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Leibniz on Creation, Contingency and Per-Se Modality

Von

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Zusammenfassung

Das Problem der Kontingenz ergibt sich für Leibniz in seiner frühen Zeit aus seiner Lehre vom göttlichen Schöpfungsakt (im Gegensatz zu seiner späteren Lehre der Wahrheit) und wird gelöst mit Hilfe seines Begriffes der „Modalität an sich": Möglichkeit an sich, Notwendigkeit an sich usw. (im Gegensatz zu seinem Begriff der unendlichen Analyse). Ich charakterisiere dieses Problem zunächst genau, und dann untersuche ich die frühesten Texte, in denen Leibniz seine Lösung einführt. Ich vergleiche seine Per-se-Begriffe mit seinem Begriff der Analyse und mit unserem Begriff der metaphysischen Notwendigkeit. Dann suche ich das Haupthindernis für Leibniz' Lösung heraus und beseitige es, indem ich über seinen Begriff einer Welt reflektiere und ihn mit heutigen Begriffen vergleiche. Zuletzt skizziere ich den Platz, den dieses frühe Ringen mit der Kontingenz im Kontext seiner späteren Philosophie einnimmt.

In addition to Leibniz's well known Infinite Analysis Solution to his problems with contingency, there is a less familiar and earlier solution, smattered throughout Leibniz's texts: The Per-Se Solution. This solution has little to do with the famed Infinite Analysis Solution and was indeed devised long before Leibniz ever mentions infinite analysis. Some questions that naturally arise are: "What was the problem?", "What was his solution to it?", "Why did Leibniz come to abandon it in favor of the Infinite Analysis Solution (if he did, as is often assumed)?" and "Where does it fit in the larger picture of Leibniz's general development with respect to contingency?".

The need to answer these questions becomes even more pressing if we notice that two recent and important papers, Robert Merrihew Adam's *Leibniz's Theories of Contingency* and Robert Sleigh's *Truth and Sufficient Reason*, both of which deal extensively with Leibniz's grapplings with contingency, exhibit a certain tension in this regard[1].

Adams considers the Per-Se Solution to be Leibniz's key solution to the problem of contingency. He says that it was

> "... a theory that Leibniz repeated incessantly, publicly and privately, to the end of his career, and that it must be regarded as his principal (and most confident) solution to the problem of contingency"[2].

With respect to the notions that compose this solution, he refers to them as "... the set of ideas that constitute the innermost and surest bastion of Leibniz's defense against the denial of contingency"[3].

Sleigh, on the other hand, regarding what I think must be taken as the Per-Se Solution, says:

> "My view is that Leibniz came to regard this as inadequate if taken as the ultimate explanation of the distinction between contingent and necessary truths.

[1] In *Leibniz: Critical and Interpretive Essays*, ed. M. Hooker (Minneapolis, 1982), pp. 243–283 and pp. 209–242, respectively.
[2] Hooker, p. 246.
[3] Hooker, p. 254.

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... The ultimate explanation that Leibniz found satisfactory is based on the infinite analysis idea"[4].

And in the next paragraph, regarding the period Sleigh is focusing on in his paper (1677–1690), he says

"He [Leibniz] had no explanation [in the earlier part of the period] that he ultimately regarded as adequate to the distinction between necessary and contingent truths.

In the latter part of our period, he achieved an explanation that he regarded as adequate for the rest of his life.... The basis of the explanation is the infinite analysis idea"[5].

In this paper I present a view of the Per-Se Solution that suggests that, contrary to appearance, Sleigh's and Adam's positions are not significantly contradictory, but complementary. The key is that there is not one problem with contingency, but two. They have separate sources and they have different solutions. The Per-Se Solution was devised to solve Leibniz's first problem with contingency, which had its source in a theological doctrine. The Infinite Analysis Solution was devised to solve his second problem with contingency, which had its source in a logical doctrine. Although my main focus will be on the Per-Se Solution, I will attempt to briefly characterize the place this solution had in Leibniz's later development with respect to contingency, and, in particular, with respect to the Infinite Analysis Idea. But for the details of the latter idea the reader should consult Sleigh's paper, which I think comes very close to being the final word on Leibniz's Infinite Analysis Idea.

With respect to the nature of Leibniz's doctrine of per-se modality and its application, this paper is limited in scope. I will concentrate exclusively on what I will call "The Per-Se Texts": *The Confessions of a Philosopher (CP), Conversations with Steno on Freedom (CS)*, and *On Liberty (OL)*[6]. These texts are dedicated exclusively to Leibniz's doctrine of creation and the apparent problems this doctrine yields concerning contingency and freedom. It is in these texts that Leibniz is hammering out his solution to these problems: The Per-Se Solution. They appear to have been written when he is first constructing the doctrine and before he has constructed his "mature philosophy"[7]. Hence they represent a "pure" statement of the doctrine. At the end of the paper, I make some remarks that I hope suggest why the doctrine is only "smattered" throughout Leibniz's subsequent writings. For a more sweeping and comprehensive examination of the doctrine as it appears in Leibniz's writings throughout his career, the reader is referred to Adams' fine paper.

The present paper is divided into two parts. The first part is dedicated to an attempt to characterize what Leibniz meant by "possible per se", "necessary per se", etc. The second part is an examination of the applications of the doctrine.

Each part of the paper is in turn divided into three sections. The first section of part

[4] Hooker, p. 227.

[5] Hooker, p. 227.

[6] The translations of the passages from these three texts were generously provided by Robert Sleigh. The source for the material drawn from the first text was Leibniz: *Sämtliche Schriften und Briefe*, Academy Edition (Darmstadt and Berlin, 1923–) series 6, vol. 3, pp. 127–128; and for the two remaining texts, Leibniz: *Textes inedits*, ed. G. Grua (Paris, 1948), pp. 270–271 and pp. 288–289, respectively. The dates or approximate dates are: 1672–73, Nov. 27, 1677 and 1680–1683, respectively. Given the brief length of the material utilized, I will suppress page references for quotations from these three texts.

[7] Beginning in the 1680's.

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one (I) identifies Leibniz's first problem with contingency and its source in his doctrine of creation. The second section is dedicated to sifting the data from the three Per-Se Texts and using it to devise a preliminary characterization of his concepts of per-se modality. In the last section, I make a somewhat speculative attempt to shed some additional light on the matter by looking elsewhere: at his doctrine of the analytic relations between concepts and propositions.

In the first section of the second part of the paper (II), I examine a problem we face in trying to understand how Leibniz thinks his Per-Se Solution can have the applications he thinks it does have. This involves a "prolegomenon" on the completeness of worlds. In the next section I examine the way in which the applications work. Finally, in the last section, I briefly characterize Leibniz's second major problem with contingency, which is brought on by his newly adopted containment account of truth. I note that the "old" Per-Se Solution can't be extended to deal with this new problem and that this paves the way for the famed Infinite Analysis Solution, which comprehends both of Leibniz's problems with contingency.

I

1. In the 1670's and early 1680's we find Leibniz attempting to come to grips with certain necessitarian conclusions that appear to be thrust upon him by doctrines to which he was already committed. The Per-Se Solution was devised to cope with the problem. One early statement of the problem appears in a letter (which does not contain the Per-Se Solution) written to Magnus Wedderkopf in 1671:

> "Fate is the decree of God or the necessity of events. Those events are fatal which will necessarily happen. . . .
>
> . . . God wills the things which he understands to be best and most harmonious and selects them, as it were, from an infinite number of possibilities.
>
> . . . 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 do the best by the very ideality of things"[8].

The Confessions of a Philosopher (CP), which was written shortly after the letter (1672–73), and in which Leibniz is beginning to formulate the Per-Se Solution, contains this succinct statement of the problem:

> ". . . the existence of God is necessary; from this the sins contained in the series of things follow; what follows from something necessary, is necessary; therefore the sins are necessary".

Leibniz's first problem with contingency had its source in a theological doctrine about the creation of this world. As Leibniz envisioned it, God, who is essentially perfect and could not have failed to exist, had before him an infinite array of possible worlds. Some of these worlds were better than others. In particular, one of these worlds was better than all the others. Since this one was the best prior to any decisions on God's part, it would appear that its being the best was necessary. Now an essentially perfect being, if it existed, couldn't do less than the best. But God could not have failed to exist. So the best world couldn't have failed to be actual. Hence, it must be necessary that the world we live in is actual and that no other "possible" world could have taken its place. This leads easily enough to the further conclusion that everything that happens, happens necessarily and

[8] Leibniz: *Philosophical Papers and Letters*, 4th ed., ed., Leroy E. Loemker (Boston, 1969), pp. 146–147.

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that no one, not even God himself, acts freely[9]. In an explicit three part argument (where "N" is the de dicto necessity operator):

The Argument:

A.	(1)	N(God exists).
	(2)	N(If God exists, then God brings it about that the best world is actual).
	(3)	N(If God brings it about that the best world is actual, then the best world is actual).
/	(4)	N(The best world is actual). [From (1)–(3)]
B.	(5)	There is a world, w, s. t. N(w is the best world).
/	(6)	There is a world, w, s. t. N(w is actual). [From (4) and (5)]
	(7)	N(No more than one possible world is actual).
	(8)	Our world is an actual world.
/	(9)	N(Our world is the actual world). [From (6), (7) and (8)]
	(10)	If (9), then there is exactly one possible world.
/	(11)	Our world is the only possible world. [From (9) and (10)]
C.	(12)	If (9), then everything that occurs, occurs necessarily.
/	(13)	Thus everything that occurs, occurs necessarily. [From (9) and (12)]
	(14)	If everything that occurs, occurs necessarily, then no one ever acts freely.
/	(15)	Therefore, no one ever acts freely. [From (13) and (14)]

Argument A tells us that if we grant that three things are necessary, God's existence, his bringing about a certain state of affairs if he exists and this state of affairs' obtaining if he brings it about, then we must grant that it is necessary that the state of affairs in question does obtain. Thus (4). Argument B, the crucial argument for our purposes, first utilizes the conclusion of A, along with the assumption that one of the worlds is such that its being the best in necessary ((5)), to yield (6): that one of the worlds is such that its being actual is necessary. We will see later that the Per-Se Solution is primarily applied to deny (5). (7) and (8) are trivial premises (though they help to provide a formally valid argument). The first records the uncontroversial fact that there couldn't have been more than one actual world; the second that our world (the one we're in) is an actual one. Together, (6)–(8) yield (9): the conclusion that our world's being the actual world is necessary. For (6) and (7) obviously imply that one of the worlds is such that its being the actual world is necessary. Now, suppose b is such a world. Then it is necessary that b is the actual world. But then since our world is an actual world, it follows that our world is that world. That is, our world is b. Hence, by substitution of identicals, it is necessary that our world is the actual world. Thus (9). (10) simply says that if no world other than this one could have been actual then there is only one that is possible. Finally, we conclude (11), that our world is the only possible world, from (9) and (10). Argument C generates some relatively straightforward consequences from (9): that everything that occurs, whether in this world or with regard to this world, is necessary. And (15) draws out the obvious consequence for freedom, be it God's or ours: there isn't any. (Sub-argument C helps to provide the background context for the first problem of contingency in Leibniz, but this further consequence about freedom will stay in the background in this paper.)

[9] This argument would have to be reformulated if Leibniz' actualism and his belief in multiple distinct representations of the actual world were to be made explicit, but this version comes closer to his own formulations of the problem. (See II.1.)

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The first thing to note about this argument is that it does not hinge on Leibniz's famed concept containment account of truth[10]. It stems from his view of creation. Secondly, the problematic necessitarian conclusions are not de re but de dicto[11]. The problem is not Adam's being necessarily (or essentially) a sinner, but its being a necessary truth that Adam sins. The latter is stronger than the former, since the former (unlike the latter) is compatible with the possibility that Adam does not exist. Although we shall see later that Leibniz does attempt to extend his Per-Se Solution to the de re problem, it is initially devised to cope with the stronger de dicto necessitarianism[12]. Let's turn to his per-se response to this problem.

2. In *CP*, following the previously quoted statement of the problem, we find what is perhaps Leibniz's earliest statement of the Per-Se Solution. He initiates his response to the problem by denying a modal principle:

"I reply that it is false that whatever follows from something necessary ‹per se› is necessary ‹per se›. Certainly, it is the case that from truths nothing follows except what is true. Nevertheless, since from purely universal propositions a particular can follow, as in Darapti and Felapton, why not a contingent ‹or one [merely] necessary on the hypothesis of another› from something necessary ‹per se›? (The addition of "merely" is mine.)"

The material in arrow-brackets was probably added as clarification to the original 1672–73 version after Bishop Nicholas Steno read and commented on it in 1677[13]. Here we find Leibniz denying a modal principle that is common to the more well known contemporary modal logics (T, S4 and S5): N(p) and N(if p then q), therefore N(q). (He is of course conceding that if we replace "N(p)" and "N(q)" with "p" and "q" respectively, the resulting principle is valid.) Hence we should be expecting a rather nonstandard interpretation of de dicto necessity. Regrettably, he does not provide us with any "counterexamples" to this principle in *CP* – save those in the argument he is immediately addressing. However, as we shall see shortly, he did provide what he took to be another counterexample elsewhere. We should also note in passing that necessity (or impossibility) of p "on the hypothesis of another", q, is used throughout the Per-Se Texts to mean necessity of the consequence: N(If q then p) (or N(If q then – p))[14].

Immediately following the previous quotation, Leibniz attempts to provide a "semantic justification" for his denial:

"But I shall bring about this result from the very notion of the necessary. For I have defined the necessary as that whose contrary cannot be understood. Therefore, it is required that the necessity and impossibility of things not be sought outside the things themselves, but in their very ideas by

[10] The first two Per-Se Texts (*CP* and *CS*) are prior to Leibniz' mature philosophy of which the concept containment account of truth is an integral part.

[11] When I speak of de re necessity, I have in mind the traditional notion of de re necessity – expressed by constructions of the sort: b is necessarily (or essentially) F.

[12] Of course, the de re problem becomes a de dicto problem when the concern shifts from the singular, Adam sins, to the hypothetical, if Adam exists, then Adam sins. But this is Leibniz's second problem with contingency.

[13] This information was provided by Sleigh.

[14] Since necessity ex hypothesi just amounts to the per-se necessity of the corresponding conditional, I will concentrate on Leibniz's simple (non-conditional) notion of per-se necessity. (Similarly for impossibility ex hypothesi.) It should be noted that Leibniz frequently uses the terms "absolute necessity" and "necessity of the consequence" as variants of "necessary per se" and "necessary ex hypothesi", respectively. (cf. Grua, p. 297).

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examining whether they can be conceived, or whether they imply a contradiction. ‹For here we call necessary only what is necessary per se, namely that which has the reason of its existence and truth in itself. Such are the Truths of Geometry, but, of existent things, only God; others, which follow from the supposition of this series of things, i. e., from the harmony of things, or from the existence of God, are per se contingent and are only hypothetically necessary . . . › . . . And so they are mistaken who declare that whatever has not been, nor is, nor will be, is impossible ‹absolutely, i. e., per se›".

The material thus far quoted from the Per-Se Texts is representative. It provides us with enough data to begin formulating an interpretation of Leibniz's modal concepts. Explicitly, these data are:

D1: For emphasis, Leibniz chooses the expression "per se" (cf. "in and of itself") to add to the first two occurrences of "necessary" in the original. He also indicates that he thinks that a "contingent" proposition can still be necessary in the weak sense of being necessary-on-the-hypothesis-of another (even if that other is itself necessary per se).

D2: He offers the following as a definition of necessity: N(p) = df (−p) can't be understood.

D3: He appears to be offering the following as at least criteria (where "I" and "P" express de dicto impossibility and possibility, respectively):

C1: N(p) if and only if (−p) can't be conceived;
I(p) if and only if p can't be conceived;
P(p) if and only if p can be conceived.

C2: N(p) if and only if (−p) implies a contradiction;
I(p) if and only if p implies a contradiction;
P(p) if and only if p does not imply a contradiction.

C3: N(p) if and only if the reason that p is true is in "the very idea" p.

D4: He thinks that in determining the modal status of p, it is inappropriate to "look outside of" p.

D5: The truths of geometry are necessary per se.

D6: God is the only existing thing that is necessary per se.

D7: The modal principle, N(p), N(If p then q) / N(q), is deemed invalid.

A few remarks on these data are in order. Although D5 and D6 may at first sight seem inconsistent, Leibniz frequently indicates that he takes the existence of geometrical objects to be only hypothetically assumed in mathematics and he is obviously not counting concepts and propositions, which are for him "ideas in God's understanding", among the existing things[15]. In a marginal note attached to *CP*, he says "In this way, only hypothetical propositions are necessary, except for this one alone of the categoricals: God exists . . ." It should be obvious that Leibniz accepts the standard modal equivalences (for example, that N(p) if and only if I(−p)), despite his denial of the previously mentioned standard modal principle. Leibniz is rather clearly equating possibility with some sort of internal conceptual coherency and it might seem that he is taking possibility to be just simple conceivability. D2 and C1, in isolation, suggest this. But I think D5 rules this out. We should assume that Leibniz appreciated, as well as anyone, the tale of Pythagoras's sacrificing an ox upon discovering Euclid's forty-seventh theorem. Mathematics wouldn't be very interesting if we could recognize every mathematical truth (within grasp) because their negations all appeared immediately inconceivable. This would undermine one of the traditional motives of axiomatics: to march from relatively secure ground to slippery soil. Leibniz had a deeper appreciation of this motive than most. So I don't think that he

[15] For an explicit statement by Leibniz on possibilities as "ideas in God's understanding" see Leibniz: *Discourse on Metaphysics/Correspondence with Arnauld/Monadology*, 2nd ed. (LaSalle: Open Court Publ. Co., 1980), pp. 115 and 131. The references are in *The Correspondence*. All subsequent references to (and quotations from) *The Correspondence* or *The Discourse* will be to the "Open Court edition".

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means plain old conceivability, and in our third Per-Se Text (*OL*) he explicitly defines the possible as "what can be understood distinctly". So he is not assuming that all necessary propositions are transparent truths, nor that all impossible propositions are transparent falsehoods. Yet one of the marks of the inconceivably true and the inconceivably false is that one reflects on the proposition in isolation in order to sort it with respect to truth value, and he does take this to be a mark of the necessary and the impossible. This brings us to D1, C3 and D4. These data suggest what is most apparent about his notion of per-se necessity: the significance of the term itself. In some importance sense, Leibniz is asserting that if it is necessary that p then it is not in virtue of some other conceptually extraneous proposition that p is true. Leibniz seems to be suggesting that, at least for those propositions we are capable of conceiving, if p is necessary then we can discover this fact while in some sense restricting our attention and consideration to p alone. To be sure, the reflection required may be of some special kind, but it will be scrutinizing p itself, restricting our "mental operations" to it and its contents, that will yield its modal status. Let's turn to this issue with an eye to Leibniz's denial of the aforementioned modal principle.

Consider the following inference:

(16) N(God exists).
(17) N(If God exists, someone exists).
/(18) N(Someone exists).

Leibniz obviously accepted (16). He thought that by merely considering the idea of God, we could come to see that it must in fact represent. And it is implausible to think he did not accept (17). For he would likewise maintain, and with less contention, that merely by reflecting on the notions of God, personhood and existence, we would come to see that it must be true that if God exists then some person does. Even most atheists would grant that (17) is true. But what about (18)? A moderately sophisticated atheist is likely to disbelieve it in virtue of disbelieving (16). A moderately sophisticated agnostic is likely to doubt it in virtue of doubting (16). But a moderately sophisticated theist is likely to believe it solely in virtue of believing (16). Only someone with the most extreme case of infatuation or delusions of grandeur would come to believe (18) without first coming to believe (16)! Leibniz believed that (16) is true in virtue of the fact that the idea of existence is involved in the idea of God and that (17) is true in virtue of the fact that the idea of personhood is involved in the idea of God. But if someone were to claim that (18) is true in virtue of the fact that the idea of God was involved in the idea of personhood, Leibniz would say he was confused about the nature of necessity.

Consider a similar case that Leibniz commits himself to in our second key Per-Se Text (*CS*):

"The series of things is not necessary with an absolute necessity, for many other series are possible, i. e., intelligible, even if the execution of these does not in fact follow.

A series of things that is impossible with a [mere] hypothetical necessity can be understood, for example, a world such that in it all the pious are damned and all the wicked are saved. Certainly such a series can be understood or conceived, but the actual existence of this series is impossible with a [mere] hypothetical impossibility, not because it implies a contradiction in terms, but because it is incompatible with the presupposed existence of God, whose perfection (from which his justice follows) is such that this state of affairs cannot be allowed."

I think it is clear that Leibniz is here disposed to accept the premises, but deny the conclusion of the following argument:

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(19) N(God exists).
(20) N(If God exists, then it is not the case that all the pious are damned).
/(21) N(It is not the case that all the pious are damned).

This is a curious example for Leibniz to choose. For on the most straightforward interpretations of "pious" and "damned" they would express concepts involving the concept of God, and hence his existence and perfections. In particular, that all the pious are damned would seem to come roughly to this: that all those devout to God are condemned to eternal torture by God. Similarly for the proposition that all the wicked are saved. But taken this way they would certainly seem to "imply a contradiction in terms". So this must not be what Leibniz intends here. I think that Leibniz must be intending something like the following pair: that all the virtuous are suffering eternally and that all the vicious are eternally happy. Neither of these seems to involve the concept of God. The first is then taken to be possible in itself and merely impossible-on-the-hypothesis-of God's existence. Hence Leibniz's denial of (21). We should also note that Leibniz here uses the phrase "implies a contradiction in terms" rather than the more usual „implies a contradiction" and he introduces still another conceptual coherence term: "intelligible". Finally, Leibniz is here asserting what he repeats unhesitantly throughout his career: that other worlds are possible. This latter datum was, for Leibniz, probably much more important theoretically than his somewhat ambivalent intuitions about freedom.

3. Let's briefly review Leibniz's well known picture of demonstration and analysis, since this will help to illuminate Leibniz's conception of necessity[16]. For Leibniz, demonstration and analysis go hand in hand. The idea is an ancient one and is described aptly by Heath in *Euclid's Elements*:

"The method is as follows. It is required, let us say, to prove that a certain proposition A is true. We assume as a hypothesis that A is true and, starting from this we find that, if A is true, a certain other proposition B is true; if B is true, then C; and so on until we arrive at a proposition K which is admittedly true. The object of the method is to enable us to infer, in the reverse order, that, since K is true, the proposition A originally assumed is true. Now Aristotle has made it clear that false hypotheses might lead to a conclusion which is true. There is therefore a possibility of error unless a certain precaution is taken. While, for example, B may be a necessary consequence of A, it may happen that A is not a necessary consequence of B. Thus, in order that the reverse inference from the truth of K that A is true may be logically justified, it is necessary that each step in the chain of inferences should be unconditionally convertible. As a matter of fact, a very large number of theorems in elementary geometry are unconditionally convertible, so that in practice the difficulty in securing that the successive steps shall be convertible is not so great as might be supposed"[17].

For Leibniz this is not a special method of demonstration, it is the method of demonstration. Leibniz came to believe that a proposition is demonstrable if and only if it reduces, by definitional substitution alone, to a primitive formal truth. He repeatedly claims that even the best mathematicians had frequently failed to give rigorous presentations of their systems because their axioms were themselves susceptible to proof by analysis[18]. Every demonstrable proposition is reducible, by a series of equivalence transformations, to an "identical proposition": a proposition that is transparently true in virtue

[16] For an excellent source on Leibniz's views on analysis esp. as they pertain to infinite analysis, see Sleigh's previously mentioned article in Hooker (esp. pp. 219–232).

[17] Vol. I and II, 2nd ed. (New York, 1956) p. 139.

[18] For example: in a letter to Herman Conring, he says outright, "... all axioms are demonstrable ..." See Loemker p. 187.

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of its logical form (e. g. a proposition of the form: 'Any A is an A' or 'Any A that is a B is a B'). The equivalence transformations are such that p yields q by analysis just in case q is the result of "replacing" one of the concept-components of p by a "definitional equivalent". This ultimately leads us back to primitive propositions composed of only primitive concepts: concepts that are not susceptible to further analysis. Demonstrable propositions are thus reduced derivatively in virtue of the analyzability of their component concepts. This picture traces back at least as far as his *Dissertation on the Art of Combinations* (1666) and was perhaps suggested by his earlier exposure to Euclidian geometry.

How we "replace" concepts by their "definitional equivalents" in a proposition, etc. need not concern us here. The important point is that Leibniz is identifying demonstrable truths with some species of what Twentieth Century philosophers have called "analytic truths". In particular, he is claiming that any such truth reduces, upon analysis, to one that is true in virtue of its logical form. Similarly, a demonstrable falsehood will reduce, on analysis, to a proposition that is false in virtue of its logical form. And these propositions will reduce, upon analysis, in virtue of their component concepts. Finally, as is also well known, Leibniz believed that the primitive concepts are all mutually compatible. Hence any proposition reducible to one that has only primitive concepts as constituents and that is neither true in virtue of its form nor false in virtue of its form will be deemed to be both possibly true and possibly false. In a word, primitive propositions will wear their modal status on their sleeves.

It is difficult to believe that Leibniz's views of necessity per se, possibility per se, impossibility per se and contingency per se are not closely related to his views about the nature of analysis, and his use of "implies a contradiction" is rather suggestive in this regard. After all, any proposition that is reduced completely will yield a primitive proposition that is either a formal falsehood, a formal truth or neither. If the first, the proposition reduced will surely be unqualifiedly impossible. If the second, the proposition reduced will be unqualifiedly necessary. And if the third, the proposition reduced will be unqualifiedly possible and unqualifiedly contingent-if-true. If we think of a proposition as "implying a contradiction" if it reduces upon analysis to a formal falsehood, we have C2. If we think of a proposition as one that "can be conceived" or "understood distinctly" if it reduces, upon analysis, to a primitive proposition that is not a formal falsehood, we have D2 and C1. Furthermore, the picture of analysis certainly fits well with D1, C3 and D4. However difficult it is to get a clear understanding of the exact way in which the modal status of a proposition is not a function of anything "outside itself", and in which its status is "per se" and contained in its "very idea", we do get a real appreciation of why Leibniz might have said these things. In particular, it should be apparent that there is an intuitively clear sense in which this picture supports the claim that we must restrict ourselves to the proposition in question when determining its modal status. D5 needs no comment. Regarding D6, Leibniz thought that God's existence was necessary because he thought that God alone of existing things has a concept that upon analysis yields the concept of existence. Hence only his existence is absolutely necessary. This covers D1–D6. Finally, the denial of the validity of arguments (16)–(18) and (19)–(21) (along with the associated modal principle) also fits, since unlike the negations of the premises of each, the negations of the conclusions will not yield formal falsehoods upon analysis. So why not just assume that a proposition is possible per se if and only if it does not reduce to a primitive formal contradiction, necessary per se if and only if it reduces to a primitive formal truth, impossible per se if and only if it reduces to a primitive formal contradiction

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and contingent per se if and only if it reduces to a proposition that is neither a formal truth nor a formal contradiction, but is nonetheless true?

One reason we should hesitate is the rather conspicuous absence of the identifications in question where we would most expect them – especially the absence of any statement that even says that necessity is equivalent to demonstrability[19]. Consider also the following facts. First of all, Leibniz explicitly defines necessity in the first Per-Se Text (*CP*) by way of a conceptual coherency term: "that whose contrary cannot be understood". He does so again in our second text (*CS*). Finally, in the third Per-Se Text (*OL*), he ends his piece with the warning that we need to "employ fixed meanings of terms, so that a variety of absurd talk is avoided", and in good faith says "Therefore, I say, that is possible of which something is the essence, or reality, i. e., what can be understood distinctly" (my emphasis). Indeed, the majority of terms he uses to elucidate his modal notions are conceptual coherency terms: "can or can't be conceived", "can or can't be understood", "intelligible or unintelligible". Also, at no point in the three Per-Se Texts does Leibniz say that necessity is even equivalent to demonstrability. Finally, we can use elements of the same picture, to tell a slightly different story that fits D1–D7 just as well.

Leibniz believed there was a set of primitive concepts and, derivatively, a set of primitive propositions that have only primitive concepts as constituents. These primitive propositions express "deeper" analyses of non-primitive propositions. In particular, the modal status of non-primitive propositions is deemed to be a function of the form of primitive ones. Now consider the fact that some of the primitive and non-primitive propositions will be infinitely complex. Suppose we have a proposition that has an infinite number of non-primitive component concepts[20]. How would we determine its status? No step by step analysis that replaced one (or any finite number) of these components per step with their definitional equivalents would come to a halt. Hence it would not reduce to a primitive proposition. On the above proposal, this would have the result that all such propositions would be possible per se – even if they were, for example, infinite conjunctions with some finitely complex demonstrably false propositions as conjuncts! Now, I think that Leibniz would hardly have been disposed to deny that at least God can intuit which one of the primitive propositions is correlated to any given non-primitive proposition even though Leibniz may have never considered this. (I will assume that each proposition has a unique primitive correlate for ease of exposition.) But then surely we could still say that every infinitely complex proposition is nonetheless correlated to a primitive proposition, albeit an infinitely complex one, which is either true in virtue of its form, false in virtue of its form or neither. And we could go on to say that each proposition has the modal status it in fact has in virtue of the formal status of its primitive correlate. In particular, we could say that a proposition is possible per se if and only if its primitive correlate is not false in virtue of its form, necessary per se if and only if its

[19] Leibniz does mention demonstration in an application, but all that can be adduced from the case is that if something is demonstrable, it is necessary per se and if its negation doesn't imply a contradiction, then it is not demonstrable. Clearly, this does not warrant us in assuming that demonstrability is being equated with per-se necessity and the absence of any statement to the effect that it is, suggests that it is not.

[20] We should note that Leibniz does, in one place, say explicitly that there are an infinite number of axioms, primitive concepts and definable concepts. See the introduction of Leibniz: *Selections*, ed. P. P. Wiener (New York, 1951), pp. xxx–xxxi.

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primitive correlate is true in virtue of its form, impossible per se if and only if its primitive correlate is false in virtue of its form and contingent per se if and only if its primitive correlate is true but not in virtue of its form. This would appear to be little more than a generalization of the original model of analysis with an analogous explication of per-se modality thereby. It also fits nicely with D1–D7 for analogous reasons.

I have attempted to give two related characterizations of Leibniz's rather nebulous notion of per-se modality. Each draws heavily on an element of his corpus – the structure of concepts and propositions – the central idea of which was already available to him in 1666, and which remained central to his later philosophy. I am not claiming that either of these characterizations is to be identified with Leibniz's concepts of per-se modality. I doubt that they should be, since I believe that if Leibniz's per-se notions were just "short for" one of these other notions, he would have said so. The irony of the Per-Se Texts is that they contain umpteen explicit definitions or criteria for these notions, certainly much more (proportional to the size of the texts) than are usually found, yet we come away from them initially perplexed, nonetheless. The hypothesis I find most plausible is that "possible per se" means that the proposition or concept is ultimately internally coherent, "impossible per se", that it is not, and "necessary per se", that its negation is not. This fits well with Leibniz's belief that all demonstrably false propositions reduce by definitional substitution to primitive propositions that are false in virtue of their form. The first step in the reduction is restricted exclusively to the proposition and its constituents and each subsequent step is similarly restricted to its immediately preceding result and the terminus is a primitive proposition that is formally incoherent. Hence the incoherency is "internal" and "ultimate" and the proposition cannot be "understood distinctly".

It is plausible to think his fundamental view about the structure of concepts and propositions, and not his identification of necessity with demonstrability (which is certainly less fundamental), is lingering in the background here. The fact that Leibniz might have used his picture of the structure of concepts and propositions to provide a deeper analysis of ultimate internal coherency prompted the two speculative strategies I sketched. As far as I can tell, nothing in the notion of ultimate internal coherency nor in Leibniz's view of the structure of propositions rules out the possibility that the second set of equivalences, where there are no finitistic restrictions, provide conditions that are at least equivalent to his concepts of per-se modality. His view about the structure of concepts and propositions is in principle independent of any identification of ultimate internal incoherency with demonstrable falsity. Indeed, it seems to give what I take to be the natural ruling with respect to infinite propositions and hence gives a better elucidation of the concept Leibniz is probably operating with. Perhaps the implications of his frequent identification of necessity with demonstrability for infinitely complex but ultimately internally incoherent propositions (and infinitly complex propositions whose negations were ultimately internally incoherent) never occurred to him. I know of no text where he considers the issue. I find it difficult to believe that if these implications had been brought to his attention when he was constructing the Per-Se Doctrine, he would have been disposed to bite the bullet and say that even an infinite conjunction, involving an infinite number of non-primitive concepts, with a demonstrably false conjunct is possible per se. Nor can I believe that he would accept the consequence that some infinite conjunctions of mathematical truths are non-necessary. In the face of these difficulties I think he would have agreed that there is an important analytic correlation between such a proposition and some primitive proposition, even though the correlation is in principle

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unspecifiable by a finite analysis and that this correlation is the basis for its per-se modal status. Here we have a tension between Leibniz's view about the structure of propositions and concepts on the one hand and his tendency to identify necessity with demonstrability. The fact that he frequently asserts that necessity is equivalent to demonstrability does not preclude the real possibility that his concept of necessity per se is not in fact equivalent, even in extension, to his concept of demonstrability. He may just never have considered the appropriate cases in the appropriate light.

Although Leibniz's denial of the modal principle allows him to reject virtually all the moves in The Argument, he is not content with stopping there. He wishes to argue that no argument supporting the conclusions of part B of The Argument will work. He wants to use his Per-Se Doctrine to show that the conclusions and the crucial premise, (5), are false outright. I turn now to the application and to an important point that it reveals about his concept of a world.

II

1. We now have to face a major difficulty with Leibniz's primary application of the Per-Se Solution to the problem that is brought on by his doctrine of creation. As we have already seen (*CS*), "the series of things is not necessary with an absolute necessity, for many other series are possible. . . ." In addition to denying the previously mentioned modal principle, Leibniz repeatedly denies (9) and (11) of The Argument: "N(Our world is the actual world)" and "Our world is the only possible world", respectively. But if a world is a complete representation – a total way things might have been – how can it fail to contain either that it is the best (if it is) or that it is not the best (if it is not), along with the information that God will choose only the best? But if worlds do contain these things how will any but the best fail to involve an ultimate internal incoherency and how will the one that is best fail to be such that its nonactuality is ultimately internally incoherent?[21]

Consider two familiar definitions of worlds:

Df. 1 b is a world = df b is a set of propositions s.t. 1) for every proposition, p, either p is a member of b or the negation of p is, and 2) it is possible that all the members of b are true.

Df. 2 p is a world = df p is a proposition s.t. 1) for every proposition, q, either it is necessary that q is true if p is or it is necessary that q is false if p is true, and 2) it is possible that p is true.

[21] For illustration, suppose worlds are infinite conjunctions of propositions, that they exist prior to creation, that @ is the best one and that God will actualize only the best one. Now, consider the following propositions:

22. that @ is the best world
23. that some world other than @ is actual
24. that God actualizes only the best world

Suppose w is a world other than @. Then, if w is really complete, it would appear to assertively involve 22)–24). For 22) just states the fact that a certain world @ is the best and this would seem to be true from the perspective of any world and regardless of which world is in fact actual. 23) says that some world other than @ is actual, something which would have to be true, by stipulation, if w were actual. 24) states that God actualizes only the best world and this Leibniz seems to think is transparently true in virtue of the very concepts involved. But w is a conjunction containing 22)–24) as conjuncts. Yet the conjunction of 22)–24) is ultimately incoherent, whatever the status of each in isolation. So w must not be possible per se and @ must be necessary per se after all.

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The first condition of each pertains to maximality, the second condition of each pertains to consistency. Hence, per the first definition, worlds are called "maximal consistent sets of propositions" and per the second definition, they're called "maximal consistent propositions".

Notice the first characterization of a world as a set of propositions. Here a proposition is true in a world just in case it is a member of that world. Now every such set conceptually involves every proposition, since for each proposition, either it or its negation is contained in it. Such a set is a complete world representation in a very strong sense indeed: if we add a missing proposition the result will fail to satisfy the consistency clause (i. e. a proposition and its negation will both be in the set). With regard to the status of each and every proposition with respect to this world, it settles the matter and it does so explicitly.

In contrast, consider the second definition of a world. Here worlds are not very big sets of propositions, but very big propositions instead. Here it is not membership that determines truth in a world, but implication. Per Df. 2, a proposition is true in a world just in case that world implies the proposition. Now there is no strong relation between implication and conceptual content. Euclid's forty-seventh theorem implies that $2 + 2 = 4$ and is implied by the proposition that there are tigers. Hence there is no good reason to expect that if p implies q then p in some sense conceptually involves q. And there does not appear to be any reason to believe that this changes if the propositions become infinitely complex.

Suppose b is the actual world per Df. 1. Now consider all the proper subsets of b that are such that it is necessary that if their members are jointly true then the members of b are also. Lots of these will exist. Now each of these, since it "implies" b and is consistent by design, will suffice to represent the actual world. From the conceptual standpoint, they will not be as complete as b. But with respect to implicational force, they are just as complete. Now consider any proposition that is the conjunction of the members of such a set. It will also suffice to represent the actual world. Indeed, it will be a world per Df. 2. For it will be consistent and it will imply the conjunction of the members of b itself. But the latter and not the former will be conceptually complete.

Kit Fine makes a related point:

> "To describe a possible world, one need only use propositions that are expressed by non-modal sentences, the logical modalities are simply not required in describing empirical reality."[22]

I think he understates the case. To describe a possible world, one needs only contingent propositions. We could easily generate definitions of worlds analogous to the two above by replacing each occurrence of "proposition" with "contingent proposition". For example, in the second case, if a consistent contingent proposition is implicationally complete with respect to contingent propositions, it will obviously be implicationally complete with respect to propositions simpliciter[23]. I think Fine is onto something important about our notion of worlds: they need only involve contingent matters and needn't explicitly involve the realm of abstract non-contingent matters.

Indeed a world, for example the actual world, is so complete when construed per Df. 1 that it will itself contain all the true modal propositions. So we could just as well say, for

[22] *World Times and Selves*, A. N. Prior and Kit Fine (Amherst, 1977), p. 154.

[23] Of course, in the first analogue, truth in a world could no longer be identified with membership in a world, but the second analogue would lose none of its earlier virtues as far as I can tell.

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any proposition p, that the proposition that it is necessary (possible) that p is true in the actual world just in case this modal proposition is itself a member of the actual world. No reference to truth in all (or some unspecified) worlds is required. Complete indeed! I think we must admit that some propositional content is just not essential to characterizing worlds. So if there are a multitude of equivalent world representations each one of which has a legitimate claim to being a representation of this world, then there may be a multitude of legitimate notions of world representations that will select only some special subset of these equivalent representations as "proper" world representations. Exactly how this is to be done and how much substantive interest there is in doing so is of course another issue.

I will note, in passing, one implication that is not without some contemporary and historical interest. Since, per Df. 2, there are many many worlds that in fact obtain, none of them is the actual world. I doubt that Leibniz would have even considered the possibility that the actual world is an abstract object. Despite his frequent possibilist manner of speaking, he was amply clear on this issue. He devotes a good deal of time in *The Correspondence with Arnauld* to a discussion of economical versus uneconomical representations of this world as they pertain to the manner in which God decreed they would represent[24]. Despite this fact and the fact that Leibniz is an actualist in principle, the vast majority of his talk about possibilities is couched in the possibilists' idiom. He speaks much of the time about "possible individuals" and "possible worlds" and hence, as if he believed that there were merely possible objects. But this is not his considered opinion. He is an actualist in possibilist's guise; and his actualism, when divorced from some of his more contentious theses, is closer to our preanalytic conceptions than some of the standard contemporary versions. For him, this world is not an abstract object[25], there are many equivalent yet distinct representations of this world, other "possible worlds" are merely representations (things that would represent a world, if they did represent something) and hence this world is the only one that exists. Of course, there still might have been other worlds, since some world representations that don't in fact represent might have. But this merely ascribes a modal property to an actual object, it does not entail that there are merely possible ones.

This constitutes an intermediate position between the two "extremes" of Plantinga-style modal actualism and Lewis-style modal possibilism[26]. Lewis can't believe that our world is an abstract object but does believe that each modal proposition is equivalent to some proposition about worlds. Hence, he is led to believe that there are many other worlds, none of which is abstract. Plantinga, on the other hand can't believe that there are concrete but merely possible worlds, despite the fact that he does believe that modal propositions are equivalent to propositions about worlds. Hence he is led to believe that

[24] See p. 108–110 of *The Correspondence* in the Open Court edition (and p. 9 of *The Discourse* in the same edition).

[25] What else could he be presupposing when he says that God is constantly, instant by instant, maintaining the actual world? See Leibniz: *Philosophical Writings*, ed. G. H. Parkinson (Totowa, 1973), p. 102.

[26] See the articles by Plantinga and Lewis in *The Possible and the Actual*, ed. M. J. Loux (Ithica, 1979). An actualist is one who believes that the actually existing objects are all the objects there are, while a possibilist is one who believes that in addition to all the actually existing objects, there are merely possible objects.

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the actual world is one among many abstract objects, albeit a distinguished one (i. e. the only one that happens to obtain).

Leibniz would have us distinguish between a world and a world representation. Propositions about world representations are equivalent to modal propositions, and our world, which for Leibniz is decidedly not an abstract representation of any kind, is the only world there is. I believe that just this style of actualism is implicit in the work of the grandfather of "possible worlds." But showing that such an actualism is indeed implicit in Leibniz or that the sort of actualism in question warrants the consideration that I believe it deserves, would demand separate treatment. Hence, I have sluffed over some of these issues here. In particular, I have not tried to sort out Leibniz's actualism and couch his arguments with respect to per-se modality in revised form. His "considered position" is buried deep within his sometimes actualist, sometimes possibilist talk and I am allowing myself the same luxury in stating and evaluating his position with respect to per-se modality.

2. I think we are now in a position to see why Leibniz thought that complete world representations, as they exist in God's understanding, might be both possible per se and yet fail to have been actualized and why one might represent and yet not be necessary per se. Consider what Leibniz has to say about why some individual things exist rather than other possible ones in OL:

"...All existent things with the sole exception of God are contingent. The cause why some contingent things exist rather than others is not to be sought from its definition alone, but by comparison with other things. Since there are infinitely many possible things that nevertheless do not exist, the reason why these rather than those exist must not be sought from a definition, otherwise what does not exist would imply a contradiction, and the others [i. e. the merely possibles] would not be possible, contrary to hypothesis. Rather the reason must be sought from an extrinsic principle, namely, that these are more perfect than the others." (The emphasis is mine.)

Leibniz can mean only one thing here. The reason why any given contingent thing exists, and any given merely possible thing does not, is not contained in the concepts in question, nor in their primitive correlates, but depends instead on an "extrinsic principle", namely that the status of the one concept is better than the status of the other. So the information regarding the relative value of one concept's instantiation over another is external to the concepts themselves and hence there is no ultimate internal incoherence in the proposition that says with respect to one that in fact represents, that it doesn't, nor in the proposition that says with respect to one that does not in fact represent, that it does.

The case is no different with worlds. Recall this from *CB*:

"The series of things is not necessary with an absolute necessity, for many other series are possible, i. e., intelligible, even if the execution of these does not in fact follow."

The reason is surely the same in the case of the actual series of things as it is for any of the individual things that are in it. The reason why one series is chosen and another is not, is external to the series in question. There are an infinite number of other possible sereis of things because no one of these internally contains, implicitly or explicitly, its relative value as non-best. Hence no one of these is such that the propositions asserting that it obtains is ultimately internally incoherent. Similarly, with regard to the best, the proposition asserting that it does not obtain is also not ultimately internally incoherent.

It is likely that Leibniz did not think that any world representation itself contained any information about another world. This strikes me as what we might expect if we thought,

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without any theoretical prejudice, about what a representation of this world would be like. Indeed, if we assume that Leibniz believed that a world representation did not contain any information about itself that ultimately rested on its comparative value with respect to other worlds, then we can easily understand why Leibniz thought that the assumption that our world didn't represent was not ultimately incoherent. It would also help to explain why, even after he came to believe that every complete individual concept contains everything that would happen in its associated world, he still says:

"Indeed, even if someone could know the whole series of the universe, even then he could not give a reason for it, unless he compared it with all other possibles"[27].

So with respect to The Argument, Leibniz would deny (5): There is a world, w, s.t. N(w is the best world). For the best world (I will assume there is just one for convenience), b, would not contain, implicitly or explicitly, the conceptual information needed to result in an ultimate internal incoherency when coupled with the assumption that it is not the case that it is the best (i. e. the proposition that is the value of the propositional function, it is not best that ___, with b as argument. Similarly for (6): There is a world, w, s.t. N(w is actual). The assumption that it is not the case that @ is actual is also going to be ultimately internally coherent (i. e. the proposition that is the value of the function, it is not actually the case that ___, with @ as argument).

Leibniz's main concern in the Per-Se Texts is to establish the non-necessity of this world and its constituent events and the possibility of other worlds and their constituent events. In the process of doing so he sometimes grants his rhetorical adversary that the non-best worlds can't be created by God and that God must create the best (or that the non-bests are impossible-on-the-hypothesis-of God and that the best is necessary-on-the-hypothesis-of-God). He grants these in the process of attempting to establish the former points about the modal status of the worlds themselves. But he does not grant these without expressing some hesitation. Consider his wording in *OL*:

"But God cannot will that it [arbitrary non-chosen world] exist. I agree, nevertheless it remains possible in its own nature, even if it is not possible with 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." (The emphasis is mine.)

Notice that there is a definite shift in the reading of this passage if we replace the two occurrences of "even if" with "although". Still more obvious is the qualification "in some way". Leibniz is clearly hesitant to grant what he is setting aside in the process of making his main point. I think that he should be. Consider these readings of "God brings about the best world necessarily" and "God's bringing about a non-best world is impossible" (with "I" for "it is impossible that"):

(25) N(God brings it about that the best world is actual).
(26) The best world, w, is s.t. N(God brings it about that w is actual).
(27) I(God brings it about that a non-best world is actual).
(28) Every non-best world, w, is s.t. I(God brings it about that w).

In (25) and (27) the concept of a world is in the scope of the modal operator. In (26) and (28) the concept of a world is not in the scope of such an operator. Now Leibniz was certainly disposed to accept (25) and (27). The imbedded sentence of (25) expresses a proposition whose negation Leibniz deemed ultimately incoherent and the imbedded sentence of (27) itself expresses a proposition he deemed ultimately incoherent. But what

[27] *Necessary and Contingent Truths*, in Parkinson, p. 99.

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should he have said about (26) and (28)? I think that his Per-Se Doctrine would rule them false. Consider the case of (26). Leibniz ought to say that since the (actually "any") best world representation does not contain any information about its status, and the only relevant information the concept of God contains is of the sort being one who does whatever is best, there is no internal incoherency in the assumption that with respect to this very thing, God doesn't bring it about. Similarly for (28). So Leibniz's hesitancy is justified.

In later years he becomes quite clear about the two readings of "God creates the best necessarily" and he comes out where we might expect, but at this later time it is demonstrability or non-demonstrability that is the criterion cited[28]. By then he has already adopted the Infinite Analysis Solution to his second major problem with contingency and up against this problem the Per-Se Solution falls flat on its face. Let's briefly see why.

3. In the summary of the *Discourse on Metaphysics* Leibniz states, in his famous proposition thirteen, that

> "... the individual concept of each person includes once for all everything which can ever happen to him, in it can be seen a priori the evidences or the reasons for the reality of each event and why one happened sooner than another"[29].

A copy of this summary was sent to Arnauld and thus began the famous correspondence that resulted in the text, *Correspondence with Arnauld*. Arnauld immediately takes issue with this proposition and in a letter to the intermediary in the correspondence that is about to ensue, he tells this intermediary just how proposterous and literally incredible he finds Leibniz's views. He goes on to support his assessment as follows:

> "I will instance for example what is said in Article 13: ... If this is so, God was free to create or not create Adam, but supposing he decided to create him, all that has since happened to the human race or which will ever happen to it has occurred and will occur by a necessity more than fatal"[30].

Leibniz brings his per-se apparatus to bear, pointing out that the events in Adam's life, for instance, are only hypothetically necessary on the contingency of the choice of this series and not absolutely necessary[31]. But Arnauld was not so easily put off. He goes right to the heart of the problem:

> "It does not appear to me, Monsieur, that, in speaking thus, I have confused necessitatem ex hypothesi and absolute necessity, for I was all the time speaking only against the necessity ex hypothesi; what I find strange is, that all human events should be quite as necessary by a necessity ex hypothesi after this first supposition that God wished to create Adam, as it is necessary by the same necessity for there to be in the world a nature capable of thinking simply because he has wished to create me"[32].

Here the problem is with de re necessity. It is not the necessity of the dictum: Adam sins. It is rather Adam's being necessarily (essentially) a sinner that is at issue. Arnauld is pointing out that, although it is essential to him that a being capable of thought exists, there is hardly the same connection between Adam and his sins, even granting that

[28] See Adams' previously mentioned piece in Hooker, p. 254–257.
[29] Open Court edition, p. 69.
[30] Open Court edition, p. 73.
[31] Open Court edition, p. 77–78.
[32] Open Court edition, p. 90.

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neither he nor Adam *had* to exist. So, Arnauld is granting Leibniz what his Per-Se Solution was designed to achieve, namely, that it is not necessary that Adam sins, because it is not necessary that Adam exists. But this doesn't take Leibniz off the hook. For he appears to be saddled with the consequence that it is necessary that *if* Adam exists, Adam sins. Surely, this is bad enough!

The Per-Se Solution just won't work here. For the key point about the Per-Se Solution is that world representations can fail to say lots of things that don't pertain to what goes on *in* the worlds, while being nonetheless complete in the relevant sense. This feature is what allowed Leibniz to think that he had saved the phenomena: the actual world was not necessary because its nonexistence was ultimately internally coherent. But a representation of Adam will conceptually contain, perhaps implicitly, everything that will ever happen to him. And the things in question are of the mundane sort: Adam's sinning, eating apples, going out with Eve, etc. Leibniz realizes that even the leanest implicationally complete representations of individuals are *ultimately* going to involve just these sorts of things. For he says:

> "... all the predicates of Adam, either depend upon the other predicates of the same Adam or they do not. Putting on one side those which depend upon others, we have only to gather together all the primitive predicates in order to form a concept of Adam sufficiently complete to deduce whatever will happen to him ..."[33]

No complete characterization of an individual could fail to involve some of its admittedly contingent properties and no intuitive analogue to the distinction between truths in a world versus truths about a world was going to do any good here. Leibniz had a new problem with contingency pertaining to admittedly contingent connections between properties and admittedly contingent individuals. His old solution was not designed for this problem and there wasn't any hope that it could be tailored to it. But light came shortly thereafter. He recognized that his notion of an individual concept was such that individual concepts must be infinitely complex. Hence their analyses and the analyses of the propositions they enter into must also be infinitely complex. But then there will be no corresponding demonstration of a hypothetical necessity between Adam and his contingent properties, provided that demonstration was restricted to finitely complex propositions and necessity was identified with demonstrability. So this infinite complexity would be the new mark of the contingent. He would also get, as an unexpected bonus, a new solution to the old problem with the de dicto necessity of the actual world. Hence the new solution would comprehend the old. Of course, the problem with the modal status of infinite conjunctions of mathematical truths, etc. (among others) would emerge, but Leibniz never appeared to notice.

I will close with a description of these basic developments that comes from Leibniz's own pen:

> "... I used to consider that nothing happens by chance or by accident.... So I was not far from the view of those who think that all things are absolutely necessary....
>
> But I was dragged back from this precipice by a consideration of those possibles which neither do exist, nor will exist, nor have existed.... For it cannot be denied that many stories, especially those that are called "romances", are possible, even if they do not find any place in this series of the universe....
>
> Once I had recognized the contingency of things, I then began to consider what a clear notion of truth would be.... I saw that it is common to every true affirmative proposition ... that the notion

[33] Open Court edition, p. 114.

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of the predicate is in some way involved in the notion of the subject. . . . But this seemed to increase the difficulty. . . . For if . . . the notion of the predicate is in the notion of the subject, then how without contradiction and impossibility, can the predicate not be in the subject . . . ?

A new and unexpected light finally arose in a quarter where I least hoped for it – namely, out of mathematical considerations of the nature of the infinite."[34] [35] [36]

[34] *On Freedom*, in Parkinson, p. 106–107.

[35] I will note in passing two differences between the position I am arguing for and Adams' position. First, I don't believe that Leibniz had two concepts of worlds in Adam's sense. Leibniz does explicitly make a distinction between a primitive world representation and a less economical one, but he clearly indicates that the flabbier one can be "deduced" from the more primitive one. His distinction is precisely that between the flabby individual concept and the economical one, as we saw in the predicate parsing example. The primitive worlds of *The Correspondence*, if they had conceptually complete non-primitive correlates, would have all the shortcomings when applied to the first contingency problem that the primitive individual concepts have with the second contingency problem. For Leibniz, a representation of the actual world, is, for the most part, about things happening in this world – whether the representation is an economical one or not. Secondly, one comes away from Adams' article with the impression that the impetus which the new problem with contingency (prompted by the containment account of truth) gave to the infinite analysis solution has been underplayed. Adam seems to stress Leibniz' need to come to grips with the status of "N(God brings about @)", where @ is the best. Hence, he fails to see that the Per-Se Solution handles this case anyway, even if Leibniz was shaky about it, due perhaps to an inability to get perfectly clear about the de re/de dicto readings of "God creates the best necessarily". I think that Sleigh comes much closer to identifying the true motivation for Leibniz' second solution. The motivation comes from Arnauld's sort of objection, and perhaps it is Arnauld's objecting that is largely responsible. Nonetheless, both Sleigh's and Adams' articles are outstanding pieces of scholarship to which this paper is little more than a footnote.

[36] My debt to Robert Sleigh is considerable. Aside from his provision of the translations of the relevant material (along with important historical information), and his critical comments on various earlier versions of this paper, he cheerfully provided unremitting encouragement. I have also benefited from Fred Feldman's comments on an earlier draft of this paper.

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