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Leibniz's Theories of Contingency

There is a familiar conception of Leibniz's views about the nature of necessity and contingency that portrays him as a sort of grandfather of possible worlds semantics for modal logic. According to this conception, Leibniz envisages an infinity of possible worlds, of which God (who exists necessarily) chooses and actualizes one (the best). Necessary truths are propositions that are true in all possible worlds. Contingent truths are propositions that are true in the actual world but false in at least one other possible world. Which worlds are possible, what would happen in them, and how they are related to one another as similar or dissimilar, better or worse, do not change from one world to another; therefore, all truths about what is possible are necessary. (This Leibniz is, to be precise, a grandfather of possible worlds semantics for S5, the strongest of the usual systems of modal logic.) For this reason also the property of being the best possible world belongs necessarily to the world that has it. The root of contingency is that it is not necessary but only contingent that God chooses to actualize the best. All and only those truths are contingent whose truth depends on God's free choice of the best.

We meet this Leibniz in chapter 3 of Bertrand Russell's *Critical Exposition of the Philosophy of Leibniz*. An important part of Russell's interpretation is the famous exception he makes in Leibniz's principle that in every true proposition the concept of the predicate is contained in the concept of the subject. "The assertion of existence, alone among predicates, is synthetic," Russell says, "and therefore, in Leibniz's view, contingent."[1] All other predicates are contained in the concepts of the subjects that have them; existence is not, however, except in the case of God. Therefore, truths about what any possible individual or possible world is like, or would be like if it existed or were actual, are all necessary, but truths about which possible world is actual, and therefore which possible individuals exist, are contingent.

Russell gave up these views after reading Louis Couturat. "Recent discussions," reported E. M. Curley, accurately, in 1974, "have tended in some measure to go back to Russell's original view (before Couturat) that, apart from the proposition that God exists, existential truths are not analytic."[2] I think this tendency leads backward, not only in time but also in our understanding of

[1]Russell, *Philosophy of Leibniz*, p. 27. The views discussed here belong to the first edition, however, and were retracted in the preface to the second edition.

[2]Curley, "Recent Work on 17th Century Continental Philosophy," p. 242.

Leibniz. For the familiar Leibniz described above is in large part a creature of misunderstanding, though not exactly of fiction.

A variety of conceptions of the problem of contingency, and solutions to it, can be found in Leibniz's writings. There was development in his thought on it, and he held more than one solution at once. (The two main solutions are set out in sections 1 and 2 of this chapter.) An accurate account of Leibniz's theories of contingency will therefore be rather complex. We will come toward the end of it, rather than at the beginning, to the question whether he regarded existence as a predicate contained in the concepts of things that exist.

1. Leibniz's First Main Solution

Even before he thought of the problem of contingency in terms of his conceptual containment theory of truth, Leibniz had "found [himself] very close to the opinion of those who hold everything to be absolutely necessary," but "was pulled back from this precipice by considering those possible things which neither are nor will be nor have been" (FC 178/L 263). Just how close he was to the cliff, we shall see in section 1.1; in sections 1.2–1.5 we shall consider the way in which he says he was rescued from it.

1.1 On the Brink of the Precipice

In May 1671 Leibniz wrote a letter to the legal scholar Magnus Wedderkopf about "the necessity of events" (A II,i,117f./L 146f.).[3] He begins by arguing that everything that happens is determined by God's decree and admitting that this is a "hard" conclusion. He then traces the cause of Pontius Pilate's damnation—from his lack of faith, to his failure to pay attention, to his failure to understand the utility of paying attention, to a lack of causes of such understanding.

> For it is necessary to analyze everything into some reason, and not to stop until we arrive at a first reason—or else it must be admitted that something can exist without a sufficient reason for its existence, and this admission destroys the demonstration of the existence of God and of many Philosophical theorems. What then is the ultimate reason of the divine will? The divine intellect. For God wills those things that he understands to be best and most harmonious, and selects them, as it were, from an infinite number of all possibles.

Leibniz goes on to state that the ultimate reason of things is found in the essences, possibilities, or ideas of things, which "coincide with God himself," are understood by God, and have no reason outside themselves. Leibniz draws a strongly necessitarian conclusion:

> Since God is the most perfect mind, however, it is impossible for him not to be affected by the most perfect harmony, and thus to be necessitated to the best by the very ideality of things. . . . Hence it follows that whatever has happened, is happening, or will happen is best and therefore necessary, but . . .

[3]All quotations in this section are from this letter, unless otherwise indicated.

> with a necessity that takes nothing away from freedom because it takes nothing away from the will and the use of reason.

Three points deserve comment here.

1. Leibniz has already slipped over the edge of the precipice in this letter. He states flatly and without qualification that everything that ever happens is necessary. This is his simplest solution to the problem of contingency. If there is no contingency, there is no need to account for it or explain its nature. Leibniz did not remain content with this position, however. On his own copy of the letter to Wedderkopf he later wrote, "I have since corrected this; for it is one thing for sins to be infallibly going to happen, and another thing for them to be going to happen necessarily." He continued to ascribe necessity to all things, but only with some qualification. In 1679 he wrote, "What is actual is *in some way* necessary" [italics added] (Gr 536). Even in free actions there is allowed (in 1710) to be "hypothetical" and "moral" necessity, but not "absolute" or "metaphysical" necessity (G VI,37).

2. Leibniz was a compatibilist, maintaining to the end of his life (LC V,3) that every event is determined but some acts are nonetheless free. According to the formula of his maturity, freedom consists in intelligence (understanding the object of deliberation), spontaneity (insofar as the source of the action is within the agent), and contingency (which excludes absolute, logical, or metaphysical necessity, but not hypothetical or moral necessity) (T 288–90,302; cf. G VII,108–11). In the letter to Wedderkopf, however, we meet a more extreme compatibilism, which does not make contingency a necessary condition of freedom. In this early work voluntariness and intelligence seem to suffice for freedom: necessity "takes nothing away from freedom because it takes nothing from the will and the use of reason." The later addition of contingency as a condition of freedom is surely related to the change in Leibniz's willingness to admit without qualification the necessity of all events, but the latter development in his thought comes sooner than the former. In a work of 1673, in which he argues vigorously against the claim that sins are (unqualifiedly) necessary (A VI,iii,124ff.), he still says, "To preserve the privilege of free will, it is enough that we have been so placed at a fork in the road of life, that we can do only what we will, and can will only what we believe to be good; but can trace out, by the fullest given use of reason, what should be regarded as good" (A VI,iii,133). Similarly, in his notes on a conversation with Bishop Nicolaus Steno (Niels Stensen), 27 November 1677, he defined freedom simply as "rational spontaneity" (VE 302 = LH IV,4,3C,12–14). And in a paper from 1678–82 he opposes freedom to constraint and to ignorance, but says nothing by way of opposing it to necessity (VE 7–10 = LH I,3,5,23–24). Later, however, Leibniz distinguished a sense in which freedom is opposed to necessity and a sense in which it is opposed only to compulsion (B 121); in several texts from the years 1681–87 (Gr 299,308,229; cf. G VII,108–111; Gr 381f.) and later (Gr 421, G III,58f.) he ascribes *both* kinds of freedom to human agents—though even in his last years he could define the free as "the spontaneous with choice" (VE 1088 = LH IV,8,60–61).

3. In the letter to Wedderkopf the argument for the necessity of all events is not based on the conceptual containment theory of truth, but rather on the nature

of God and the principle of sufficient reason. This latter, more theological argument against contingency is by far the one most often addressed by Leibniz in his writings; and we shall be concerned with it in most of this chapter.

The letter to Wedderkopf is an exceptional text. It is hard to regard as merely tentative a view that Leibniz communicated to an eminent person with whom he was by no means intimate. But he may not have held the extreme necessitarian position for any length of time. It seems not to have been held in a fragment on free will written just a few months before or after the letter (A VI,i,540f.).[4]

1.2 Things Possible in Their Own Nature

By 1677 the necessitarian position was replaced by a theory Leibniz frequently repeated, publicly and privately, to the end of his career, which must be regarded as his principal (and most confident) solution to the problem of contingency. The basic idea of this solution is briefly stated in a comment on Spinoza from about 1678: "On the hypothesis of the divine will choosing the best, or operating most perfectly, certainly nothing but these things could have been produced; but according to the very nature of things considered in itself [*per se*], things could have been produced otherwise" (G I,149/L 204). We find it more fully stated in a paper on freedom, probably written in the early 1680s.

> But we must say that God wills the best by his own nature. Therefore he wills necessarily, you will say. I shall say with St. Augustine that that necessity is happy. But surely it follows from this that things exist necessarily. How so? Because a contradiction is implied by the nonexistence of that which God wills to exist? I deny that that proposition is absolutely true. Otherwise those things which God does not will would not be possible. For they remain possible, even if they are not chosen by God. It is possible indeed for even that to exist which God does not will to exist, because it would be able to exist of its own nature if God willed that it exist. But God cannot will that it exist. I agree; yet it remains possible in its own nature, even if it is not possible in respect to the divine will. For we have defined possible in its own nature as that which does not imply a contradiction in itself even if its coexistence with God can be said in some way to imply a contradiction.[5] . . .
>
> Therefore I say: that is possible, of which there is some essence or reality, or which can be distinctly understood. . . . If God had decreed that no real line must be found which should be incommensurable with other real lines (I call real a line that actually bounds some body), it would not therefore follow that the existence of an incommensurable line implies a contradiction, even if God, from the principle of perfection, could not fail to ordain in this way. (Gr 289f./AG 20–22)

On this view, the actual world, and the things that exist in it, are not necessary but contingent, because other worlds are possible in which those things would not exist. The possibility of those other worlds does not depend on the

[4]On the dating, see A VI,i,537 and ii,579, and Kabitz, *Die Philosophie des jungen Leibniz*, pp. 121–26.

[5]Here Grua inadvertently omits the clause, *etsi eius coexistentia cum Deo aliquo modo dici possit implicare contradictionem*. See VE 277.

possibility of God's choosing them. It is enough, for the contingency of the actual world, if the other possible worlds are "possible in their own nature" or "do not imply a contradiction in themselves," considered apart from God's choice.

Leibniz still takes this position in the *Theodicy*. He reports that Abelard agreed "that it can well be said that that man [who in fact will be damned] can be saved, in respect to the possibility of human nature, which is capable of salvation, but that it cannot be said that God can save him, in respect to God himself, because it is impossible for God to do that which he ought not to do." He comments that Abelard therefore need not have held, as he did, that "God cannot do anything but that which he does," for "the others . . . do not mean anything else when they say that God can save that man, and that he can do that which he does not do" (T 171). The possibility of the alternatives among which God chooses is internal to them, and this internal possibility of the alternatives is enough to make God's choice free.

> In a word, when one speaks of the *possibility* of a thing it is not a question of the causes that can bring about or prevent its actual existence; otherwise one would change the nature of the terms and render useless the distinction between the possible and the actual, as Abelard did. . . . That is why, when one asks if a thing is possible or necessary, and brings in the consideration of what God wills or chooses, one changes the question. For God chooses among the possibles, and for that very reason he chooses freely, and is not necessitated; there would be neither choice nor freedom if there were but one choice possible. (T 235; cf. T 44,45,228,230–32,234,367)[6]

The first problem about this theory is to understand what is meant by "possible in its own nature." If a certain world is inferior and so cannot be chosen by God, is that not by virtue of its own nature? Why, then, should we not say that it is impossible in its own nature?

The theory requires a relatively narrow understanding of the nature, essence, or concept of a thing or a world. The essence of a substance, in the narrow sense, contains information about such things as the perceptions the substance has, and perhaps the geometrical configurations and motions expressed by those perceptions, and about the substance's powers and tendencies to produce perceptions in itself—but not about other substances.[7] It is in this sense that Leibniz can say, "That is possible of which there is some essence," even if God could

[6]Robert Sleigh, in his superb book on *Leibniz and Arnauld*, pp. 82f., doubts that Leibniz still adheres to the "possible-in-its-own-nature" theory of contingency in the *Theodicy*, and offers an ingenious interpretation of T 235, where it does not imply that theory. I am not persuaded, however, because I think there are too many passages of the *Theodicy*, many of them cited here and in sections 1.4 and 1.5, that are most naturally interpreted on the basis of the "possible-in-its-own-nature" theory. There is also a letter of March 1713 to Christian Goldbach in which Leibniz gives an extended treatment of the problem of contingency, using only ideas belonging to the "possible-in-its-own-nature" theory, and identifies this as the view defended in the *Theodicy* (LG 189).

[7]This presupposes that information about a substance's perceptions and their (internal) content does not of itself contain information, in the relevant sense, about other substances—that apart from considerations of intersubstantial harmony, it does not entail the existence of the substances perceived. I believe that Leibniz was committed, on the whole, to this presupposition; there are things in his writings from 1686 and later, however, which could be taken as suggesting the opposite. See Chapter 3, section 3.

not choose to actualize it (Gr 289). Necessity as well as possibility can be viewed as internal to essences in the narrow sense; indeed, what Leibniz means by necessary existence is precisely existence that follows from the essence of a substance without consideration of the essence of any other substance (see Chapter 5, section 1). Conversely, one main sense in which things are contingent, for Leibniz, is that they depend on God's will (and power) for their existence (or nonexistence).

Of course, Leibniz famously speaks of each substance as having an individual concept in a much broader sense in which it is "complete" and contains much information about other substances—indeed, perhaps it contains all truths. This complete concept, I believe, is supposed to follow from the substance's essence in the narrower sense, but only in combination with truths that follow from the essences of other substances and their interrelations. In the *Discourse on Metaphysics* "essences" seem to be equivalent to complete concepts (DM 16), but Leibniz's use of the term 'essence' is quite fluid.

The nature of a possible world, in the narrow sense, is constructed from the essences, in the narrow sense, of the substances that would exist in it. Leibniz may indeed have thought of it as the sum of those essences. But we may think of it as containing also all sorts of relations among the substances—which are more perfect than which, how they perceive or express each other, and so forth. Thus is built up what we may call the *basic concept* of a possible world. It is to contain information about everything that happens *in* that world, but not everything that is true about its relation to God's will.

By analogy with the complete concept of an individual, we can also speak of the *complete concept* of a possible world, which is to be fuller than the basic concept and contain information about everything that is true about that possible world, including whether it is the best, or nearly the best, or far from the best, of all possible worlds, and whether God therefore chooses or rejects it.[8] We may take it to be Leibniz's position that a world is possible in its own nature if its *basic* concept contains no internal contradictions, and nothing that is incompatible with its actuality so long as certain determinants of God's choice are kept out of the picture; its *complete* concept may contain God's rejecting it, but that does not keep it from being "possible in its own nature."

Questions remain about just what is to be excluded from a world's basic concept.

1. Does it include any concepts of other possible worlds? It seems natural to exclude them, since we are trying to capture the idea of a possibility that is internal to one possible world. And by excluding them we can be certain of not including enough information to imply God's rejection of the world represented by the basic concept. On the other hand, the solution of the problem of contingency does not strictly require the exclusion of this information if the right information about God is excluded. And if rational creatures would exist in the world

[8]The distinction between basic and complete concepts of a possible world is not explicit in Leibniz. He does speak of the concept of a possible world, but without making the distinction: "this universe has a certain principal or primitive concept, of which particular events are only consequences" (LA 41).

of the basic concept, they would presumably think about alternative possibilities; so by containing their thoughts, the basic concept would contain partial concepts of alternative possible worlds. But this does not prove that the basic concept of a possible world must include *complete* concepts of other worlds. For no creature, no being other than God, according to Leibniz, conceives possible worlds in enough detail to determine which is the best.

2. Do basic concepts of possible worlds include any facts about God? Leibniz seems flatly to exclude God from the world when, in discussion with Gabriel Wagner, 3 March 1698, he rejects some of Wagner's suggestions, saying, "These things would be true, taking the word 'World' so that it includes God too. But this usage is not appropriate. By the name 'World' is normally understood the aggregate of things that are changeable or liable to imperfection" (Gr 396). Similarly, Leibniz refers to the world in 1697 as "the Aggregate of finite things" (G VII,302/L486), and in the early to mid-1680s as "the composite of all creatures" (VE 166 = LH IV,7C,70) or, with an unusual restriction, "the Aggregate of all bodies" (VE 418 = LH IV,7C,111–14).[9] If Leibniz conceives of the basic concept of a possible world as a sum of essences of (possible) substances, God's essence will be excluded from the sum. On the other hand, Leibniz speaks of the possible things that are the alternatives for God's choice as containing in their concepts certain decisions of God, considered as possible, so that God chooses among certain possible divine actions, as well as among possible creatures (C 23f.; LA 49–51; cf. G I,360). This causes no problem for the theory of contingency, provided that the divine decisions that are included in the alternatives for God's choice are noncomparative decisions concerned only with the laws or order of the world to which they belong.

What is important for Leibniz's treatment of contingency is that the basic concepts of possible worlds do not include God's choice *among* possible worlds. In order to exclude it, they must exclude some information either about God or about other possible worlds. And it is not clear that excluding information about other worlds will always be enough. If "the damnation of an innocent is . . . possible in itself," and does not "imply a contradiction in terms," as Leibniz wrote in texts dating from 1677 and the early 1680s, the basic concept of such a thing may very well have to exclude information about God's justice, for Leibniz does not seem to think one has to compare possible worlds in order to determine that a just God would not choose such a state of affairs. Indeed, the information that Leibniz invokes from outside the concept of this state to explain the way in which it is not possible is not about other possible worlds, but only about God: it cannot actually exist "because it is incompatible with the presupposed existence of God, whose perfection (from which justice follows) cannot permit such a thing" (Gr 300,271).

[9]These formulations suggest a conception of possible worlds as less complete than they are normally conceived to be today. A similarly restricted conception persisted in post-Leibnizian German philosophy. Thus "the world" is defined by Wolff (*Vernünftige Gedanken*, § 544) as a connected "series of changeable things" and by Crusius as (*Entwurf der nothwendigen Vernunft-Wahrheiten*, § 204) as "the whole aggregate of all finite things."

1.3 Hypothetical Necessity

Even if a satisfactory explanation can be given of what it is for a thing or a world to be possible in its own nature, there remains an important objection to Leibniz's use of this notion in accounting for contingency. His claim is that the actuality of this world is contingent because other worlds are still possible in their own natures even if they are not possible in relation to God's will. But in presenting this theory of contingency, in some of the earlier texts (Gr 289f.; A VI,iii,127f.), Leibniz seems to admit that it is necessary that God chooses this world. And if it is necessary that God chooses this world, and it follows necessarily from that that this world is actual, must not the actuality of this world be necessary and not contingent? As Curley puts it:

> It is an uncontroversial truth of modal logic that if p is necessary and entails q, then q is necessary. So if it is (absolutely) necessary that God choose the best, and if the existence of the best world is (hypothetically) necessary in relation to his choice, then it is (absolutely) necessary that the best world exist.[10]

Leibniz makes much use of the term 'hypothetically necessary', which Curley rightly brings in here. Leibniz says repeatedly (e.g., in DM 13) that contingent truths are *hypothetically* but not *absolutely* necessary. 'Hypothetical necessity' is normally, as he recognized (G III,400/AG 193), a synonym for 'necessity of the consequence'. So he seems to be using the traditional distinction between necessity of the consequence and necessity of the consequent: 'If p then necessarily q'[11] can mean either that 'If p then q' is necessary (necessity of the consequence), or that if 'p' is true then 'q' is necessary (necessity of the consequent). But then necessity of the consequence (hypothetical necessity) combined with necessity of the antecedent implies necessity of the consequent. If 'p' and 'If p then q' are both necessary, then 'q' is necessary.

Leibniz raised this very objection against himself in his "first Theodicy," written in dialogue form in 1673 as *The Philosopher's Confession*, and given to Antoine Arnauld and others.[12]

> God's existence is necessary. From it follow the sins that are contained in [this actual] series of things. What follows from the necessary is necessary. Therefore the sins are necessary. (A VI,iii,127)

The answer that Leibniz first wrote was as follows:

> I reply that it is false that whatever follows from what is necessary is necessary. From truths, to be sure, nothing follows that is not true. Yet since a particular [conclusion] can follow from purely universal [premises], as in [the

[10]Curley, "Recent Work on 17th Century Continental Philosophy," p. 243. Substantially the same objection was raised by a "Roman Catholic Theologian" whom Des Bosses consulted and quoted in a note to § 201 of his Latin translation of Leibniz's *Theodicy* (Dutens I,273).

[11]I use ordinary (single) quotation marks in place of corner quotes, since the latter are not universally understood.

[12]I owe this information, and the phrase "first Theodicy," to the introduction to Saame, 14, 16, 22. Saame's excellent edition is now superseded by A VI,iii, as a standard reference, but his introduction and notes remain extremely valuable.

> syllogistic figures] Darapti and Felapton, why not something contingent from something necessary? (A VI,iii,127)[13]

Thus baldly stated, Leibniz's answer seems simply to ignore the modal axiom to which Curley appeals. Leibniz acknowledged the axiom, however, at least by 1675, when he wrote, "Whatever is incompatible with something necessary is impossible" (A VI,iii,464). He therefore distinguished two types of necessity and impossibility. "The concept of the impossible is twofold: that which has no Essence; and that which has no Existence or which neither was nor is nor will be, which is incompatible with God or with existence or with the reason which makes things to be rather than not" (A VI,iii,463). Leibniz accordingly corrected his answer in the manuscript of *The Philosopher's Confession* (very likely about the end of 1677),[14] to incorporate such a distinction:

> I reply that it is false that whatever follows from what is necessary *through itself* is necessary *through itself*. From truths, to be sure, nothing follows that is not true. Yet since a particular [conclusion] can follow from purely universal [premises], as in [the syllogistic figures] Darapti and Felapton, why may not something contingent, *or necessary on the hypothesis of something else*, follow from something that is necessary *through itself*? (A VI,iii,127f.)[15]

He also added:

> In this place we call *necessary* only that which is necessary *through itself*—that is, which has the reason of its existence and truth within itself. Such are the Geometrical truths, and of existing things only God. The others, which follow from the supposition of this series of things—that is, from the harmony of things—or from the Existence of God, are *contingent through themselves* and only hypothetically necessary. (A VI,iii,128)[16]

Here it is clear that in spite of the traditional terminology of hypothetical necessity, the absolute or per se necessity that Leibniz denies in affirming contingency is something more than the traditional necessity of the consequent.[17] In Leibniz's conception of hypothetical necessity, the absolute necessity or contingency of the antecedent is no more important than the externality of the

[13]Here I translate the text of A VI,iii, minus Leibniz's later additions.

[14]Additions to a manuscript are hard to date, but we know that Leibniz was working on this text, and thinking along these lines, at this time. The manuscript bears marginal comments by Nicolaus Steno, in Steno's hand, and responses to them in Leibniz's hand, which surely date from the period of Steno's residence in Hannover, from late 1677 to 1680. Steno and Leibniz had a long discussion on the subject on 27 November/7 December 1677. Leibniz's record of his own views in that discussion expresses the same theory of contingency as these additions to *The Philosopher's Confession*, as I will shortly explain. On these matters, see A VI,iii,115 and the introduction to Saame, 20–23.

[15]Here I translate the full text of A VI,iii, italicizing Leibniz's principal additions.

[16]Here the italicized words were underlined by Leibniz. What Leibniz says here is important for his conception of God as a necessary being; see Chapter 5, section 1.

[17]Conversely, 'hypothetical necessity' could mean for Leibniz something stronger than it traditionally meant, something that excludes only per se necessity. Fabrizio Mondadori argues along different lines for a similar conclusion in his very thorough and illuminating study of Leibniz's treatment of this topic; see Mondadori, "Necessity ex Hypothesi," esp. pp. 196–205.

antecedent to the consequent. What follows necessarily from what is necessary through itself is certainly necessary by necessity of the consequent, in the traditional sense. It is not necessary through itself, however, but only hypothetically necessary, and contingent, in Leibniz's sense, if the antecedent from which it follows is external to it, and not contained in its own nature. The phrase Leibniz uses here, 'necessary *ex alterius hypothesi*' [necessary on the hypothesis *of something else*], expresses his meaning better than the more usual 'necessary *ex hypothesi*'.

This conception of hypothetical necessity is expressed only slightly less clearly in another early passage. In Leibniz's record of his side of his conversation on 27 November 1677 with Nicholas Steno, who read *The Philosopher's Confession* and commented on it, he says that "there is an *absolute necessity* when a thing cannot even be understood, but implies a contradiction in terms," and "there is a *hypothetical necessity* when a thing's being *some other way* can indeed be understood through itself, but it is necessarily *this way*, nonessentially [*per accidens*], on account of other things outside itself already presupposed" (Gr 270f.).

In his later writings Leibniz is usually less explicit about his interpretation of hypothetical necessity, and indeed it may be questioned whether he adhered consistently to his account of contingency in terms of things possible in their own nature. The evidence that his adherence to it was not consistent and unwavering has to do with the question whether effects that are contingent in the sense of being only hypothetically necessary must have contingent causes, and likewise whether effects that are possible in themselves must have possible causes. There are passages, both early and late, in which Leibniz says that the possibility or essence, as distinct from the actual existence, of any being depends on the possibility of a cause or reason of its existence, which seems to imply that the concepts of creatures as possible depend on the concept of God as possibly causing them.

Thus in 1676, in connection with the ontological argument for the existence of God, Leibniz wrote that a most perfect Being "cannot be unless it has a reason of existing from itself or from something else" (A VI,iii,572).[18] While it is God whose possibility Leibniz is discussing here, he is clearly relying on a general principle that would make the possibility of *any* being depend on the possibility of a reason for its existence. This threatens to undermine the distinction between internal and external possibility on which his first main theory of contingency is based.

Of course this text may well have preceded, by some months, Leibniz's full development of that theory of contingency. And by 1678 or 1679 Leibniz himself was using a distinction between internal and external possibility to criticize a Spinozistic proof that was based on an assumption very similar to his own assumption of 1676. He endorses a proof that a substance conceived through itself is possible in the sense that it "can be conceived," but with a reservation:

> But thus far it can still be doubted whether it is therefore possible in the way in which *possible* is taken in this context—that is, not for what can be con-

[18]This passage is part of an argument discussed at length in Chapter 5, section 2.3.

> ceived, but for that of which some cause, analyzable ultimately into the first cause, can be conceived. For not all of the things we can conceive can therefore be produced, on account of other, superior things with which they are incompatible. (G I,143/L 199)

Being unable to be produced (by a perfectly wise and good God) on account of incompatibility with superior things is exactly the way in which Leibniz thought that something possible in its own nature might nonetheless lack a more external sort of possibility. In 1678 or 1679 he sees that this point invalidates an existence proof that depends on inferring the possibility of a cause from the possibility of a thing in its own nature. That in 1676 he proposed (to himself, at least) a proof that depends on the converse inference from impossibility of a cause to what appears to be understood as impossibility of a thing in its own nature may be taken as suggesting that by 1676 he had not yet worked out the distinction between internal and external modalities or the theory of contingency that depends on the distinction.

Perhaps he had not. But the view expressed in 1676 recurs at intervals through Leibniz's middle and later years. There is a paper from the mid-1680s (Gr 310f.), for example, that hints, though it does not unambiguously imply, that effects that are contingent in the sense of being only hypothetically necessary must have contingent causes. Writing to Arnauld in 1686, Leibniz says that "the possibilities of individuals or of contingent truths contain in their concept the possibility of their causes, namely of the free decisions of God" (LA 51). In a letter of 1701 to Burcher De Volder, Leibniz says, "for conceiving of the essence of [a substance], the concept of a possible cause is required; for conceiving of its existence, the concept of an actual cause is required" (G II,225/L 524). Similarly, Leibniz seems to think that the possibility of an effect requires the possibility, though not the actuality, of some cause of it, when he says, in a letter of 1714 to Louis Bourguet, "Generally speaking, in order for a thing to be possible, it suffices that its efficient cause be possible; I except the supreme efficient cause, which must exist in fact" (G III,572/L 661).[19] In some of these passages it is not explicit that the possibility of a thing *in itself* is at issue; but the statement of 1701 to De Volder about essence is surely about internal possibility.

I am not persuaded by this evidence, however, that Leibniz ever abandoned the distinction between internal and external possibility, or the theory of contingency based on it. For in the *Theodicy* of 1710 he still says that considerations about what God chooses, and in general about the causes of a thing, are not relevant to the question of the thing's possibility (T 235, quoted earlier in section 1.2). And it would not be plausible to interpret Leibniz there as meaning only that the *actuality* of the causes is irrelevant, while tacitly assuming that the *possibility* of the causes is relevant. For he is explicitly attacking Abelard, whom he reads (T 171) as arguing, not merely from the nonactuality, but from the alleged impossibility of God's having chosen otherwise than God actually did. The idea that it is enough for contingency that there are a plurality of alternatives for God's choice that are possible in themselves is more clearly and

[19]Two of the passages quoted here were called to my attention by David Blumenfeld, who also pointed out the problem they cause for my interpretation.

emphatically presented in the *Theodicy* than any other well-articulated solution to the problem of contingency.[20] By the time of writing the *Theodicy*, as we shall see, Leibniz had developed a more ambitious theory of contingency that enabled him to hold that God's choice of this world to actualize is contingent, and therefore that contingent existences do have a contingent cause in God; this more ambitious theory is not clearly presented in the *Theodicy*, however.

Perhaps there is some vacillation or inconsistency in Leibniz's treatment of hypothetical necessity and the relation of a thing's possibility to the possibility of a cause of it. But we may be able to obtain a consistent reading of all (or almost all) the texts if we draw the right line between attributes of God that are, and that are not, to be taken into account in the basic concepts of possible worlds. In particular, we should consider the hypothesis that Leibniz consistently (and persistently) supposed that the internal possibility of created things depends on God's omnipotence or power to create them, but not on God's justice, by which God discriminates among the internally possible creatures.

1.4 The Reality of Choice

We may be tempted to object that the conception of the contingent as that which has some alternative that is possible *in itself* (if not in relation to God, or God's justice) does not really show how there can be any contingency in the Leibnizian universe, nor how God's choice among possible worlds can be free. For what is contingent in this Leibnizian sense may still be necessary by necessity of the consequent—that is, absolutely necessary—in the traditional (and twentieth-century) sense. And the choice of this world to actualize may be necessitated by God's nature as perfectly good, even if other worlds remain possible in themselves. If this is all that Leibniz has to offer in defense of contingency, his system may be thought as necessitarian as Spinoza's.

Most of what is said in this objection is right, in a way, but it overlooks the nature of Leibniz's interest in free will and contingency, along with his stated view of the difference between his determinism and Spinoza's. His interest in contingency is rooted in his interest in divine and human free will—with respect to which he is, after all, a compatibilist. We must let him define for himself what kind of compatibilist he is. At one time, as we have seen, he regarded unqualified necessity as compatible with freedom. Later his principal reason for insisting on some sort of contingency in connection with free action seems to have been to ensure the reality of choice—to ensure that what happens is really influenced by final causes and judgments of value.

This is the point that Leibniz most often insists on in distinguishing his views about necessity from Spinoza's. Spinoza held that there are no final causes in nature, that God does not act for an end, and that things are called good or bad with regard only to how they affect us, being quite indifferent to God (*Ethics*, I, Appendix). He said that actual intellect and will must be referred to God-as-an-effect [*natura naturata*] and not to God-as-a-cause [*natura naturans*] (*Ethics*, I,

[20] I still hold this view, despite Sleigh's arguments to the contrary; see Sleigh, *Leibniz and Arnauld*, pp. 82f., and note 6 above.

prop. 31), and denied that a divine intellect or will could resemble ours in anything more than name alone (*Ethics*, I, prop. 17, schol.). Indeed there is no room in Spinoza's system for God to choose, for there is nothing to be excluded by God's choice. By the necessity of the divine nature, since it is infinite in Spinoza's sense, absolutely everything possible must be actual (*Ethics*, I, prop. 16).

On all of these points Leibniz disagreed with Spinoza. Even in the most extremely necessitarian interpretation of Leibniz's system, God's choice has a real and important role to play. For even if God's choice of this world is necessary, other worlds are possible in their own nature and are not excluded without God's choice but only through (the necessity of) God's choosing this one. God's choice is an indispensable link in the chain of explanation for the actuality of this world. "The nature of things, taken without intelligence and without choice, has nothing sufficiently determining" (T 350). The comparative value of the different worlds also has a crucial explanatory role, in which Leibniz employs a notion of final cause.[21]

Leibniz emphasizes this disagreement in his discussions of Spinoza, early and late. In the period 1676–78, near the time of Spinoza's death, Leibniz commented, "But it is not at all to be thought that all things follow from God's nature without any intervention of the will" (A VI,iii,364; cf. Gr 279), and "Even if it is true that not everything happens for the sake of human beings, it still does not follow that [God] acts without will or understanding of the good" (G I,150/L 205). In the *Theodicy* he wrote:

> Spinoza . . . appears to have explicitly taught a blind necessity, having denied to the author of things understanding and will, and imagining that good and perfection relate only to us and not to him. It is true that Spinoza's opinion on this subject is somewhat obscure. . . . Nevertheless, as far as one can understand him, he acknowledges no goodness in God, properly speaking, and he teaches that all things exist by the necessity of the Divine nature, without God making any choice. We will not amuse ourselves here refuting an opinion so bad, and indeed so inexplicable. Our own is founded on the nature of the possibles—that is to say, of the things that do not imply any contradiction. (T 173; cf. T 174,371–74; RS 48–50/AG 277f.)

If we will allow Leibniz to disagree with Spinoza in his own way, rather than in some way that we might impose on him, this should be enough to show that his determinism is not properly called Spinozistic.

1.5 Moral Necessity

When Leibniz says that he opposes a "brute" or "blind" necessity (T 174,349), he means (sometimes with explicit reference to Spinoza) a necessity that denies

[21]A similar point is made by Margaret Wilson, in her interesting paper, "Leibniz's Dynamics and Contingency in Nature," pp. 284f.: "Even if one should conclude that the denial of a truth of fact *must* lead to contradiction on Leibniz's premises, there remain vast differences between his system and the necessitarianism of Spinoza. The main point can be expressed very simply: Leibniz's philosophy requires that the explanation of any existential proposition involve reference to value, purpose, perfection."

to God intelligence and choice (T 371–72). Similarly, in the *Theodicy*[22] he admits a "moral" but not a "metaphysical" necessity of God's choosing the best. Leibniz usually gives little or no explanation of this distinction, and one might be tempted to take it as a promissory note for a less strongly necessitarian theory that he was unable to provide in detail. But in fact 'morally necessary' had a precise meaning. The morally necessary is what one morally ought to do. In his early writings on jurisprudence (1671–78) Leibniz enunciated a system of moral modalities (a very rudimentary deontic logic) in terms of what is possible, impossible, necessary, or contingent (i.e., omissible or not necessary) "to be done by a good man" (A VI,i,465ff.). "I call *morally impossible* that which it is not possible to do without committing a sin" (A IV,i,471). "*Obligation* . . . is a moral necessity—that is, a necessity imposed on him who wants to keep the name of 'a good man'" (Gr 608). Similarly, "*duty* [*officium*] is whatever is necessary in the perfectly just" (C 517). Accordingly, when Leibniz says that God's choice of the best is morally necessary, we must take him to mean that it is necessary that if God did not choose the best, God would not be perfectly good. It is noteworthy that Samuel Clarke, his contemporary, did take this to be Leibniz's meaning. Clarke's examples of moral necessity are "that a *good Being*, continuing to be *Good*, cannot do *Evil*; or a *wise* Being, continuing to be *Wise*, cannot act *unwisely*; or a *veracious* Person, continuing to be *veracious*, cannot tell a Lie" (G VII,423). (Clarke also thought this a "figurative" and philosophically uninteresting sense of 'necessity'.)

It is in keeping with this conception that the *Theodicy* speaks of being "necessitated morally by wisdom" (T 237), identifies moral necessity with "the choice of the wise, worthy of his wisdom" (T pd2), and says that "it is a moral necessity that the wisest is obliged to choose the best" (T 230). In some of his discussions of moral necessity Leibniz's concern for the reality of choice comes together pretty explicitly with his idea of the contingent as that which receives necessity only from outside itself and has alternatives that are possible in themselves. He distinguishes between "metaphysical necessity, which leaves no place for any choice, presenting only one possible object, and moral necessity, which obliges the wisest to choose the best" (T 367), and says:

> But that sort of necessity which does not destroy the possibility of the contrary has that name only by analogy. It becomes effective, not by the essence of things alone, but by that which is outside them and above them, namely by the will of God. This necessity is called moral, because with the wise, what is necessary and what ought to be are equivalent things. [T aVIII (G VI,386)]

2. *Leibniz's Second Main Solution*

We have now explored the set of ideas that constitute the innermost and surest bastion of Leibniz's defenses against the denial of contingency. Even if everything actual is necessarily actualized by God on account of the divine goodness,

[22]Leibniz used the concept of moral necessity much earlier, but had applied it to God's choice of the best only since 1707, according to Grua, *Jurisprudence*, p. 235.

the things that God chooses are not necessary through themselves, but only on the hypothesis of something external to them, and they have alternatives that are possible in themselves. They are therefore in a certain sense contingent, and only hypothetically necessary. Leibniz finds contingency in this sense worth defending, because it preserves the reality of God's choice, distinguishing the "moral" necessity that he ascribes to God's action from the "brute" or "blind" necessity that he thinks belongs to it in Spinoza's system. Leibniz adhered to these views from 1677 to the end of his life.

But we have yet to examine the outer walls of his castle of contingency. In the end, Leibniz not only denied that this world, which in fact is actual, is necessary through itself; he also denied that it is necessarily actualized by God. In several papers from the 1680s we see him struggling to justify this denial and fit it into his philosophy. By 1690 he had made much progress in understanding the problem and had attained a solution that seems to have satisfied him fairly well.

2.1 The Contingency of Which World Is Best

According to Leibniz, this world, rather than any other possible world, is actual because God chooses to actualize whatever is best, and this is the best of all possible worlds. Therefore, if it is contingent that this world is actual, it must either be contingent that God chooses whatever is best or be contingent that this is the best. Which is it that is contingent? Leibniz explicitly raised this question in several papers written between 1689 and 1706; he tended to favor the answer that what is contingent is that this world is the best.

In one note from about 1695 he raises the question without answering it:

> The formal cause [of the knowability of future contingents] is the coherence of terms, or the fact that the predicate inheres in the subject, even if the cause why it inheres depends on two things, the universal bestness and God's decision to choose the best. Or is God's general decision necessary?[23] Or is it not that 'This is the best' is true, but not necessary; it is true but not demonstrable a priori. Is it not therefore contingent? (Gr 351)

Although the question is not answered here, Leibniz's inclination is clear.

It is explicit in other texts, including an important paper from 1689 or 1690, the earliest work known to me in which Leibniz defined the alternatives:[24]

> We must see whether if we suppose that this proposition is necessary: *the proposition which has the greater reason for existing exists*, it follows that the proposition which has the greater reason for existing is necessary. But the inference is rightly rejected. For if the definition of a necessary proposition is, that its truth can be demonstrated with geometrical rigor, then it can indeed

[23]Leibniz first wrote "God's general decision is necessary"—then changed it, producing a sentence that is quite awkward in the original.

[24]The date is that of Leibniz's Italian tour; the manuscript is written on Italian paper (VE 1763). The text belongs to a period when Leibniz was in comfortable possession of the infinite analysis theory of contingency, but seems still to have been working out the ideas expressed in the quoted passage. In my translation I omit the many phrases crossed out by Leibniz.

> happen that this proposition can be demonstrated: *every truth, and only a truth, has the greater reason*, or this one: *God always acts most wisely*. But it will not therefore be possible to demonstrate this proposition: *contingent proposition A has the greater reason*, or *contingent proposition A is conformed to the divine wisdom*. And therefore also it does not follow that contingent proposition A is necessary. And therefore even if it were conceded that it is necessary that God chooses the best, or that the best is necessary, still it does not follow that that which is chosen is necessary, since no demonstration that it is the best is given. (Gr 305f./AG 30)

Here Leibniz is rather careful not to assert that it is necessary that God chooses the best. But he does commit himself to the view that it is not necessary that this (which God has chosen) is the best, although it is in fact the best. Of the two ways in which the necessity of that which God has chosen could be denied, Leibniz is readier here to deny the necessity of 'This is the best' than the necessity of 'God chooses the best'.

His stance is the same in a note written in the early 1690s:

> Or does this follow: 'This proposition is necessary: God does the best. Therefore that which God does is necessary'? The inference is not valid. For the conclusion follows the weaker part. But it is not demonstrable that a certain thing is the best, nor, therefore, [can it be demonstrated] what must be done. Or shall we rather say that this proposition too, 'God does the best', is not necessary but only certain? The previous opinion appears to be best, since this proposition: A is the best, is certain, but is not necessary since it cannot be demonstrated. (Gr 336)

We do not have to deny the necessity of 'God does the best', since that which is the best is not necessarily the best.

In another text, the latest and most revealing of the series, Leibniz begins by stating again that 'This is the best' is not necessary even if 'That which is the best is chosen' is necessary. He says that he does not know whether God's not choosing the best implies a contradiction. But he asserts flatly that "This is the best," though true, "is not demonstrable by a demonstration that shows that the contrary implies a contradiction." Then he seems to change his mind and shifts to a less cautious position on the necessity of God's choosing the best:

> It is the same argument: God wills necessarily the work that is most worthy of his wisdom. I say that he wills it, but not necessarily, because although this work is the most worthy, that is not a necessary truth.[25] It is true that this proposition: God wills the work that is most worthy of him, is necessary. But it is not true that he wills it necessarily. For this proposition: This work is the most worthy, is not a necessary truth; it is indemonstrable, contingent, a truth of fact. (Gr 493)

The argument here turns on an ambiguity of 'necessarily'. Leibniz saw it as an ambiguity of scope. He accepts the 'necessarily' as "applied to the copula" (that is, to the whole proposition), but not as applied to "what is contained in the copula" (that is, as internal to the predicate). He will affirm that "God is

[25] *Vérité*. Grua, by mistake, has *suite*. Grua has also inserted quotation marks in the text of this passage.

necessarily the one who wills the best. But not the one who necessarily wills the best" (Gr 494). It is misleading, however, for Leibniz to make an issue of which verb 'necessarily' modifies. The crucial point in the ambiguity is whether the necessity applies *de re* to the object that God in fact wills. This point could be brought out by distinguishing wide from narrow scope of the definite description operator in "God necessarily wills the work that is most worthy of his wisdom." If it has wide scope, the necessity applies *de re* to the work, and the sense of the proposition is, 'The work that is most worthy of God's wisdom is such that it is necessary that God wills *it*'—which Leibniz denies. But if the definite description operator has narrow scope, the sense is rather, 'It is necessary that God wills whatever work is most worthy of God's wisdom'—which Leibniz here accepts. Of course it would be anachronistic to expect Leibniz to have made the point that way.

The date of this text deserves comment. It cannot possibly have been written before 1706, because it is a note made in reading the third volume of Pierre Bayle's *Réponses aux questions d'un provincial*, which was published at the end of the previous year.[26] This refutes Nicholas Rescher's suggestion that it was only "until the year 1686, when his mature philosophy took form" that Leibniz preferred denying the necessity of 'This is the best' to denying the necessity of 'God chooses the best'.[27]

It should also be noted that the proposition, "God wills necessarily the work that is most worthy of his wisdom," which is quoted from Bayle, is discussed again (with the same reference to Bayle) in the *Theodicy*, where it is denied (T 237). Leibniz does not make there the distinctions that he had made in the note from 1706, but only appeals to the difference between metaphysical and moral necessity. What he is denying in the *Theodicy*, however, should probably be understood in light of the earlier note.

2.2 *Necessity, Demonstrability, and Infinite Analysis*

The thesis that the property of being the best of all possible worlds belongs only contingently to the world that has it has seemed so evidently false to some recent philosophers that they have been unwilling to regard it as a part of Leibniz's mature philosophy. "That this world is the best possible world is presumably a necessary fact," according to Curley;[28] Rescher says, "it is difficult to see how what is best could avoid being determined with necessitation when the substances are conceived *sub ratione possibilitatis*."[29] That this world is the best does not depend on which world exists, or is actual, or is chosen by God. Leibniz insists that the values of things are completely independent of God's will.[30] The "bestness" of this world is rather the ground of its being chosen by God and hence actual and existent.

[26]December 1705, dated 1706. See Labrousse, *Pierre Bayle*, vol. I, p. 259, n. 88. Leibniz had seen the volume by February 1706 (G III,143).

[27]Rescher, *Philosophy of Leibniz*, pp. 69f.

[28]Curley, "Root of Contingency," p. 94.

[29]Rescher, *Philosophy of Leibniz*, pp. 69f.

[30]As pointed out in this connection by Lovejoy, *Great Chain of Being*, p. 173.

In several of his mature writings, however, Leibniz did assert that the bestness of that which is best is contingent, as we have seen, and I do not know of any text from the mature period of his philosophy in which he asserts or implies the opposite. How can he have thought what he appears to have thought? The explanation is to be sought in the idea, which occurs in all of the crucial passages, that it cannot be *demonstrated* what is best. Leibniz brings in here, implicitly, his very formal ideal of demonstration by analysis in a finite number of steps. For of all his solutions to the theological version of the problem of contingency, that which proceeds by denying the necessity of facts about which things are best is the most clearly connected with his conception of contingency in terms of infinite analysis.

This conception is indeed rather fully stated in the earliest of the papers in which we have found Leibniz saying that it is contingent what is the best.

> And here[31] is uncovered the secret distinction between Necessary and Contingent Truths, which no one will easily understand unless he has some tincture of Mathematics—namely that in necessary propositions one arrives, by an analysis continued to some point, at an identical equation (and this very thing is to demonstrate a truth in geometrical rigor); but in contingent propositions the analysis proceeds to infinity by reasons of reasons, so that indeed one never has a full demonstration, although there is always, underneath, a reason for the truth, even if[32] it is perfectly understood only by God, who alone goes through an infinite series in one act of the mind. (Gr 303/AG 28)

This is Leibniz's solution to the version of the problem of contingency that has fascinated his twentieth-century readers, the version that asks, "if the concept of having the predicate at a given time inheres in the concept of the subject, how can the subject then lack the predicate without contradiction and[33] impossibility, and without loss of its concept?" (FC 179/L 264) The solution is that a predicate can be contained in the concept of a subject without this containment being provable by analysis in a finite number of steps. Leibniz will say that in such a case the subject's lacking the predicate does not "imply a contradiction," and that its having the predicate cannot be "demonstrated" and is contingent (FC 181/L 264).[34]

An example may help us understand how such cases may arise. It may be that there is a property, ø, such that for every natural number, *n*, it can be proved that *n* has ø, but the universal generalization that every *n* has ø cannot be proved except by proving that 7 has ø, that 4 has ø, and so on until every *n* has been accounted for—a task that can never be completed. In this case it is a purely mathematical truth that every *n* has ø, but it cannot be demonstrated. And it is

[31]Grua has *Et hoc arcano* where the manuscript reads *Et hic arcanum*. See VE 1763. AG follows Grua.

[32]*Etsi*; Grua has *et*.

[33]FC's *ab* is a misreading of *atque*. See VE 1768.

[34]This text is probably from 1689 (VE 1767). For similar statements from 1686 or earlier, see C 17/MP 97; GI 74,130; and from 1715, G III,582/L 664. Note that in Gr 303/AG 28, as in C 1f./AG 98f., finite demonstrability is presented as a necessary, and not just a sufficient, condition of necessity, contrary to the claim of Castañeda, "Leibniz's View of Contingent Truth in the Late 1680's," pp. 266f.

a purely mathematical falsehood that some n lacks $\varnothing$, but no contradiction can be derived from it in a finite number of steps. Alfred Tarski decided to say that a system of which these conditions hold, but in which 'Some natural number lacks $\varnothing$' can be proved, is *consistent*, but not *ω-consistent*.[35] He thus reserved the use of 'inconsistent', without qualification, to express a proof-theoretical notion rather than the notion of mathematical falsity. Similarly, Leibniz reserves 'implies a contradiction' to express a proof-theoretical notion rather than the notion of conceptual falsity or being false purely by virtue of the relations of concepts. He thinks, of course, that the latter notion is expressed simply by 'false'.

It is not difficult to see how it would follow, from this conception of contingency, that it is contingent which possible world is the best. For one would presumably have to consider infinitely many aspects of a world in order to assign a value to it as a whole. And then one would have to compare infinitely many worlds in order to determine which is the best. It could not be determined by any finite analysis; hence, it is contingent. Several commentators have explained Leibniz's reasoning along these lines,[36] and Leibniz himself did so. In a paper on "Necessary and Contingent Truths" (Couturat's title), which contains what seems to me an early statement of his infinite analysis conception of contingency, Leibniz points out that the universe has infinitely many aspects, and adds:

> Indeed, even if one could know the whole series of the universe, one still could not give the reason for it, unless one had set up a comparison of it with all the other possible [series]. From this it is clear why no demonstration of any contingent proposition can be found, no matter how far the analysis of concepts is continued. (C 19/MP 99; cf. Gr 343 from the early 1690s)

There remain difficult questions, never resolved by Leibniz or his commentators, about just how analysis is supposed to work in the relevant cases. *Analysis*, for Leibniz and the seventeenth century, was a method of proof beginning with the conclusion to be proved and working back to the axioms from which it follows—though in an infinite analysis the axioms are never reached. The method that begins at the other end, with the axioms, was called *synthesis*.[37] In conformity with this distinction, Leibniz described finite and infinite analyses as proceeding from the proposition to be proved, by substituting definitions, or parts of definitions, for its terms (FC 181f./L 264f.). But the process of determining which is the best of all possible worlds by comparing the values of all the worlds seems likely to be a synthesis, rather than an analysis, in this sense. Indeed Leibniz gives us no idea how one would even begin an analysis, finite or infinite, to determine which world is the best possible, although it is clear that he thought the infinite number of worlds to be compared is one ground of the contingency of God's choice of this world. Perhaps something like the following form of analysis is intended. Let 'W*' be a proper name of the world that happens to be actual. An analysis of 'W* = the best of all possible worlds' will require the re-

[35]Tarski, "Einige Betrachtungen."

[36]Couturat, "On Leibniz's Metaphysics," p. 31; Rescher, *Philosophy of Leibniz*, pp. 38f.; Abraham, "Complete Concepts," p. 278; Broad, *Leibniz: An Introduction*, p. 35; cf. Curley, "Root of Contingency," p. 94.

[37]Cf. Hacking, "Infinite Analysis," pp. 127f.

placement of one or both sides of the equation by an analysans. To reduce the equation to identities by such replacement, we would need on the right-hand side an analysans including a statement of the complete (or at least the basic) concepts of all the possible worlds, but that is not finitely statable.

Another difficulty is that while it does seem that it could not be proved in a finite number of steps that a certain world is the best possible, there might perhaps be a finite proof that a certain world, or any world of a certain sort, is not the best possible. Leibniz himself seems to have thought it could be demonstrated that no world in which God damns the innocent is the best.

> The damnation of the innocent is indeed possible in itself, or something that does not imply a contradiction; but it is not possible for God. . . . For we do not need to examine the whole harmony of things in order to know whether God is going to damn someone innocent eternally. (Gr 300; cf. Gr 271)

Here Leibniz seems to be confronted with a truth, 'No one innocent will be damned eternally', which satisfies one of his criteria for contingency (its contrary is possible in itself), but not the other (it would not require an infinite analysis to prove it). Leibniz does not tell us how to resolve this conflict; indeed, I doubt that he realized its existence.

We may also be tempted to object that the infinite analysis conception of contingency represents contingency as illusory, or at best merely relative to our intellectual incapacity (as Spinoza had regarded it: *Ethics*, I, prop. 33, schol. 1). It is natural to conclude that for Leibniz, as A. O. Lovejoy put it, "though we are unable to attain an intuitive apprehension of the necessity [of a judgment which appears to us as contingent], . . . we can nevertheless be sure that the necessity is there, and is recognized by the mind of God."[38] Russell took a similar view in 1903, when he wrote, "Where an infinite analysis, which only God can perform, is required to exhibit the contradiction, the opposite will *seem* not to be contradictory"; he did not think the alternative suggestion, "that the denial of an analytic truth might not be self-contradictory," would commend itself to Leibniz.[39]

This objection rests on a fundamental misunderstanding of Leibniz's conception of necessity and contingency. The distinction between them "is drawn on logical grounds alone," as Rescher rightly points out.[40] It is not an epistemological distinction, and it is not based on a relation in which contingent propositions stand to us but not to God. It is based on a difference in the logical form of the reasons by virtue of which propositions of the two sorts are true. Contingent truths are just as contingent for God as they are for us, and God can no more demonstrate them than we can; for not even God can "see . . . the end of the analysis, since there is no end" (FC 182,184/L 265f.).[41] Leibniz does say that

[38]Lovejoy, *Great Chain of Being*, p. 175. Cf. Copleston, *History of Philosophy*, vol.4, p. 286.

[39]Russell, "Recent Work on the Philosophy of Leibniz," p. 378, n. 8.

[40]Rescher, *Philosophy of Leibniz*, p. 44, n. 24.

[41]In DM 13, and in GI 131 and perhaps GI 74, all from 1686, Leibniz seems to speak of a "demonstration" of contingent truths that is beyond the powers of finite minds to accomplish. And in an early text, probably from 1677 to 1680 (VE 115 = G VII,194) he speaks of all truths as "demonstrable." This may be due either to carelessness or, more likely, to unclarity or variation in his terminology during a formative period of his thought. Usually, at least from 1689 on (e.g., VE

God can know contingent truths a priori (that is, through their reasons), and that we cannot. But these epistemological relations are not constitutive of contingency; they are only consequences of the logical property that is constitutive of contingency.

Two initially plausible principles about (logical) necessity are that whatever is true purely by virtue of the relations of concepts is necessary, and that whatever is necessary must be logically demonstrable. Leibniz seems at first to have assumed both principles. The light that was kindled for him by the knowledge of the analysis of infinites (C 18/MP 97) was the realization that the two assumptions are incompatible because some propositions that are true solely by virtue of the relations of concepts are nonetheless not provable by anything that he would count as a demonstration. Leibniz held consistently to the second principle. His usual definition of the logically necessary is that it is that whose contrary implies a contradiction (e.g., T pd2). And we have seen that Leibniz treats 'implies a contradiction' as expressing a proof-theoretical property that does not belong to propositions whose falsity can be discovered a priori only through an infinite analysis (FC 181/L 264; cf. C 17/MP 96f.). The realization of the incompatibility of the two principles therefore enabled Leibniz with a clear conscience to give up the first principle, which had made his theory of truth seem to leave no room for contingency.

When Russell charged that the infinite analysis conception of contingency would at most yield truths that only seem to be contingent, he was explicitly and mistakenly assuming that whatever is false purely by virtue of the relations of concepts must be self-contradictory for Leibniz. Similarly, Curley seems to be assuming a conception of necessity in terms of conceptual truth, rather than in terms of demonstrability, when he says that the bestness of this world "is not rendered any the less necessary by the number of other possible worlds being infinite rather than finite."[42] For our own use, of course, we may well prefer a conceptual truth conception of necessity to a demonstrability conception. If so we will rightly conclude that Leibniz's infinite analysis theory does not give us real contingency. I believe that conclusion is substantially correct, as I think the demonstrability conception of necessity is fundamentally misguided.[43] But that presents no *internal* objection to Leibniz's system. The contingency we are demanding, he can only regard as a brute fact and a violation of the principle of sufficient reason, which he has no intention of admitting in his mature philosophy.

It is just as clear in the essay "On the Radical Origination of Things" of 23 November 1697 (G VII,302–8/L 486–91) as in the letter to Wedderkopf of May 1671 (A II,i,117f./L 146f.) that Leibniz thinks of everything in the world as determined ultimately by the divine nature, and particularly by the relations of concepts in God's intellect. From this point of view the problem of contingency is to find a difference between *ways* in which facts are determined by relations

1775f. = C 1f./AG 98f.), he is careful not to say that contingent truths have "demonstrations" though they have "proofs" a priori that are known to God.

[42]Curley, "Root of Contingency," p. 94.

[43]See R. Adams, "Divine Necessity." As indicated there, I would not exactly endorse a conceptual truth conception of necessity, either.

of concepts—a difference that is both important and plausibly related to the preanalytic notions of logical or metaphysical necessity and contingency. The difference between truths that are and are not demonstrable in a finite number of steps is Leibniz's candidate for this role.

If this looks like an attempt to solve a philosophical problem by definition, there is some evidence that that is what Leibniz meant to do. Writing in February 1698 to G. W. Molanus about what he regarded as excessively necessitarian explanations of the occurrence of sins, he said:

> But the more I consider the matter, the more manifestly I seem to myself to see that the error [*peccatum*] was not so much in realities as in formulas, on account of assumed definitions of freedom, necessity, will, and right that are not only less philosophical, and less familiar, but also less suited to edification. From them ways of speaking were bound to arise that are offensive to pious ears. By these ways of speaking, to be sure, the greatness of God is extolled, and human pride put down (which seems to have been the aim of those speaking more rigidly); but on the other hand, inadequate provision was made for celebrating God's goodness, and arousing our love toward him. What if therefore, as I am almost persuaded, by merely developing definitions all that harshness could be softened, and it is permitted to remove the controversy about which people have sounded so tragic; do you think this should be neglected? (Schrecker 84)

2.3 Contingent Connections among Possibles as Such

As a consequence of his infinite analysis theory of contingency, Leibniz accepted another thesis, which some commentators have been most reluctant to admit as part of his philosophy. Russell noted in 1903 that "the view that infinite complexity is the defining property of the contingent has the curious consequence that truths about possible substances are contingent."[44] Both C. D. Broad and Curley have claimed that Leibniz did not accept this consequence,[45] but their claim is untenable. That you exist in the best possible world is a fact about you conceived as a possible substance; its contingency follows from what Leibniz wrote in several places about the contingency of which world is best.

Indeed, the idea that there are contingent connections among things considered as possible becomes quite important to Leibniz in the *Discourse on Metaphysics* and the correspondence with Arnauld. This is to be expected, in view of Leibniz's insistence that all of the acts of any individual follow from the concept of that individual considered as possible. It is crucial to his theodicy that the connection between our natures or concepts and our sins and other evils be one that would have been there, no weaker and no stronger, even if God had not created us (cf. DM 30). So if it is important to our freedom that we be contingently connected with our actions, this following of our actions from our concepts must somehow be a contingent connection between them and us considered as possible. Accordingly, Leibniz says in § 13 of the *Discourse* that

[44]Russell, "Recent Work on the Philosophy of Leibniz," p. 374, n. 5; cf. Russell, *Philosophy of Leibniz*, p. 26.

[45]Broad, *Leibniz: An Introduction*, p. 36; Curley, "Root of Contingency," pp. 92f.

there are two sorts of connection, one absolutely necessary but the other contingent, by which different events follow from the complete concept of a created person.[46]

Arnauld was perhaps the first to find this strange. He argued that, on Leibniz's view, the connection between Adam and everything "that has happened and will happen to him and his posterity" must be necessary, "because," as Leibniz put it, "I consider the individual concept of Adam as possible," and "possible concepts in themselves do not depend on the free decisions of God" (LA 28–30,40). There are two main points in Leibniz's reply to this objection.

1. "The possibles are possible before all the actual decisions of God, but not without presupposing sometimes the same decisions taken as possible" (LA 51). This is because the complete concept of any possible thing involves (as possible) some decisions that God would make (for instance, in establishing laws of nature) if God actualized the world to which that thing belongs. Here Leibniz clings to the idea that truths involving God's decisions are contingent. But now it seems they need not depend on what God actually decides; it is enough if they involve divine decisions considered as possible. We may wonder why the merely possible divine decisions should be thought to have this relevance.

2. The connection between a created person, considered as possible, and the events of his or her possible world is "intrinsic" (LA 51) and "certain" but not "necessary," although the failure of the connection would destroy the individual concept of that person (LA 52; cf. LA 41). Here it seems clear that Leibniz's position involves contingent connections within possible worlds, and hence contingent truths that do not depend on which world is actual.[47]

The same view is expressed by Leibniz in other texts:

> It is of the nature of an individual substance that its concept be perfect and complete, and contain all its individual circumstances, even contingent ones, down to the least detail. . . . Yet these individual [circumstances] are not therefore necessary, and do not depend on the divine intellect alone, but also on decisions of the divine will, insofar as the decisions themselves are considered as possible by the divine intellect. (Gr 311)

[46]Hector-Neri Castañeda, in his interesting article on "Leibniz's View of Contingent Truth in the Late 1680's," proposes an interpretation of the two types of connection that is quite different from mine. If I understand him, he identifies the two types of connection with the existential and essential uses of the copula 'is' that Leibniz distinguishes (GI 144). Fabrizio Mondadori has pointed out to me that such a distinction was current in Leibniz's time, and can be found, for example, in Francisco Suárez's *Metaphysical Disputations*, XXXI,xii,44–45. The substance of this distinction, however, is simply that the truth of an "existential" predication depends on the actual existence of its subject and predicate terms, whereas the truth of an "essential" predication does not. Since, according to Castañeda's Leibniz, "every contingent truth" involving the existential copula "is underlain by its corresponding necessary truth" involving the essential copula (Castañeda, "Leibniz's View of Contingent Truth in the Late 1680's," p. 264), all that is contingent, intuitively, in such a case, is the *existence* of the subject and/or predicate, not the connection between them. Speaking, technically, of a different copula when the existence of the terms is implied does not, *intuitively*, make the contingency of the existence rub off on the connection. In this respect the position Castañeda ascribes to Leibniz is no more intuitive than the one I attribute to him.

[47]Mondadori, in "Leibniz and the Doctrine of Inter-World Identity," pp. 32f., takes it that what is not necessary here is the actualization of the individual; but that does not adequately explain why Leibniz should call the *connection* contingent. Cf. note 46 above.

> God decided to create a creature whose full concept involves such a series of graces and free actions, although not necessarily but by such a connection as the nature of the thing involves. (Gr 383)

These quotations are probably from the mid-1680s (VE 1105,1122). From about 1695, according to Grua, is a reading note in which Leibniz states flatly, "There are some indemonstrable truths even in possible things—namely about contingent things regarded as possible" (Gr 353).

How can the connection between an individual substance and some of the properties or events involved in its concept be contingent? Leibniz offers hints of some answers to this question, but they are by no means as clear as his best-worked-out answers to the question of how the existence of those creatures that are actual can be contingent. Three answers may be distinguished.

1. In § 13 of the *Discourse* Leibniz says that the predicate of deciding to cross the Rubicon and winning the battle of Pharsalus is contained in the concept of Julius Caesar, but that it is not "necessary in itself" that those things happen to him. This suggests that Leibniz thought of Caesar's deciding not to cross the Rubicon, or his losing at Pharsalus, as things that are possible in themselves, in something like the way that non-actual possible worlds are possible in themselves although they are impossible on the hypothesis of something else. But how can we make sense of this suggestion, if the source of the threatening necessity is in the concept of Caesar himself? That might be thought to constitute a necessity internal to Caesar's deciding and winning, since he himself is a constituent of those events.

It may be important here that Leibniz distinguishes, within an individual's complete concept, between features that are particular to the individual, and the laws of that individual's universe, which also enter into the concept of the individual. To Arnauld he says:

> Thus all human events could not fail to occur as they have actually occurred, given that the choice of Adam was made; but not so much because of the individual concept of Adam, although that concept contains them, but because of the designs of God, which also enter into that individual concept of Adam, and which determine that of that whole universe. (LA 51)

It seems clear that in the *Discourse* Leibniz is thinking of the intrinsic but not necessary connection between Caesar and his decision to cross the Rubicon as depending on laws that govern Caesar's world.

> [T]his predicate of Caesar is not so absolute as those of numbers or of geometry, but . . . it presupposes the sequence of things that God has chosen freely, and that is founded on the first free decision of God, the import of which is to do always that which is most perfect, and on the decision that God made (in consequence of the first) with regard to human nature, which is that a human being will do always (though freely) what seems the best. (DM 13)

This suggests the hypothesis that Caesar's deciding not to cross the Rubicon is viewed by Leibniz as possible in itself because it is excluded by Caesar's individual concept only in virtue of the laws of Caesar's universe, and not purely by what is particular to Caesar in Caesar's concept. This would explain the contin-

gency of connections depending on merely possible divine decisions, if those possible decisions are identified with laws of a universe.[48]

This is a possible interpretation, but not without problems, of which the chief is that, as we shall see in Chapter 3, section 1, Leibniz's views imply that the laws of Caesar's universe are incorporated not only in Caesar's individual concept, but also, concretely, in the primitive forces that constitute Caesar's very substance. Can *Caesar's* doing something precluded by laws so incorporated in his very substance be possible in itself? An adequately informed judgment on this question must await Chapter 3, where we will explore a variety of considerations bearing on the tightness of the connection between an individual substance's primitive forces and the events that happen to it.

2. An alternative reading is possible of the statement, in § 13 of the *Discourse*, that if someone did the opposite of something that is involved in his complete concept, "he would do nothing impossible in itself, although it is impossible (*ex hypothesi*) for that to happen." Maybe just as God chooses freely because God chooses among a plurality of possible worlds, each of which is possible in itself even if it is impossible in relation to God, so a creature can act freely by choosing among a plurality of actions, each of which is possible in its own nature even if it is impossible in relation to the complete concept of the choosing creature. In 1697, at any rate, Leibniz was explicitly willing to explicate the freedom of creatures as well as of God in terms of the plurality of alternatives for choice:

> It is more exact even to say that the good actions of God, the Angels confirmed [in good], and the glorified Saints are not necessary, although they are assured; and the reason is because they are done by choice, whereas there is necessity when there is no choice to make. When there are several paths, one has the freedom to choose, and although one may be better than another, that's just what makes the choice. . . . [I]t is not indifference of equilibrium, so to speak, that constitutes freedom, but the faculty of choosing among several possibles, even though they are not all equally feasible or convenient for the one who acts. (Schrecker 97)

Leibniz here identifies one way in which he thinks the structure of creatures' choices is like that of God's choices. In both cases the agent's choice among a plurality of alternatives is an essential part of the metaphysical reason for the actuality, or the nonactuality, of each alternative. This seems to be enough to establish the reality of choice, but intuitively I would not say that it establishes the internal contingency of the alternatives for choice.

If the latter is to be established by this approach, the alternatives among which creatures choose must probably be regarded as somewhat general, rather than as completely individual, actions. Caesar's alternatives on the bank of the Rubicon, for example, must be crossing and not crossing, rather than Caesar's crossing and Caesar's not crossing. Individual concepts must be kept out of the objects of choice. This line of thought, therefore, seems not to provide an expla-

[48]For a very interesting discussion of the relation of laws and possible divine decrees to contingency, and in general a much fuller and richer account of contingent connections within a single possible world than I attempt here, see Carriero, "Leibniz on Infinite Resolution and Intra-Mundane Contingency."

nation of the contingency of *Caesar's* deciding to cross the Rubicon. But it does show us a way in which Leibniz could say that the *reality* of Caesar's choice is preserved.

3. Contingent connections between possibles can be explained in terms of the infinite analysis theory of contingency. Leibniz gives such an explanation of the contingency of 'Peter denies'. "The concept of Peter is complete, and so involves infinite things; therefore one never arrives at a perfect demonstration" (GI 74). 'Peter denies' is under discussion in this text as an existential proposition, but the argument evidently works just as well if the subject is considered only as a possible person—as Russell perceived with dismay.

There are even more difficult problems, however, about how infinite analysis is supposed to work in this case than in the case of bestness among possible worlds. Leibniz mostly ignores these difficulties, and I will not try to do much more here than point them out. The first is the problem of the Lucky Proof.[49] Even if infinitely many properties and events are contained in the complete concept of Peter, at least one of them will be proved in the first step of any analysis. Why couldn't it be Peter's denial? Why couldn't we begin to analyze Peter's concept by saying, 'Peter is a denier of Jesus and . . .'? Presumably such a Lucky Proof must be ruled out by some sort of restriction on what counts as a step in an analysis of an individual concept, but so far as I know, Leibniz does not explain how this is to be done. On the other hand, we may wonder how we can even begin an analysis of the individual concept of any person, as Leibniz seems to imply that we can. For such a concept, being complete, is not our concept but God's, and we do not seem to have a definition with which to begin to replace it.[50]

2.4 Reasons That Incline without Necessitating

One of the things Leibniz never tired of saying about free choices is that their causes, motives, or reasons "incline" but do not "necessitate." Lovejoy calls this "misleading if edifying phraseology" and a "verbal distinction, absolutely meaningless in the light of [Leibniz's] other doctrines."[51] One is tempted to agree with this harsh judgment, for Leibniz does not give much explanation of the difference between inclining and necessitating. But I think the distinction has a place in the interpretation of Leibniz I have been developing.

Leibniz presents the idea of reasons that incline without necessitating, sometimes in connection with the notion of a choice among alternatives that are possible *in themselves* (T 45,230; LC V,8–9), and sometimes in connection with the infinite analysis theory of contingency. In the latter connection, which seems to me the more illuminating of the two, Leibniz says, "There is the same proportion between necessity and inclination that there is in the Mathematicians' Analysis between exact equation and limits that give an approximation" (Gr 479; cf. Gr 303, T k14). This statement was written in the years around 1700 in a memorandum that also makes clear how infinity is supposed to enter into

[49]I am indebted to William Irvine for this name for it.

[50]Cf. Broad, *Leibniz: An Introduction*, p. 27.

[51]Lovejoy, *Great Chain of Being*, p. 174.

the influence of reasons on the will. The word 'incline' suggests the image of a balance that is tipped or inclined to one side or the other by the preponderance of weights; and 'balance' (noun and verb) occurs, at least figuratively, several times in the memorandum. Leibniz liked mechanical analogies of volition (T 22, G VII,304/L 488), and in particular that of the balance (cf. NE 193). He later wrote to Clarke (V,3) that "reasons in the mind of a wise being, and motives in any mind whatsoever, do that which answers to the effect produced by weights in a balance." Though not necessitating, the balance of motives determines as certainly as the balance of weights: "We always follow the direction toward which there is more inclination or disposition" (Gr 479); we never fail to do so (T 43).

The motives that play the role of weights in the scales of volition include all our perceptions, subconscious as well as conscious, according to Leibniz. "Several perceptions and inclinations contribute to the complete volition, which is the result of their conflict. Some of them are separately imperceptible; the mass of these makes an uneasiness which pushes us without the subject of it being seen" (NE 192; cf. Gr 480).

Here the infinite makes its appearance. For in Leibniz's system the mass of subconscious perceptions in a finite spirit is a confused perception of the whole universe, in all its infinite complexity. Every fact about the world is perceived, and our perception of it has some influence on our will; those perceptions of which we are not conscious are nonetheless weighed in the balance en masse, by virtue of their contribution to our feelings. Our minds, being finite, cannot completely understand the motives of our choices, because they are infinitely complex. On the same ground, the connection between a free decision and its ultimate reasons or motives will be contingent, and cannot be demonstrated, in the senses laid down in the infinite analysis theory of contingency. Much of this, including some connection between contingency and the infinity of influences, is explicit in the memorandum quoted earlier. Leibniz speaks there of our ignorance "of an infinity of little influences on us of which we are not conscious," which sometimes lets us have the illusion that the factors moving our will are equally balanced. And he immediately adds:

> That shows that it is indeed always true that our *freedom*, and that of all other intelligent substances right up to God himself, is accompanied by a certain degree of indifference or contingency, which has been defined in such a way that we and those substances are never necessitated, since the contrary of that which happens always remains possible or implies no contradiction. (Gr 480f.)

The reference to God should not be taken as suggesting that God has subconscious motives, for Leibniz's God perceives everything distinctly. But Leibniz did say that "God had infinite reasons competing with each other, which he considered when he judged this possible universe worthy to be chosen"; he offered it as an explanation of why the truth of "This series of the universe is the best" cannot be known a priori by us (Gr 343). God's reasons, like ours, incline but do not necessitate, because they are involved in a conflict of such infinite complexity that the resulting volition cannot be demonstrated (in the strict sense) from them.

Leibniz himself seems strangely to get this point wrong in a letter to Jaquelot of 1704, where he explicitly links the notion of inclining with things being too complex for us to understand them. He says that "future things are contained in the soul even less than in God, because they are in the soul distinctly only in an inclining and confused way, and not explicitly and perfectly as in the Divine ideas" (G III,472). This linkage of themes is revealing, but Leibniz has the shoe on the wrong foot in this text (even apart from the puzzling suggestion of a *confused* way of being in the soul *distinctly*). For he thinks that God, too, is only inclined, not necessitated, by reasons (T 230), although God's perceptions are in no way confused. What is essential to inclination, therefore, is not confusion, but the infinity of factors that in our finite minds gives rise to confusion.

2.5 Is 'God Chooses What Is Best' Contingent?

The contingency of 'God chooses this world' could be explained and defended by holding either that 'God chooses what is best' is contingent or that 'This world is the best' is contingent. We have seen that Leibniz prefers the latter alternative, but he explicitly rejects the other in only one of the texts we examined. More often he leaves open the possibility of holding that both are contingent. There seems to have been more vacillation and uncertainty in Leibniz's mind about whether it is necessary or contingent that God chooses what is best than about any other main issue in the problem of contingency. I shall argue, however, that the view that it is necessary is required by other features of Leibniz's philosophy.

Many passages in which Leibniz appears to address this issue yield no solid evidence on it, in view of some of the subtleties that we have already seen in his position. When he says, for example, "God's decisions about contingents certainly are not necessary" (Gr 385), the claim can be taken *de re* with respect to the contingents: for any contingent, what God decides about *it* is not necessary (because it takes an infinite analysis to determine what is best). It may not be implied, therefore, that it is not necessary that God decides to order contingent things as well as possible. Similarly, when Leibniz says that "God was infallibly led by his wisdom and goodness . . . to give [the world] the best form possible; but he was not led to it necessarily" (T k14), the expression "to it" [French *y*] does not make clear whether the denial of necessity applies *de re* to that form which is in fact the best possible for the world, or whether it applies *de dicto* to God's giving the world *whatever* form is best. We have to bear in mind Leibniz's saying that "it is a necessary proposition" that God wills the best, but that God does not will it "necessarily," because what is best is not necessarily so (Gr 493f.).

On the other hand, our present question remains equally unanswered when Leibniz says, as he often does, such things as "God cannot fail to choose the best," for Leibniz has distinguished several sorts of inability and necessity. He may mean only a moral necessity (as he says in such a context at T aVIII), whereas we are interested in logical or metaphysical necessity.

And when Leibniz says that "God wills the best by his own nature" (Gr 289), or that the reason for God's eternal free action is "the divine nature or perfection itself" (C 405), he says nothing more than is implied by his analytic theory of truth. What we want to know is whether God's voluntary optimizing is

demonstrable—that is, whether it follows by a finite or only by an infinite analysis from the divine nature. In fact, in both the texts I have just quoted on this point, it is stated or suggested that it is not demonstrable (Gr 288, C 405).

First of all, therefore, we must seek texts in which necessity is asserted or denied, *de dicto*, of some such proposition as 'God chooses what is best', and in which the necessity is explicitly or contextually indicated as logical or metaphysical, or is stated or explained in terms of demonstrability. There are several such texts, and they speak on both sides of the question.

The most explicit texts for the indemonstrability and hence the contingency of the crucial propositions date probably from the early 1680s, when Leibniz was actively engaged in formative work on a variety of solutions to the problem of contingency. In one he denies flatly that the proposition 'God chooses the best,' or 'God wills the best,' can be demonstrated (Gr 301).[52] A contrast is introduced in a similar denial: "Thus, that God loves himself is necessary, for it is demonstrable from the definition of God. But that God does what is most perfect cannot be demonstrated, for the contrary does not imply a contradiction" (Gr 288).[53]

The contrast recurs in some later texts. In the early 1690s Leibniz noted with approval Thomas Aquinas's opinion that "God's attitude toward himself is necessary and natural, but his attitude toward other things is not necessary, nor forced, but voluntary" (Gr 333).[54] And in the *Theodicy* he says, "The love that God has for himself is essential to him; but the love of his glory, or the will to obtain it, is not essential to him at all" (T 233; cf. T 175,230). (Here God's glory is conceived as an external attribute, "the reflection of the divine perfection in created beings."[55])

The contingency of 'God chooses what is best' seems more favored in the *Theodicy* than in the private papers Leibniz wrote while preparing the book. In addition to the passage just cited, there is a list of things said to be necessary "in a certain sense," but not "logically, geometrically, or metaphysically"; among them is that "God himself chooses the best" (T 282; it would not be plausible to read this denial of logical necessity as *de re* with respect to the best). If the *Theodicy* were our only source for Leibniz's opinions, I think we would find nothing incompatible with the impression that Leibniz thinks it contingent, *de dicto*, that God chooses what is best. The general tenor of the book would leave us with that impression, although most passages in it can be interpreted otherwise in light of Leibniz's other works.

[52]Leibniz muddied the waters a little by adding "or identical" to the claim that the first of these is "a first proposition"; but the context makes clear that what he really wanted to say is that it is *like* an identical proposition in being a truth but indemonstrable. In another relevant text from more or less the same period Leibniz says that "in a certain way it is of physical necessity [here distinguished from metaphysical necessity] that God does all things as well as he can" (C 21/MP 101).

[53]This paper (quoted in section 1.2) is also an important source for the view that non-actual things remain possible in their own natures even if they are not possible in respect to the divine will. It might be quibbled whether in the quoted passage demonstrability is denied only *de re*, with respect to that which is most perfect, but I think that would be an unnatural reading of the text.

[54]The same set of notes, however, expresses the view that it is demonstrable that God cannot do evils, which I will discuss later in this chapter. The reference to Aquinas is given as *Summa contra gentiles*, I,82ff.; the correct citation would be I,80ff.

[55]Grua, *Jurisprudence*, p. 307.

Section 13 of the *Discourse on Metaphysics* gives a similar impression. Probably the most important utterance bearing on the issue there is the mention of "the first free decision of God, the import of which is to do always that which is most perfect." For if this decision is free and freedom implies contingency, it will follow that 'God decides to do what is best' is contingent.

The strongest texts on the other side are those already discussed in section 2.1 of this chapter,[56] in which Leibniz pointedly refrains from denying, and in 1706 affirms, that 'God chooses the best' is necessary in the sense of being demonstrable. Those texts date from about 1689 to 1706; but there is a note, probably from the early 1680s, in which Leibniz says, "From God's essence or supreme perfection it follows, certainly and, so to speak, by a necessary implication, that God chooses the best" (Gr 297). He goes on to explain God's freedom in terms of the plurality of alternatives possible in their own nature. The phrase "by a necessary implication" is important here. When Leibniz wrote in 1698 that "it follows from the nature of God that he prefers the most perfect" (Gr 393), he left some ambiguity. For he also said that *all* truths, even contingent ones, follow from God, who is the highest truth (Gr 347). Might God's preference for perfection follow from the divine nature by an infinite rather than a finite analysis, and therefore contingently? But what follows from God's essence "by a necessary implication" must be necessary—though the qualification "so to speak" or "if you will" [*si ita loqui placet*] still leaves a little uncertainty.

In reading notes from the 1690s Leibniz held that "the inability to do evils can be demonstrated of God" (G 333) and "rigorously, it can be said that the good Angels can sin, and that does not imply a contradiction, but in God it does imply one" (Gr 360). Leibniz held more consistently to this thesis than to the more general claim that it is demonstrable that God chooses the best. Even in one of the papers from the early 1680s in which he says flatly that 'God chooses the best' is not demonstrable, Leibniz says that damning the innocent eternally is not possible for God and is therefore one of those things "whose . . . existence implies a contradiction" (Gr 300).

The only text against this of which I am aware is in the *Theodicy*: "However it does not imply a contradiction for God to will (directly or permissively) a thing that does not imply a contradiction" (T 234). Nothing is said here explicitly about whether it is contingent, *de dicto*, that God does no evil or that God chooses the best. For the possibility that is asserted is pretty clearly *de re* with respect to the objects of God's choice: it is claimed about everything, that if it is possible in itself, considered without regard to its relation to God's will (cf. T 235), then it is also possible for God to will to actualize it. But since Leibniz thought the eternal damnation of the innocent is possible in itself (Gr 300), it does seem to follow that it is possible for God to damn the innocent eternally—which is not far removed from the conclusion that it is possible for God to do evil.

In general, however, Leibniz seems inclined to the view that it is demonstrable that God does no evil, whether or not it is demonstrable that God chooses the

[56]In another text, from 1677, Leibniz wrote that "God necessarily and yet freely chooses the most perfect" (VE 305 = LH IV,4,3C,12–14); but this seems not to be in the framework of the infinite analysis conception of contingency.

best. Indeed, even his 1706 reading note on Bayle in which he says that "God wills the work that is most worthy of him" is a necessary proposition ends with a hint that God "cannot do or will moral evil" in some sense stronger than that in which God cannot fail to create the best possible world (Gr 494).

But if Leibniz holds that it is demonstrable that God does no evil, how can he avoid the conclusion that it is demonstrable that God does not prefer the less perfect? "For as a lesser evil is a kind of good, by the same token a lesser good is a kind of evil, if it forms an obstacle to a greater good" (T 8). And in maintaining the axiom, *Minus bonum habet rationem mali* [A lesser good has the character of an evil] (T 194, DM 3, G III,33), Leibniz does not suggest that it is contingent. So he seems committed to holding that preferring the less perfect would necessarily be doing something evil.

God is more than sinless. That "God is an absolutely perfect being," morally as well as metaphysically, is virtually a definition for Leibniz (DM 1), and so far as I know he never suggests that it is contingent. If it is not true by definition, or at least demonstrable, how is he so confident that it is true at all? Surely he does not know it by experience. And he denies that it is known only by faith (T pd44). Both Rescher and Curley seem to me to err in saying that Leibniz would solve the problem of contingency by holding that God's goodness is contingent.[57]

But that is not the only way in which he could deny that it is necessary that God does what is best, for the belief that God does what is best is based on two premises: that God is "a most perfect Being," and that "the operation of a most perfect Being is most perfect" (Gr 16). Once, probably in the early 1680s, Leibniz did say that the second of these is contingent: "God's choosing a less perfect from among many perfect things does not imply an imperfection in God" (Gr 300). I agree with this statement,[58] but find it astonishingly un-Leibnizian and do not think it fits into his philosophical system.

One objection to including it in the system is inconclusive. Leibniz says it is morally necessary for God to choose the best. This means that it is necessary that a perfectly good agent in God's position would choose the best (see section 1.5 of this chapter). It follows that it is necessary that if God chooses the less perfect, God is imperfect (cf. G III,33). But the crucial question here is how strong this necessity is. Is the morally necessary only what it is *demonstrable* that a perfectly good agent would do? Or is it enough for moral necessity if the action is contained in the concept of a perfectly good agent, even though an infinite analysis would be needed to show the reason of the containment? The weaker requirement seems to me to be the one assumed in Leibniz's mature writings: he appears to regard God's choice of this world as morally necessary (cf. T pd2), but it is not demonstrable that a perfectly good agent would choose this world, since it is not demonstrable that it is the best.

Other arguments, however, show that Leibniz cannot consistently hold that it is contingent that a supremely perfect being would choose the more perfect. For suppose that is contingent. Then either it must be contingent that a supremely perfect being is perfectly good, wise, and just, or else it must be contingent that

[57]Rescher, *Philosophy of Leibniz*, p. 45; Curley, "Root of Contingency," p. 95.

[58]R. Adams, "Must God Create the Best?"

a perfectly good, wise, and just being would choose the more perfect. Neither of these is contingent for Leibniz, for the following reasons.

Leibniz regards justice as "an essential attribute of God" (Dutens IV,iii,280, where this is not asserted, but contextually implied). And since God's justice, for Leibniz, "depends on wisdom and goodness" (Dutens IV,iii,261; cf. G III,34), the latter perfections must presumably be regarded as essential to God, too.

Leibniz would have to admit that it can be demonstrated, from acceptable definitions of these perfections, that they imply a preference for the best.

> The end of goodness is the greatest good, but in order to recognize it, wisdom is needed, which is nothing other than knowledge of the good, as goodness is nothing other than the inclination to do good to all, and to prevent evil unless it is necessary for a greater good or to prevent a greater evil.[59]

Thus Leibniz seems unable to escape the conclusion that it is demonstrable, and hence logically necessary, that God, as an absolutely perfect being, does what is best.

The conflict in Leibniz's thought is reflected in divergent pronouncements about "the root of contingency." In the mid-1680s he set out, somewhat tentatively, the idea that in dealing with problems of contingency we must "have recourse to that one thing which is not essential in God, but free—namely, the decision of the will, from which alone a source of contingency in things can be sought" (Gr 311). This is not unambiguous, but seems to agree with Rescher's judgment that for Leibniz "the ultimate source of contingent truth is clearly" in God's choosing "to act in the most perfect way," rather than in the bestness of that which is chosen.[60] Elsewhere Leibniz locates the root of contingency not in the divine will, but in the objects among which God chooses. In the early 1680s he wrote, "The root of freedom in God is the possibility or contingency of things"—by which he means the plurality of alternatives possible in themselves, as the context shows (Gr 298). About 1696, likewise, he wrote notes on the views, ascribed to Scotus and Aquinas, respectively, that the root of contingency is in the will of God as free and as efficacious. Leibniz commented that the former view was circular. As to the latter, "contingency is in the nature itself of truth, or of the object, as of possibility, as of existence" (Gr 348; cf. Gr 353). Here perhaps what Leibniz has in mind is that contingent truths cannot be proved by a finite analysis.

The circle with which Leibniz charged Scotus has to do, presumably, with seeking the ultimate reason for all contingent facts in a divine decision which is itself one of the contingent facts to be explained. Often Leibniz sees an infinite regress in place of this circle, and almost always he condemns it as vicious. There is one text from the early 1680s, however, in which he accepts the infinite regress; and this acceptance assumes great importance for the interpretations of Rescher and Curley.

[59]Quoted by Grua, *Jurisprudence*, pp. 212f., from *Mittheilungen aus Leibnizens ungedruckten Schriften*, ed. by G. Mollat (Leipzig: 1883), p. 48. Grua says the text is from 1701–1705. On this subject see in general Grua, *Jurisprudence*, pp. 198–222.

[60]Rescher, *Philosophy of Leibniz*, p. 39.

> The first principle about Existences is this proposition: *God wills to choose the most perfect.* This proposition cannot be demonstrated; it is the first of all propositions of fact, or the origin of every contingent existence. . . . For if anyone asks me why God decided to create Adam, I say: because he decided to do what is most perfect. If you ask me now why he decided to do what is most perfect, . . . I answer that he willed it freely, or because he willed to. Therefore he willed because he willed to will, and so on to infinity. (Gr 301f.)

Curley says that this text presents "the only one of the various ways in which Leibniz invokes infinite processes which seems . . . to have any bearing on the problem of contingency."[61] Rescher does not cite this passage, but does propose, as Leibniz's main solution to the problem of contingency, that "God's moral perfection follows from His metaphysical perfection, but deduction would require an infinity of steps."[62] Something of this sort is required, of course, if the supposed contingency of 'God chooses what is best' is to be reconciled with Leibniz's conceptual containment theory of truth and infinite analysis theory of contingency.

Rescher's formulation deftly avoids the obvious objection that the infinite regress of reasons violates the principle of sufficient reason. Leibniz's use of the principle in proving the existence of God requires him to refuse to accept an infinite regress of reasons as itself constituting a sufficient reason. Furthermore, Leibniz had said, "it is absurd [to suppose] that a free will is an ultimate reason, since the free will itself has its requirements [*requisita*], for it is not an independent Being [*Ens a se*]" (A VI,iii,120).[63] A sufficient reason must be found in something of metaphysical necessity; the ultimate reason for the existence of all things is to be found in the divine essence and intellect. Rescher recognizes and accepts this. In his interpretation the ultimate sufficient reason is found in God's metaphysical perfection; if there is an infinite regress of volitions, it has a reason outside itself in God's nature. But in conformity with the infinite analysis theory of contingency, this reason cannot be proved by a finite analysis.

In the paper in which he accepts the regress, however, Leibniz was not as deft as Rescher, for he refused to ground the infinite regress of volitions in God's essence. "No other reason can be given why God chooses the most perfect than because he wills to. . . . And certainly he wills freely, because outside his will no other reason can be given than the will." He goes on to claim that "nothing is therefore given without a reason, but that reason is intrinsic to the will" (Gr 301). The infinite regress of reasons he describes certainly does not satisfy his principle of sufficient reason. It is noteworthy, moreover, that this rather early paper contains no explicit appeal to the infinite analysis theory of contingency. I know of no work in which Leibniz develops the infinite regress of volitions into the sort of solution that Rescher proposes for him.

[61]Curley, "Root of Contingency," p. 96.

[62]Rescher, *Philosophy of Leibniz*, p. 45.

[63]This is a response to one of Steno's comments in the manuscript of *The Philosopher's Confession*, and therefore comes probably from about the end of 1677, as explained in note 14. On Leibniz's use of *requisita* [requirements] as a term for necessary conditions, see Chapter 4, section 1.

This text, as Grua says (Gr 259), is exceptional. It is the same short paper in which Leibniz denied that choosing the less perfect would imply an imperfection in God. The infinite regress of volitions, and the whole idea of willing to will, were explicitly rejected by Leibniz at about the same time, as well as both earlier and later. In another paper probably from the early 1680s he wrote, "Indeed God cannot will voluntarily; otherwise there would be a will to will [and so on] to infinity" (Gr 289). In the letter to Wedderkopf and in *The Philosopher's Confession* he had denied, with explicit reference to God, that anyone wills what to will (A II,i,117/L 147) or wills because he wills (A VI,iii,124). In the *New Essays* Leibniz says, "We do not will to will, but we will to do; and if we willed to will, we would will to will to will, and that would go to infinity" (NE 182). Here nothing is said explicitly about God. There is an explicit reference to God in the *Theodicy*, however: "It is, in a sense, an abuse of terms to say here: one can will, one wills to will; power is related here to the actions that one wills" (T 234).

There are, it must be granted, two texts that support the idea that divine decisions, considered as possible, are part of the object of other divine decisions (C 24), or more vaguely, that "God executes all reflex acts at once and once for all" (Gr 345). Indeed, Leibniz thought of possible divine decisions as involved in the concepts of possible creatures among which God chooses, but in these texts it is not stated or suggested that God's general decision to do what is best is the object of a prior decision, nor that the regress of decisions provides the *reason* for the decision to act.

At any rate, the infinite regress of volitions is clearly not a keystone of Leibniz's position on contingency. On this and other grounds that we have reviewed, it is fair to say that the view that 'God chooses what is best' is contingent must not be regarded as a thesis of Leibniz's philosophy, much less as a basis of one of his principal solutions to the problem of contingency.

2.6 An Exception for Existence?

We are now in a position to deal with the question whether Leibniz meant to solve the problem of contingency by making existence an exception to the rule that the predicate of a true proposition must be contained in the concept of the subject. There are several compelling arguments for a negative answer.

1. Leibniz says something that looks very much like an explicit negative answer, in the *New Essays*:

> But when one says that a thing exists, or that it has real existence, this existence itself is the predicate—that is to say, it has a concept linked with the idea that is in question, and there is a connection between these two concepts. (NE 358)[64]

2. In many formulations of his conceptual containment theory of truth Leibniz says explicitly that the concept of the predicate is contained in the concept of the subject in contingent as well as necessary truths (FC 179/L 263f.; LA

[64]I am indebted to W. E. Abraham, "Complete Concepts," p. 278, for calling this reference to my attenrion.

56; C 16/MP 96; C 519/L 267f.; C 272; G VII,199f.; Gr 303/AG 28). In view of these statements, it seems perverse to suppose that Leibniz meant to explain the possibility of contingency by making an exception to the theory for those propositions that he regarded as contingent.

3. Leibniz made a number of attempts to explain how existence is contained in the concepts of those things that exist. These attempts typically involve some or all of the following claims. The predicate of existence is in some way equivalent to "entering into the most perfect series of things" (C 9) or to pleasing God (C 405).[65] The analysis of concepts would have to be carried to infinity, however, to prove the existence of any contingent thing (GI 74; cf. Gr 304f./AG 29). The underlying idea, of course, is that existence is contained in the concepts of existing things, not directly, but by virtue of the factors that determine God to create those things.

4. As Couturat pointed out, "existential propositions are not the only contingent propositions" for Leibniz.[66] Couturat chose an unfortunate example: laws of nature, which are indeed contingent, but are also existential according to Leibniz, as Curley has pointed out.[67] In sections 2.1 and 2.3 of this chapter, however, we have seen better examples of contingent propositions whose truth, according to Leibniz, does not depend on what exists—namely, the propositions asserting the bestness of this possible world[68] and the contingent connections within possible worlds.

5. The version of the problem of contingency that troubled Leibniz most persistently throughout his life does not depend on his conception of the nature of truth, and it cannot be solved by making the predicate of existence an exception to that conception. For the problem is that the existence of all actual things seems to follow not just from their own concepts, but from the concept of God, whose existence Leibniz always regarded as absolutely necessary. The principle of charity favors an interpretation according to which a problem so important for Leibniz is addressed by his theories of contingency.

Some of Leibniz's texts may seem to speak on the other side of the question, but I am not persuaded that they seriously undermine my interpretation. One is a passage near the end of a paper commonly known as "Necessary and Contingent Truths," where Leibniz says that "the possibility or Concept of a created mind does not involve existence" (C 23/MP 104). This statement, however, seems flatly inconsistent with what he asserts at the beginning of the same paper about

[65]For the former equivalence see also Gr 325; B 119f.; C 405,360,376/P 51,65f.; for the latter see also GI 73; on both see Chapter 6, section 2.

[66]Couturat, "On Leibniz's Metaphysics," p. 28.

[67]Curley, "Root of Contingency," p. 91.

[68]Objecting to the relevance of this evidence, Castañeda argues that "Leibniz may have had both a coherent and exciting metaphysical theory of contingency, and a problematic theological extension of it" (Castañeda, "Leibniz's View of Contingent Truth in the Late 1680's," p. 270). But the contingency of which world is best seems to be a straightforward consequence of Leibniz's infinite analysis theory of contingency, rather than a problematic extension of it. It does not have the characteristics of the clearly problematic theological extensions of his metaphysics that he was willing to entertain in his last years (see Chapter 10, section 5.4); he does not characterize it as "above reason" or as inaccessible to his usual philosophical approaches. Leibniz certainly did not regard the theological in general as problematic, and his metaphysics is pervasively theological.

existences, in saying that "all the knowledge of propositions that is in God, whether it be of simple understanding, about the Essences of things, or of vision about the existences of things, or middle knowledge about conditioned existences,[69] results immediately from the perfect understanding of each term that can be the subject or predicate of any proposition" (C 17/MP 96). The best consistent reading of the paper, I think, is one on which the *complete* concept of any existent thing does involve its existence, and "the possibility or Concept of a created mind" that "does not involve existence" is understood in a narrow sense, as discussed earlier in section 1.2. This reading is suggested by the theological context of the problematic statement, which is immediately preceded by the statement that God "first considers a Mind as possible, before he decides that it ought actually to exist" (C 23/MP 104). The possibility (or concept) of a created mind is here considered as an alternative for God's choice, and therefore in abstraction from those other factors in God that determine God's choice among things that are "possible in themselves." And it is by virtue of those factors in God that the existence of an existent creature follows from its concept in the wider sense—that is, from its complete concept.

This paper on "Necessary and Contingent Truths" contains important developments of the infinite analysis theory of contingency. It is undated, and its watermark has not yet been connected with any particular dates (see VE 455). But like the parts of "General Inquiries" devoted to the theory (GI 60–75,130–37; dated 1686), it seems to me to have an experimental quality not present in statements of the theory from 1689 (FC 179–85/L 264–66, Gr 303f./AG 28f.). One sign of its experimental character is the intriguing passage in which Leibniz says that "Free or intelligent Substances" have the privilege "that they are not bound to any certain subordinate Laws of the universe, but act spontaneously from their own power alone, as if by a sort of private miracle, and by looking to some final cause they interrupt the connection and course of efficient causes operating on their will" (C 20/MP 100). Underlying this statement is the thought that free choices cannot be predicted by any laws of nature that can be understood by a finite mind. This thought can be supported by reflections on infinite analysis, and connects with things Leibniz says about miracle in DM 16. But speaking of free choices as routinely interrupting the connection of efficient causes seems quite contrary to Leibniz's usual views about the pre-established harmony, in which final causes do not disturb the order of efficient causes. As early as July 1686 he writes to Arnauld about the agreement of mind and body, "each one following its laws, and the one acting freely, the other without choice," and contrasts this with the changes in "the laws of bodies" and in "the regular course of thoughts of the soul" that are involved in the occasionalist hypothesis (LA 57f.; cf. LA 74f.,93f.; E 127f./L 457f.; and, much later, G III,657). I therefore think that "Necessary and Contingent Truths" was written in a fairly early period of

[69]"Middle knowledge' signifies God's knowledge of counterfactual conditional truths. The term was originated by the sixteenth-century Jesuit theologian Luis de Molina, whose highly controversial theory on the subject, however, is inconsistent with the implications of what Leibniz asserts here. Cf. R. Adams, "Middle Knowledge and the Problem of Evil."

the development of the infinite analysis theory, not later than July 1686 and perhaps considerably earlier.[70]

It contains a passage (C 18/MP 98) in which Leibniz treats 'essential' and 'existential' as equivalent, respectively, to 'necessary' and 'contingent'. It is not the only text in which he does this, so it is possible that these texts represent a variety of views. But we must be cautious about drawing metaphysical implications from this rather conventional usage.[71] Two texts may be cited as evidence that, in speaking this way, Leibniz did not necessarily mean to imply that all contingent truths depend on which finite things actually exist. (He did of course think that no necessary truths depend on the existence of any being except God.)

"Necessary [truths] are of Essences, contingent [truths] of Existences" (Gr 354), wrote Leibniz, probably in the mid-1690s, without offering any explanation of a special sense of 'essence' or 'existence'.[72] But this is in the same set of reading notes in which he states flatly, "There are some indemonstrable truths even in possible things—namely about contingent things regarded as possible" (Gr 353). If these indemonstrable, and hence contingent, truths are "of" existences, they must presumably be "of" merely possible existences as such.

From the mid-1680s comes even clearer evidence on this point, in a text in which "essential" is equated with "necessary" and "existential" with "contingent" (Gr 311). Here these terms are used to assert that "not only essential or necessary [truths] . . . but also existential, so to speak, or contingent [truths] are contained in this complete concept of Peter [as] possible." And since "this complete concept" refers to one that Leibniz has said God understood perfectly "even before he decided that this Peter who afterwards denied ought to exist," the "existential" truths mentioned here cannot be understood as depending on the actual existence of the creatures they are about—a point perhaps partly acknowledged by the qualifier, "so to speak [*ut ita dicam*]" attached to the term "existential" here. Corresponding to this broad sense of 'existential' is a narrow sense of 'essential', and presumably also of 'essence' (cf. section 2.3 of this chapter). For only a portion of the truths contained in the complete concept of Peter are said here to be "essential." In case the narrow sense of 'essential' was not clear enough from the context, Leibniz added a qualifying clause to one of the statements I have quoted from this text: essential truths are "those, namely, that flow from incomplete or specific concepts, and therefore are demonstrated from the

[70]Heinrich Schepers proposed 1678 as its approximate date in his paper, "Zum Problem der Kontingenz bei Leibniz," pp. 344, 350n; 1686 is favored by both G.H.R. Parkinson (MP 96) and Robert Sleigh ("Truth and Sufficient Reason in the Philosophy of Leibniz," p. 210). Massimo Mugnai considers 1684–86 to be the probable period of composition ("'Necessità *ex hypothesi*' e analisi infinita in Leibniz," p. 153).

[71]The distinction between existential and essential propositions plays a central role in the interpretation offered in Benson Mates, *Philosophy of Leibniz*. I have responded to Mates's arguments in a review of his book in *Mind* 97 (1988): 299–302. The distinction is concerned, in the first instance, with actual existence as entering or not entering into the truth conditions for categorical propositions, and I cannot see that Leibniz used it to frame a theory of contingency, though it does occur in his writings. (See note 46 above.)

[72]As regards 'essential', cf. Gr 373, probably of the same period and similarly without explanation.

terms, in such a way that the contrary implies a contradiction" (Gr 311). The implication is clear that not every truth flowing from an individual's *complete* concept is necessary, or "essential" in the relevant sense.

All interpreters agree that Leibniz always believed there is at least one necessary existential truth: that God exists. But he does not normally mention this as an exception when equating existential with contingent propositions.[73] There is, I think, no reason to take these (usually rather casual) identifications more strictly in the other direction—as excluding contingent propositions that are not existential in the usual sense—given that Leibniz says there are such propositions, as we have seen, and that his most fully developed theory of contingency implies there are.

3. Leibniz and Possible Worlds Semantics

It has been discovered that by beginning with the idea that the possible is what is true in some possible world and the necessary is what is true in all possible worlds, and varying our assumptions about the relations of possible worlds to each other, we can obtain models that validate different systems of modal logic. This discovery has given birth to *possible worlds semantics*—the interpretation of modal notions in terms of truth and falsity in (or at) possible worlds. It has shed so much light on modal logic, and has so affected our interest in the notion of possible worlds, that it is especially natural for us to assume that Leibniz also conceived of necessity as truth in all possible worlds and contingency as truth in some but not all possible worlds. It is not at all clear that he did, however.

The closest I have seen him come to expressing this conception is in the paper on "Necessary and Contingent Truths," which I have argued in section 2.6 is not later than 1686, where he says that necessary truths, "which can be demonstrated by analysis of Terms . . . not only will obtain while the World stands, but would still have obtained if God had created the World on a different plan [*alia ratione*]" (C 18/MP 98). This is suggestive, but not conclusive, for on any reasonable interpretation Leibniz regards no world as possible in which something demonstrable is false (if we overlook the problem about the damnation of the innocent as discussed in section 2.2). What we want to know is whether he thought that all the truths that do not depend on which world God created are necessary. In "Necessary and Contingent Truths" he at least comes close to holding that they are. He says that contingent truths, which "cannot be demonstrated by any analysis . . . not only express what pertains to the possibility of things, but also what actually exists, or would exist contingently on certain conditions"[74] (C 18/MP 98).

[73]But cf. Gr 386, where an explanation of the necessity of eternal truths, "because there it is not a matter of existence, but only of Hypothetical propositions," is immediately followed by just this qualification: "Hence it must be said that no absolute [i.e., unconditional] proposition is necessary except that which follows from the nature of God. Certainly no Being exists by its own essence or necessarily except God."

[74]In this context Leibniz also says that "existential or contingent" truths "are true for a certain time," and he gives interesting reasons for thinking it would take an infinite analysis to estab-

Even in the same paper, however, Leibniz also says something inconsistent with this view; this is one sign of the experimental character of the text. For the text itself expresses the point that it would take an infinite comparison of possible worlds to determine the reason for the existence of the one that is actual (C 19/MP 99). From this one can infer, as Leibniz did in 1689 (Gr 305f./AG 30) that it is contingent that this is the best of all possible worlds. And this will be a contingent truth which "would still have obtained if God had created the World on a different plan." I have argued that Leibniz's infinite analysis theory of contingency requires there to be such truths.

The first step in dealing with this issue is to distinguish two things Leibniz may mean by 'possible world'. He may mean a world whose concept is not *demonstrably* inconsistent, or he may mean a world whose *basic* concept (as I have put it in section 1.2) does not involve, demonstrably or otherwise, a contradiction or conceptual falsehood.

The first of these interpretations fits with Leibniz's usual conception of necessity in terms of demonstrability, and indeed yields a possible worlds semantics for it. Given the plausible assumption that not all conceptual truths are demonstrable, the conceptual truth and demonstrability conceptions of necessity demand different modal logics. The strong system S5 seems to be the right modal logic for the conceptual truth conception of necessity.[75] But the characteristic axiom of S5, '$\sim Np \supset N \sim Np$' (if not necessarily p, then necessarily not necessarily p), is not valid on the demonstrability conception of necessity. For a proposition may be indemonstrable without being demonstrably indemonstrable. (In rejecting this axiom, it should be noted, one rejects the assumption that all truths about the possible as such are necessary.) The weaker system S4 seems to be the right system for the demonstrability conception of necessity. Its characteristic axiom, '$Np \supset NNp$' (if necessarily p, then necessarily necessarily p), will be valid under that conception, for what can be demonstrated can thereby be demonstrated to be demonstrable.

By the same token, if we assume that a world w_2 is possible relative to a world w_1 if and only if nothing is true in w_2 whose falsity can be demonstrated in w_1, we obtain the result that the relation of relative possibility among possible worlds is reflexive and transitive but not symmetrical. It is reflexive, if we restrict consideration to worlds that are possible (that is, possible relative to the actual world), for Leibniz will surely hold that 'Something is true which is demonstrably false' is (in the actual world) demonstrably false, but it must be true in any world that is not possible relative to itself. The transitivity of the relation of relative possibility is proved as follows. Suppose it is not transitive. Then there must be a world w_2 which is possible relative to a world w_1, and a world w_3 which is possible relative to w_2 but not to w_1. There must be some proposition p which is true in w_3 but whose falsity can be demonstrated in w_1, though not in

lish what is the state of things at any given time. But surely not all contingent or existential truths have reference to a particular time. For instance, the truth that this world, as a whole, is actual, does not. The fact that no such exception is noted in this text is one more sign of its rough, experimental character.

[75]See R. Adams, "Logical Structure of Anselm's Arguments," pp. 45f., for a brief argument on this point.

w_2. But then there is a proposition (that p is not demonstrably false) which is true in w_2 but demonstrably false in w_1; its falsity is demonstrated in w_1 by demonstrating the falsity of p. So w_2 is not possible relative to w_1, contrary to the hypothesis, and the relation of relative possibility must be transitive after all. It is not symmetrical, however. For there is, as Leibniz supposes, at least one proposition p which is possible, and actually true, but not demonstrably possible. A world in which it is true that p is demonstrably false will therefore be possible relative to the actual world, but the actual world will not be possible relative to such a world.

It is known that a relation of relative possibility that is reflexive and transitive but not symmetrical is the principal feature that a system of possible worlds should have if it is to provide a semantics for S4 but not for S5.[76] Thus the possible worlds semantics based on the demonstrability conception of possible worlds seems to fit the modal logic suggested by the demonstrability conception of necessity.

But does Leibniz hold this conception of possible worlds? Certainly he does not work out an S4 semantics; he does not even raise the question of a relation of relative possibility among possible worlds. The crucial question is whether he understands 'possible' in 'possible worlds' in terms of demonstrability and indemonstrability.

He seems to imply that he does, when he says in March 1698, "There are as many possible worlds as there are series of things that can be thought up which do not imply a contradiction. This thesis is identical with me, for I call possible that which does not imply a contradiction, and so in this sense it cannot be refuted" (Gr 390). I assume that "does not imply a contradiction" expresses a proof-theoretical notion here, as it usually does in Leibniz. On this interpretation Leibniz here lets a consistent, univocal use of modal terms carry the proof-theoretical notion of possibility into his conception of possible worlds.

On the other hand, the demonstrability conception of possible worlds has some strikingly un-Leibnizian consequences. First, a possible individual will in general exist in more than one possible world. Leibniz holds that many of the properties contained in an individual's complete concept cannot be demonstrated from the concept. Worlds in which the individual lacks various of those properties will therefore not be demonstrably inconsistent. Second, each actual individual will be compossible with individuals of almost every possible sort, in the sense of coexisting in some possible world with an individual of that sort. For the coexistence of a certain actual individual with most possible sorts of individual will not be demonstrably inconsistent. Third, there will be possible worlds in which different worlds will be the best possible, for the bestness of this world is not demonstrable. Fourth, there will be possible worlds that have (with one exception) all the perfection that the actual world (considered as possible) has, and more. There will be, for example, a world as good as the actual world in other respects, from which the horrors of the Thirty Years War are absent. Leibniz surely did not think it could be demonstrated that the world would be less perfect without the Thirty Years War. The exception, the perfection that the actual

[76]Kripke, "Semantical Analysis of Modal Logic I."

world has but those worlds lack, is *conceptual consistency*, as we may call the property of not involving, not even indemonstrably, a contradiction.

Leibniz never accepts these consequences. Indeed, he explicitly rejects the idea of an individual existing in more than one possible world (T 414).[77] And for his theodicy and theory of creation he *needs* modalities quite different from those generated by the demonstrability conception of necessity. For example, he must claim that God *couldn't* have created a world as good as the actual world in other respects but lacking the horrors of the Thirty Years War. This 'couldn't' cannot be explained in terms of demonstrability. And Leibniz certainly does not mean that God was prevented by divine *goodness* from choosing such a world, having judged that the horrors of the Thirty Years War are better than conceptual inconsistency. Rather, it is not within God's *power* to create such a world, because it is not possible in its own nature.

The claim that two possible substances are *compossible*, likewise, is surely not just the claim that they are not *demonstrably* incompatible, in spite of the fact that Leibniz defined "compossible" as "that which with another does not imply a contradiction" (Gr 325). For it is the lack of compossibility that keeps additional excellent substances from existing in the actual world (G III,572f., C 534), but the addition of such substances is surely not demonstrably inconsistent with the concepts of actual things.

One may be tempted to accuse Leibniz of cheating in his theodicy by using modal terms equivocally. There is a sense in which God couldn't have created a better world than this one (it is conceptually false that there is such a world), but in that sense God also couldn't have done anything different at all (it is conceptually false that God does anything different). There is also a sense in which God could have done something different (it is not demonstrable that God does not, say, omit to create giraffes), but in this sense God could also have made something better than this world (it is not demonstrable that no possible alternative is better).

There is yet another sense of 'could' and 'couldn't' available to Leibniz, however, in which he can say, without equivocation, both of the things he wants to say. God *could* have done something different, in the sense that only the divine goodness keeps God from doing so. But God *couldn't* have created a better world than this, in the sense that it is not only God's goodness that keeps a better alternative from being possible. We could systematize these modalities (although Leibniz did not) by using 'It is possible that p' to mean roughly that if it were not a conceptual truth that God is perfectly good, it would not be a conceptual falsehood that p.[78]

Leibniz's chief use of the imagery of possible worlds is at those points in his theory of creation that require this last sort of modality. "There are several possible Universes, each collection of compossibles making one of them" (G III,573). The possible worlds are the alternatives among which God chooses, with only

[77]Our investigation of the sense in which he can have done this (and hence our account of possible worlds) will not be complete until the end of Chapter 3, however.

[78]I assume here that a counterfactual conditional with a conceptually false antecedent need not be vacuously true or vacuously false. I think this assumption could be justified within the framework of Leibniz's conceptual containment theory of truth.

the divine goodness keeping God from choosing one of the worlds that are in fact rejected. There must not be among them a world as good in other ways as the actual world but lacking the horrors of the Thirty Years War. The conception of a possible world implied by this imagery, which must therefore be reckoned Leibniz's principal conception, is not that of a world that is not demonstrably inconsistent. It is, rather, that of a world whose basic concept does not involve (demonstrably or otherwise) a contradiction or conceptual falsehood, a world whose basic concept is conceptually consistent.[79]

If we admit to the basic concepts of worlds information about everything except God's goodness and God's choice among worlds (see section 1.2), this conception of possible worlds probably yields a satisfactory semantics for 'It is possible that p', interpreted as meaning that if it were not a conceptual truth that God is perfectly good, it would not be a conceptual falsehood that p. Helpful though it would be in explaining the theory of creation, Leibniz does not really develop this interpretation, and does not usually use 'it is possible that' in this sense. His main conception of possibility is the proof-theoretical one that can be analyzed in terms of indemonstrability of falsehood. Thus Leibniz's main conception of possible worlds does not provide a possible worlds semantics for his main conception of possibility. If we put the two conceptions together, we get the result that there are propositions which are possible but are not true in any possible world. 'It would be best if there were never any wars' is such a proposition. 'Judas exists without betraying Jesus' may be another (cf. DM 30).[80]

I do not mean to suggest that Leibniz was fully aware of the diversity of sorts of modality at work in his philosophy. Had he been conscious of it, he would presumably have articulated the relevant distinctions more clearly and avoided some apparent inconsistencies. He might also have explored the relations between the different sorts of modality and the notion of a possible world. But he did not, and it is quite misleading to think of him as a grandfather of possible worlds semantics, given the bad fit between his principal conception of possible worlds and his principal modal concepts.[81]

4. On Leibniz's Sincerity

On no point has more suspicion of a cleavage between a public and a private Leibnizian philosophy arisen than on the problem of contingency. Leibniz's sincerity in the *Theodicy* has often been impugned, and often defended. The most spectacular charge of duplicity was one of the earliest, but it is not widely accepted. In 1728, twelve years after the event, and after Leibniz's death, a

[79]Cf. Schepers, "Zum Problem der Kontingenz bei Leibniz," pp. 345f.

[80]Whether it is depends on considerations, and possible further refinements in the notion of a possible world, which will be taken up at the end of Chapter 3.

[81]It should also be noted that Leibniz was not unique in his own time in using the notion of possible worlds. Nicolas Malebranche, in his *Treatise of Nature and Grace* (1680), I,13 (OM V,28), speaks of "an infinity of possible Worlds," of which God chose "the most perfect, in relation to the simplicity of the ways necessary for its production or for its conservation." I know of no evidence that Malebranche was influenced on this point by Leibniz at this early date.

Lutheran theologian, Christopher Matthäus Pfaff, published an account (but not the complete texts) of letters exchanged between him and Leibniz. He claimed that he had said he thought Leibniz was being playful in the *Theodicy*, pretending to oppose Bayle's skepticism while really confirming it, and that Leibniz replied, in a letter of 2 May 1716, "You have hit the nail on the head. And I am amazed there has been no one hitherto who has sensed that this is my game. For it is not for philosophers always to take things seriously. In framing hypotheses, as you rightly point out, they try out the force of their mental talents."[82] If we believe Pfaff's report, we may suppose (as Pfaff did not) that Leibniz was being ironic or playful with him.[83] In any event, it is hard to know what to make of Leibniz if he was not serious in his defense of the thesis that the actual world was chosen as the best possible by a perfect deity. The Leibnizian philosophy that has held the interest of posterity depends in most of its parts on that thesis, and Leibniz has not left us even a sketch of a philosophy that does not depend on it.

With regard to subtler developments of his system, however, there can still be doubts about Leibniz's sincerity, especially in the *Theodicy*. It is partly but not entirely vindicated by the results of the present investigation. It is emphatically clear in the *Theodicy*, as in the rest of his work, that Leibniz is a compatibilist and a determinist. The solution of the problem of contingency that is most clearly developed in the *Theodicy*, that nonactual things are possible in themselves even if they are not possible in relation to God's will, is one that Leibniz also held, and never abandoned, in his private papers from 1673 on. It is a solution that imposes a minimum of qualification on the necessity of all things.

The infinite analysis theory of contingency is partly stated in the *Theodicy*, in § 14 of the remarks on King:

> For one may say in a way that these two principles [of contradiction and sufficient reason] are contained in the definition of True and False. Nevertheless, when in making the analysis of the truth that has been proposed one sees it depending on truths whose contrary implies a contradiction, one may say that it is absolutely necessary. But when in pushing the analysis as far as one pleases one is never able to arrive at such elements of the given truth, one must say that it is contingent, and that it has its origin from a prevailing reason that *inclines without necessitating*. (G VI,414)

Here, as in a letter to Louis Bourguet in 1715 (G III,582/L 664), Leibniz says that necessary truths receive a finite analysis and contingent truths do not, but without stating that this is what contingency consists in, or that the concept of the predicate is contained in the concept of the subject even in contingent truths.[84]

[82]Pfaff, "Fragmentum Epistolae," p. 127

[83]As argued in Blondel, *Une énigme historique*, pp. 1–15. According to Pfaff's own account, at least one of his contemporaries took this view, and some doubted the accuracy of Pfaff's report of Leibniz's statement.

[84]Only slightly more revealing, I think, is a text written quite likely about 1710 for Leibniz's own use, in which he says that something follows "infallibly" but "not necessarily; that is, not in such a way that it could ever be demonstrated that the contrary implies a contradiction," and gives as a reason, "because the analysis goes to infinity" (RML 412).

We have seen that the view that 'God chooses what is best' is contingent, about which Leibniz was very hesitant in his private papers, seems to occur in one or two passages of the *Theodicy*. This might be due to some development of his thought, but no such explanation is plausible for the *Theodicy*'s striking omission of any mention of the view that it is contingent that this world is the best. The latter view was well worked out, affirmed, and never rejected in Leibniz's private papers; and it is plausibly inferred from his infinite analysis theory of contingency, which he clearly continued to believe when he wrote the *Theodicy*.

Moreover, the frequent and unelucidated use that the book makes of the terms 'moral necessity', 'hypothetical necessity', and 'incline without necessitating' leaves the reader with a less necessitarian impression of Leibniz's thought than these terms would leave if they were accompanied by the explanations of their meaning that are presented or suggested by his less public writings. One is not reassured about Leibniz's sincerity when one reads, in a letter from Leibniz to Bartholomew Des Bosses discussing the use of 'moral necessity' in the *Theodicy*, the comment that "in general I should prefer the words to be interpreted in such a way that nothing bad-sounding follows" (G II,419f.).[85]

The lack of candor in the *Theodicy* is evident; the motives for it, whether pedagogical or self-protective, are not. It is interesting that Leibniz had written once, probably in 1676:

> Metaphysics should be written with accurate definitions and demonstrations, but nothing should be demonstrated in it that conflicts too much with received opinions. For thus this metaphysics will be able to be received. If it is once approved, then afterwards, if any examine it more profoundly, they will draw the necessary consequences themselves. (A VI,iii,573)

One of the difficulties in the *Theodicy*, however, is that so many of Leibniz's "accurate definitions" are omitted that one must turn to other works to find the material necessary for a more profound examination.

[85]Des Bosses, a Roman Catholic, was preparing a Latin translation of Leibniz's *Theodicy*. In the Roman Catholic Church propositions could be officially censured as "bad sounding [*male sonans*]," which is weaker than condemning them as "false"; see, e.g., Denzinger, *Enchiridion*, p. 370 (following § 1340).