refer to with the description “the author of Genesis 2” --i.e., the unique author of Genesis 2 -- does not exist. There simply is no such individual. One might argue that, consequently, reference in sentences like “J’s style is engaging” simply fails.

Yet, the scholars’ use of ‘J’ in the sentence “J’s style is engaging” certainly *appears* to refer and there is, I think, an intuitive sense in which it’s true: whoever wrote Genesis 2 had an engaging style. We can respect this intuition if, employing Donnellan’s distinction, we understand the scholars’ use of the description “the author of Genesis 2” *referentially*, rather than *attributively*.³⁹ I think it is plausible to say that the scholars’ dubbing -- “let ‘J’ name the author of Genesis 2” --succeeded despite itself, and a referential use of a description provides for this. To be sure, the description the scholars used to fix the referent of ‘J’ was partly the product of a false assumption, namely that Genesis 2 had a unique author, but it picks out its intended reference notwithstanding. When Donnellan’s party-goer asks “Who is the man with the martini in his glass?”, he nevertheless succeeded in referring to the man he intends to despite the fact that it was not a martini in his glass. The party-goer made a mistake, and really the person he thought he was referring to did not exist.

³⁸What I say regarding the Moses case bears a strong resemblance to what Palle Yourgrau says, though not what Donnellan says, regarding Donnellan’s examples of famous misidentifications. See Yourgrau (1998) and Donnellan (1966).

³⁹Donnellan first presents this distinction in Donnellan (1966)

But it was a recoverable mistake, and, oversimplifying somewhat, the appropriate referent can be constructed from the utterer's *intentions*. Similarly in the case of J. The scholars intended to refer to whomever wrote the book of Genesis, and, I think it is reasonable to say, they did so. They presupposed that the book had a unique author and were wrong; it has two authors. But again, it was a recoverable mistake, and the appropriate referent can be constructed from the scholars' intentions. Their dubbing, which they thought picked out one person, had picked out two instead. This brings us to option (4).

Option (4), 'J' refers to both A and B, is, on balance, the most plausible. On this view, when the scholars described J's style as engaging, they were in fact referring to both A and B and describing their style of writing as engaging. When they write, "J is more interested in story telling than in genealogy," they are in fact describing the interests of A and B. These sorts of attributions are telling and help us to confirm the reference of 'J'. Their value is not in their descriptive power, but in the causal link---between A and B and the scholars' use of 'J'---to which they are witness. The scholars' beliefs about J, and their use of the name 'J', are sensitive, in Stalnaker's language, to facts about both A and B.⁴⁰ If A or B, or both of them, had written their portions of Genesis 2 in a less engaging and more solemn style, then the scholars would have declared J to be a less engaging and more solemn author. If A and B had been particularly interested in genealogy, then the scholars' would have said, "J is particularly interested in genealogy." Loosely, one minimal requirement on the correct use of a name is that it must bear this sort of causal link to its referent (or referents). In cases in which a name's reference is uncertain, this kind of causal evidence can help determine the name's actual reference. These observations help to establish that the scholars' are using 'J', to refer to A and B. In possible worlds compatible with the way the scholars' believe the actual world is, J represents the actual authors of Genesis 2, namely A and B.

Moreover, if the scholars were asked, after their mistake was revealed, who's style was engaging, A's or B's? No one's? Who *is* J? They might reply that, really, no single person's style was engaging, and that by 'J' they did not in fact refer to a single person. But this is simply acknowledging their error. If pressed, I think the scholars would say that, really, A and B wrote Genesis 2 in an engaging style; and that J turned out to be two people.

⁴⁰See Stalnaker (1988) particularly page 154 where Stalnaker describes a similar, but inverted, case in the context of belief attribution.

not one. The awkward grammar contorts a plausible theory: unbeknownst to them, the scholars' description "the author of Genesis 2" identified not one, but two individuals, and their use of 'J' referred to them both. Endorsing this theory, the scholars are endorsing a version the thesis of Multiple Possible Referents.⁴¹

It is not (immediately) clear that our conclusions regarding the reference of 'J' ought to be extended to explain the reference of 'Swice'. The two cases are different. The case of J is a case in which a possible individual is mistaken for two actual individuals. Swice, if the friend of the CIC is right, is an individual which might have been each of two distinct individuals. Yet, in each case, a name is used *in* the relevant utterance world to refer to a single individual and *with respect to* some non-utterance world to refer to two distinct individuals. In other words, in each case, the reference of a name is best explained by embracing the thesis of Multiple Possible Referents. If this is a plausible approach to explaining the reference of 'J', then I suggest it is also a plausible approach to explaining the references of 'Swice'.

3.4 Conclusions

Our challenge in this paper has been to defend the CIC from charges that it is incoherent—for violating the transitivity of identity—and/or unattractive—for being incompatible with the thesis that names are rigid designators. Both charges, I have argued, fail. Careful attention to the notion of perspective frees the CIC from the charge of violating the transitivity of identity; careful attention to the use and function of names frees the CIC from the charge of being incompatible with the thesis that names are rigid designators. Two further conclusions merit emphasis and provide a direction for further study.

(1) Much of the confusion which surrounds contingent identity, and has led or contributed to many objections—including those from Transitivity and Rigid Designation—has arisen from insufficient clarity on the *metaphysics* of contingent identity. The CIC is not about the logic of the identity relation, but about the metaphysics of identity, about constitution, persistence, sameness, identity through time and logical space. The debate over contingent identity, which I think has yet to be settled, should turn to these sorts of questions.

⁴¹I am very grateful to Ishani Maitra for helpful discussions on the topics of these paragraphs.

(2) Many of the objections to contingent identity—and even statements of the thesis itself—contain tendentious or equivocal use of names. Indeed, names played an important part in both the Objection from Transitivity and the Objection from Rigid Designation. Clarifying these roles and dispatching equivocations has yielded some interesting results and some new ideas in the fields of naming and reference. Two of these ideas in particular, the use and mechanics of ‘*qua*’, and the thesis of Multiple Possible Referents, deserve further study. Many interesting advances, especially in areas unrelated to contingent identity, remain to be made.

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