Leibniz and the Problem of Temporary Truths[1]
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Abstract

Not unlike many contemporary philosophers, Leibniz admitted the existence of temporary truths, true propositions that have not always been or will not always be true. In contrast with contemporary philosophers, though, Leibniz conceived of truth in terms of analytic containment: on his view, the truth of a predicative sentence consists in the analytic containment of the concept expressed by predicate in the concept expressed by the subject. Given that analytic relations among concepts are eternal and unchanging, the problem arises of explaining how Leibniz reconciled one commitment with the other: how can truth be temporary, if concept-containment is not? This paper presents a new approach to this problem, based on the idea that a concept can be consistent at one time and inconsistent at another. It is argued that, given a proper understanding of what it is for a concept to be consistent, this idea is not as problematic as it may seem at first, and is in fact implied by Leibniz's general views about propositions, in conjunction with the thesis that some propositions are only temporarily true.

0. Introduction

Not unlike many contemporary philosophers, Leibniz admitted the existence of temporary truths, true propositions that have not always been or will not always be true. In contrast with contemporary philosophers, though, Leibniz conceived of truth in terms of analytic containment: on his view, for the proposition *that Elizabeth is queen* to be true is for the concept QUEEN to be contained in the concept ELIZABETH. Given that containment relations among concepts do not change over time, the problem arises of explaining how Leibniz reconciled one commitment with the other: how could truth be temporary, if concept-containment is not? Call this *the Problem of Temporary Truths*.

Traditional solutions to this problem involve modifying the structure of predicative sentences in various ways – either by adding a temporal parameter to every predicate (Broad 1949, 1975; Russell 2005) or by replacing substances with their temporal stages as the primary subjects of predication (Mates 1989; Futch 2008) or else by relativizing the copula to times or intervals of time (Adams 1994). This paper explores a different approach, based on the idea that a concept can be consistent at one time and inconsistent at another. Though not entirely unproblematic, this idea appears to be implied by Leibniz's general theory of propositions, in conjunction with the thesis that some of them are only temporarily true. A careful examination of the alternative approach, then, promises to shed new light on a problem that admits of no obvious solution and that bears crucially on the

I will proceed as follows. In § 1, I will explain what the Problem of Temporary Truths is and why it arises. § 2 presents the standard solutions and points out the difficulties they face. § 3 goes through the reasons why that the Problem of Temporary Truths cannot be avoided by ascribing to Leibniz a 'tenseless' theory of propositions. § 4 presents the alternative solution, clarifies its implications and defends it from some objections.

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1. The Problem of Temporary Truths

As a way of bringing the Problem of Temporary Truths into focus, consider the sentence 'Elizabeth is queen':

(A) Elizabeth is queen

Since Elizabeth only became queen of England in 1952, the proposition expressed by (A), which is now true, was false 70 years ago. However, given Leibniz's doctrine that the truth of a predication consists in the analytic containment of the concept expressed by predicate in the concept expressed by the subject (hereafter, the 'concept-containment doctrine'), for the proposition *that Elizabeth is queen* to be true is for the concept QUEEN to be contained in the concept ELIZABETH.[2] On the assumption that containment relations among concepts do not change over time, if the concept QUEEN is now contained in the concept ELIZABETH, it has always been (and will always be) contained in it. This means (assuming, once again, the concept-containment doctrine) that the proposition *that Elizabeth is queen* was already true 70 years ago. But the proposition *that Elizabeth is queen* was false 70 years ago. So 70 years ago the proposition *that Elizabeth is queen* was both truth and false – which is clearly impossible. This is an instance of the Problem of Temporary Truths.[3]

  Several factors contribute to generating this problem. There would not be any Problem of Temporary Truths if Leibniz had restricted the concept-containment doctrine to truths featuring essential predicates (e.g. 'Elizabeth is human') or predicates that apply eternally, even if not essentially, to their subject (e.g. 'Elizabeth is blue eyed'). But it is clear that the concept-containment doctrine was not meant to be restricted in this way – as Leibniz says in *Primary Truths*, 'the predicate or consequent is *always* in the subject or antecedent, and the nature of truth *in general* or the connection between the terms of a statement, consists in this very thing' (AG 31; my emphasis).

  Equally, there there would not be any Problem of Temporary Truths if the relation of ELIZABETH containing QUEEN were not supposed to be an *analytic* relation between these two concepts or if it were somehow possible for analytic relations to change over time. But Leibniz must have thought of the relation of concept-containment as analytic, for he took the concept-containment doctrine to imply that all true predications can be proved *a priori*, i.e. on the basis of one's grasp of the concepts involved and without the aid of any empirical knowledge (indeed, what the *a priori* proof of a true proposition shows is precisely that 'the connection between subject and predicate [...] has its basis in the natures of both' (AG 46)).[4] As to analytic relations, they cannot change over time because they reflect God's dispositions to think in certain ways, and such dispositions are eternal

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2   A more accurate and detailed formulation of the concept-containment doctrine will be offered in § 4.

3   I take the Problem of Temporary Truths to be concerned primarily with propositions, and I distinguish these from sentences and facts. The *sentence* 'Elizabeth is queen' is a linguistic entity composed by a subject ('Elizabeth') and a predicate ('being queen'). The *fact* that Elizabeth is queen is an obtaining state of affairs having as its constituents a substance (Elizabeth) and a property (*being queen*). The *proposition* that Elizabeth is queen is an abstract entity involving two concepts, ELIZABETH and QUEEN. I take the Problem of Temporary Truths to be concerned primarily with propositions because propositions are the fundamental bearers of truth and falsity and the entities to which the concept-containment doctrine most directly applies (strictly speaking, 'Elizabeth' does not contain the predicate 'being queen', nor does Elizabeth contain the property of being queen; it is the concept ELIZABETH that contains the concept QUEEN). This having being said, there is no doubt that Leibniz's theory of propositions was of a piece with his philosophy of language and metaphysics: on his view, the structure of propositions reflected the structure of facts and was reflected by the structure of sentences (hence his claim that "the true Metaphysics is hardly different from the true Logic" (G IV, 292)). Throughout the paper, then, I will move rather freely across these levels, assuming, with Leibniz, that any thesis about the proposition that A is B and its constituent concepts is equally, even if indirectly, a thesis about the sentence 'A is B' and its parts and the fact that A is B and its components. For discussion of Leibniz's views on language, and on the relationship of language to philosophy, see Rutherford (1995).

4   For a fuller defence of the claim that Leibniz's relation of concept-containment is (what Kant would have described as) an analytic relation, see Couturat (1961, 213-17) and Martin (1966, 48-50). For a critique, see Ishiguro (1981).

and unchanging.[5]

Interestingly, there would not be any Problem of Temporary Truths if Leibniz had offered some special account of what it is for a truth to be temporary, just as he offered a special account of what it is for a truth to be contingent. According Leibniz's infinite-analysis account of contingency, a derivative truth is contingent if and only if it does not admit of a finite a priori proof. So for the proposition expressed by (A) to count as contingently true it is not necessary that there be any contingency in the relationship of containment that holds between ELIZABETH and QUEEN. It is only necessary that there be no finite proof that that relationship holds. If Leibniz had suggested some way for (A) to be temporarily true that did *not* require ELIZABETH to contain QUEEN at some times and not others, the Problem of Temporary Truths would not arise. But he never did. And, given that not all contingent truths are also temporary,[6] the infinite-analysis account cannot be simply extended to the treatment of temporariness.

Finally, and most obviously, there would not be any Problem of Temporary Truths if Leibniz had embraced what contemporary philosophers would call a 'tenseless' theory of propositions, i.e. a theory according to which propositions can only be eternally true or eternally false. But Leibniz never denied the existence of temporary truths. In fact he positively affirmed their existence and – as we shall see in due course – there are good reasons for thinking that he could not have done away with them very easily (§ 3).

The Problem of Temporary Truths is, therefore, a genuine problem and, even if Leibniz does not explicitly discuss it in his writings, it is legitimate to ask how he could (and should) have solved it, given his views about time, truth and concept-containment. If truth *is* concept-containment and concept-containment is *not* a temporary matter, how can there be temporary truths?

2. How (not) to solve the Problem of Temporary Truths

Among Leibniz's interpreters, the dominant view is that the Problem of Temporary Truths should be solved by modifying in one way or another the structure of predicative sentences. Based on this view, three different approaches have been proposed over the years, each targeting a different component of the sentence.

One approach targets the *predicate*: it is argued that Leibniz could avoid the Problem of Temporary Truths by adding to every predicate a temporal parameter. On this approach, instead of applying the concept-containment doctrine to (A), Leibniz should apply it to (B):

<div align="center">(B) Elizabeth is queen-in-2017</div>

(B) expresses the proposition *that Elizabeth is queen-in-2017*, which is true if and only if the concept QUEEN-IN-2017 is contained in the concept ELIZABETH. Since this is perfectly consistent with the concept ELIZABETH failing to contain many other concepts – in particular, the concept QUEEN-IN-1945 – no contradiction arises from Elizabeth's being queen now and not 70 years ago.

A second approach targets the *subject*: the idea is that Leibniz could avoid the Problem of Temporary Truths by replacing substances with their temporal stages as the primary subjects of predication. On this approach, the right replacement for (A) would not be (B), but (C):

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5   See Mates (1986, 49-50). Against this, one could cite a passage of the *Principium Scientiae Humanae* (1685-6), where Leibniz says that in the case of contingent propositions the connection between subject and predicate is not necessary but "varies with time [*tempore variatur*]" (A6.4.671). In the same passage, however, Leibniz also says that, when a truth is contingent, the connection between subject and predicate 'depends on God's decree and free will' (ibid.). Plausibly, this does *not* mean that analytic relations are at the mercy of God's decisions (Leibniz famously disagrees with Descartes about whether it is in God's power to modify the truths of logics and other analytic domains). So we have reason to think that the passage should not be taken literally – Leibniz is simply emphasizing the point that the concept-containment doctrine does not have necessitarian implications.

6   The aforementioned proposition *that Elizabeth is blue eyed* is an example of this: while Elizabeth has always been and will always be blue eyed, it seems plausible to think that her eyes could have been of a different colour.

(C) Elizabeth-in-2017 is queen

(C) expresses the proposition *that Elizabeth's 2017-stage is queen*, which is true if and only if the concept QUEEN is contained in the concept of Elizabeth's present stage. This is perfectly consistent with the concept QUEEN not being contained in the concept of (some of) Elizabeth's past stages – in particular, the 1945-stage. So, once again, Elizabeth's change from being not-queen to being queen poses no threat to Leibniz's concept-containment doctrine.

The third and last approach targets the *copula*. On this account, Leibniz should not say that A is P-at-t1 and not P-at-t2. Nor should he say that A's t1-stage is P and A's t2-stage is not. Instead, he should say that A is-at-t1 P even if it is not the case that A is-a-t2 P. So (A) should not be replaced by (B) or (C), but rather by (D):

(D) Elizabeth is-in-2017 queen

The relativization here affects neither Elizabeth nor the property of being queen, but rather the relationship between the former and the latter.[7]

The first approach – relativizing the predicate – is in line with the interpretation of the concept containment doctrine proposed by Russell (2005, 51) and Broad (1949, 1975).[8] The second approach – using temporal stages as the primary subjects of predication – was first suggested by Mates (1989, 88-9) and has recently been revived by Futch (2008, 137-8). The third approach – relativizing the copula – is the one Robert Adams advocates in *Leibniz: Determinists, Theist, Idealist* (1994, 73). Each of these solutions has some advantages over the others. Ultimately, though, none of them offers a satisfactory solution to the Problem of Temporary Truths. Let us see why.

2.1. Relativizing the predicate

From a contemporary perspective, adding a temporal parameter to the predicate might seem the most obvious way of avoiding the Problem of Temporary Truths. But there are at least two reasons for thinking that Leibniz would not have pursued an approach of this kind.

First of all, while Leibniz offers many examples of temporary predicates (among others, 'being king', 'being general', 'being a winner', 'being well-taught', 'being strong' and 'being warm' (A6.4.553), 'being a disciple of Aristotle' (A6.4.625), but also 'having been to Rome' (A6.4.596) and 'loving', which Leibniz distinguishes from the future-tensed 'going to love' (A6.4.1336)), he never says, suggests or implies that a temporal parameter should be added to them. Indeed, some of his remarks are directly in tension with this idea. Leibniz accepts the reality of change (AG 214) and affirms on numerous occasions that change requires two *contradictory* predicates to be true of the same substance at different moments of time (A6.4.556; A6.4.569; A6.4.629; A6.4.869). Since 'being P-at-t1' and 'not being P-at-t2' are *not* contradictory predicates, the present approach has the strange feature of removing contradictoriness precisely from where, according to the texts, the reality of change *requires* that there be contradictoriness.

Second, adding a time parameter to every predicate (or at least to every temporary predicate) is tantamount to building a time specification into every property (or at least into every temporary property). But, as Mates points out, this move would undermine Leibniz's project of doing away

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7   There is an immediate worry that this approach would not be applicable to all kinds of temporary truths: 'Peter loves' is temporarily true, but it contains no copula. The worry quickly vanishes when it is realized that, according to Leibniz, the copula is implicit in the verb whenever is not explicitly present in the surface structure of the sentence: 'The particle *is* is necessary in language, whenever the verb is absent, but if the verb is present, it can be omitted, because it is hidden in it. For example, *I love* [*amo*] means *I am lover* [*sum amans*]. So the verb is a word which includes the copula' (A6.4.882). See also A6.4.596-7 and A6.4.865.

8   Cover & Hawthorne (1999, 168 and 174-5) take this approach seriously, though they don't explicitly endorse it. Bella thinks that "it matches well, indeed, with Leibniz's way of speaking in several passages, like the end of the *De Affectibus*" (2005, 223).

with irreducible temporal properties and relations:

> Leibniz defines the non simultaneity of two states of a substance as the inclusion in one of a property that is lacking in the other, and it is plain that in general he hopes to reduce temporal relations to nontemporal properties of the relata; if qualities had time specifications built in, as it were, this would make no sense. (Mates 1986, 89)

Note that the problem does not go away if, instead of building time specifications into properties – for example, by distinguishing *being queen-in-1945* and *being queen-in-2017* – we limit ourselves to positing a plurality of temporally unqualified properties – for example, *being queen$_1$* and *being queen$_2$*. A central idea in Leibniz's discussion of irreducible temporal properties and relations is that the distinctions marked by such properties and relations are not *genuine* (in his correspondence with Clarke, for instance, Leibniz says that two universes that differed from one another *only* with respect to the time of their creation would not be *genuinely* different – this is why it is an impossible fiction 'to suppose that God might have created the world some millions of years sooner' (AG 329)). If we replace *being queen-in-1945* and *being queen-in-2017* with *being queen$_1$* and *being queen$_2$*, this problem, far from disappearing, becomes more pressing. Since, by hypothesis, *being queen$_1$* and *being queen$_2$* have no built-in time specifications, the distinction they are supposed to mark is – even more clearly than in the case of *being queen-in-1945* and *being queen-in-2017* – a distinction without a difference. In short, the strategy of relativizing the predicate, besides being exegetically untenable, leads to a spurious and unLeibnizian multiplication of attributes.

2.2. Temporal stages

As anticipated, Mates favours a different approach to the Problem of Temporary Truths, based on the replacement of substances with their temporal stages as subjects of predication: 'I believe that Leibnizian statements to the effect that an (incomplete) attribute or concept B is contained in a complete individual concept A are best interpreted as meaning that the concept B is a component of the relevant t-states of the concept A' (Mates 1986, 89).

One key advantage of this approach is that it is compatible with Leibniz's project of reducing temporal relations to nontemporal properties of their relata. In fact, accepting an ontology of temporal stages would put Leibniz in a better position to carry out the reduction, because it would provide him with a larger set of relata – hence with a more generous reduction base. Distinguishing between Elizabeth's 1945-stage and Elizabeth's 2017-stage is also, from a Leibnizian perspective, less objectionable than distinguishing between *being queen-in-1945* and *being queen-in-2017* (or between *being queen$_1$* and *being queen$_2$*): since Elizabeth undergoes qualitative change between 1945 and 2017, her 1945-stage and her 2017-stage can be seen as two qualitatively discernible entities.

Still, Mates's proposal faces some serious problems. The idea of a substance having distinct temporal stages is not foreign to Leibniz. Indeed, his definition of change as 'the aggregate of two contradictory states' (A6.4.556) may be interpreted as alluding to that idea. Likewise, the doctrine of continuous creation, defended in the *Theodicy*, could be taken to imply that a substance persists through time in virtue of God's constantly creating new stages of it. But these readings are notoriously difficult to maintain.[9] Leibniz's 'states' (*status*) are not stages in the proper sense of the term, because they are accident-like rather than substance-like ('a state is a mutable attribute', Leibniz says (A6.4.392)). Far from being able to *replace* substances as the primary subjects of predication, then, states are among the things we must predicate *of* substances. On the other hand, while it remains controversial how to interpret the doctrine of continuous creation, an interpretation requiring the existence of temporal stages is highly implausible, given Leibniz's insistence that

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9   See McDonough (2007) and Whipple (2010).

persisting substance should not be thought of as *entia successiva*.[10]

   A further problem with Mates's approach is that it would *not* provide Leibniz with a solution to all instances of the Problem of Temporary Truths. Replacing substances with their stages might be the right way of dealing with propositions expressed by sentences of the form 'A is B', where A is a substance and B a property. But what about propositions expressed by sentences of the form 'All As are B'? Consider:

<div align="center">(a) All dinosaurs are extinct</div>

Since dinosaurs became extinct about 65 million years ago, the proposition expressed by (a), which is now true, was false 100 million years ago. But according to Leibniz, the truth of the proposition expressed by (a) is guaranteed by the fact that the concept EXTINCT is contained in the concept DINOSAUR.[11] So the same question arises again: given that the analytic containment of one concept in another is an eternal matter, how could the proposition expressed by (a) be only temporarily true? Here a strategy appealing to temporal stages is of no help: DINOSAUR designates a property, not a substance, and properties, unlike substances, have no temporal stages.[12]

<div align="center">*2.3. Relativizing the copula*</div>

In *Leibniz: Determinist, Idealist, Theist*, Adams rejects Mates's solution to the Problem of Temporary Truths, affirming that it is 'as contrary to Leibniz's way of speaking as imposing a temporal qualification on the properties' (Adams 1994, 73). According to Adams, the best solution is to 'assign a time-index to the copula by which the predicate is attached to the subject' (ibid.).

   This strategy obviates the need to add a temporal parameter to predicates and does not require an ontology of temporal stages. Furthermore, relativizing the copula puts one in a position to provide a uniform treatment of (A) and (a). For just as one can replace (A) with (D), one can also replace (a) with (d):

<div align="center">(d) All dinosaurs are-in-2017 extinct</div>

The difference between adding a temporal parameter to the predicate and adding it to the copula is subtle, but important. If the temporal parameter is added to the copula, it may be argued that the relativization does not affect the concept expressed by the predicate, but rather the containment relation that the concept expressed by subject bears to it: as Adams puts it, 'inconsistency will be avoided by saying that the individual concept of [Elizabeth] contains in some way the predicates ["being queen"] and ["not being queen"], *but only with respect to different times*' (Adams, ibid.; my emphasis).

   The question is whether this difference, however important, is sufficient to avoid the problems that relativizing the predicate gave rise to. Saying that the relation of concept-containment is time-relative seems to be a way of saying that the instantiation-relation holding between a substance (e.g. Elizabeth) and its properties (e.g. *being queen*) is time-relative. But if instantiation is time-relative, it becomes once again hard to see how Leibniz's project of doing away with irreducibly temporal properties and relations could succeed – instantiation is, itself, a certain kind of relation.

   In addition, Adams's solutions seems to raise philosophical concerns of its own. If analytic relations have been thought to be eternal and unchanging, it is because they appear to be timeless or atemporal, rather than somehow time-relative. Just as it would seem awkward and unnatural to say that the relation between 2+2 and 4 is not *equaling* but *equaling-in-2017*, it seems awkward and unnatural to say that the the relation between ELIZABETH and QUEEN is not *containing*, but *containing-in-2017*. This is all the more so in a context where, as already noted, analytic relations

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10 See, for instance, G VI 350.

11 A more precise statement of the truth-conditions of universal truths like (a) is offered in § 4.

12 We could, of course, substitute DINOSAUR with DINOSAUR-IN-2017 – but there are as many good reasons not to do that as there are not to substitute QUEEN with QUEEN-IN-2017.

are supposed to reflect God's dispositions to think in certain ways rather than others. Maybe, contrary to what Adams suggests, there are ways of interpreting the addition of a time-index to the copula that do not call into question the timeless and atemporal nature of concept-containment. But until we have a clear conception of what these alternative interpretations might be, Adams's solution is, at the very least, highly problematic.

3. Getting rid of temporary truths?

The above discussion suggests that the three main strategies proposed so far to solve the Problem of Temporary Truths – relativizing predicates, replacing substances with their stages as the primary subjects of predication and relativizing the copula – face serious exegetical and philosophical difficulties. Where they do not openly contradict the letter of Leibniz's writings, they are either incompatible with his views about the metaphysics of time and persistence or incapable of solving all instances of the problem (or both).

   If this diagnosis is correct, a more radical solution may appear to be called for: given that there does not seem to be any straightforward way of squaring Leibniz's concept-containment doctrine with the existence of temporary truths, shouldn't we conclude that Leibniz did *not* accept the existence of temporary truths? A 'tenseless' theory of propositions – a theory on which propositions can only be eternally true or eternally false – would not only solve the Problem of Temporary Truths at the root, but it would also be consonant with Leibniz's reductionist views about time – or so it might be argued.

   There are three things to be said in response to this suggestion. The first is Leibniz's reductionist views about time are neither here nor there with respect to the question whether propositions can be 'tensed'. Broadly speaking, one can distinguish three components in Leibniz's reductionism about time. There is *Relationalism*, the doctrine that time is not a substance distinct from the events occurring in it, but a system of relations among events.[13] There is the *Causal Theory of Time*, according to which temporal relations are grounded in causal relations (so that – for instance – for an event x to precede another event y is for x to be (part of) the reason why y will occur).[14] And there is the thesis – call it *Causal Intrinsicalism* – according to which causal relations are grounded in intrinsic properties of the relata.[15]

   A detailed discussion of these components and their interrelations would take us too far afield, but it is crucial to see that each of them is perfectly compatible with the acceptance of a 'tensed' theory of propositions. For a 'tensed' theory of propositions can be combined with each the following three claims: (i) that the most fundamental truths about the universe involve nothing about the absolute position of events in time (as per *Relationalism*); (ii) that if, e.g., p *is* true and q *will* be true, this is because p explains or contributes to the causal explanation of q (as per the *Causal Theory of Time*) and (iii) that that if p explains or contributes to the causal explanation of q, this is because of the intrinsic properties that p and q ascribe to their respective subjects (as per *Causal Intrinsicalism*).[16]

   The second thing to be said about the hypothesis that Leibniz embraced a 'tenseless' theory of propositions is that the textual evidence tells heavily against it. Besides offering many examples of temporary predicates (as already noted in § 2), Leibniz shows awareness of the distinction between

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13 Leibniz defends Relationalism is his correspondence with Clarke. There and in several other places, he defines time an 'order of successions' (AG 324). On many occasions, he explicitly says that time is a relation (NE II, 13, 17; G IV, 491-92; 568-69; GM VII, 242).

14 The Causal Theory of Time is defended by Leibniz in the text *Initia Rerum Mathematicarum Metaphysica*. For a discussion of this doctrine, see Arthur (1989), Cover (1997) and Futch (2008).

15 Causal Intrinsicalism can be shown to follow from Leibniz's thesis that '*there are no purely extrinsic denominations, denominations which have absolutely no foundation in the very thing denominated*' (AG 32).

16 On this point – the compatibility of Leibniz's reductionism about time with a 'tensed' account of propositions – I entirely agree with Vailati (1997, 121)

'tensed' and 'tenseless' interpretations of the present indicative when he distinguishes two readings of 'Peter denies' – one synonymous with 'Peter is denying', the other with 'Peter sometimes denies' (A6.4.763). Further, Leibniz affirms that no proposition about an object can change in truth-value unless there is an actual change in the object – a point that he would have had no reason to make had he not believed in the existence of propositions that change in truth-value.[17] Even more explicitly, Leibniz says that, among contingent propositions, there are some that 'are only true at a certain time', like the propositions *that I am now alive* or *that the sun shines* (A6.4.1517). And a text from 1687-88 entitled *De Lingua Philosophica* contains a clear endorsement of the thesis that some propositions are only temporarily true:

> The copula is always tensed [*semper includit tempus aliquod*], and so is any proposition or statement [*propositio seu enuntiatio*] […]; and the reason why every statement [*enuntiatio*] is tensed [*connotet tempus*] is this, that *one and the same proposition can be true and false at different times*, even if everything else [in it] remains the same. (A6.4.882; my emphasis).

Notice that in saying that the copula '*semper includit tempus aliquod*' and that every statement '*connotet tempus*' Leibniz is *not* suggesting that we should think of the copula (or of other components of the statement) as involving reference to times or intervals of time. '*Tempus*' here refers to the grammatical category of tense, as shown by the fact that, in the same paragraph, Leibniz uses this term to refer to a verb form (*tempus quoddam Aoristum*) inspired by and modelled on the aorist tense of ancient Greek.[18] Notice also that this passage commits Leibniz to the view that *propositions* (not sentences, utterances or other kinds of linguistic items) can be temporarily true. Here as elsewhere, Leibniz uses the terms *propositio* and *enuntiatio* interchangeably (Mates 1989, 53f), and refrains from employing the Latin terms for "utterance" and "sentence" – which are, respectively, *dictio* (or *locutio*) and *sermo* (or *sensus*).

The third and last thing to be said about solving the Problem of Temporary Truths by getting rid of temporary truths is that it is not really an *alternative* to the solutions considered in the previous section. For, while the solutions considered in the previous section disagree on which particular sentence one should replace (A) with, they all agree that (A) should be replaced, not with another temporary truth, but with some sentence expressing an eternally true proposition. The proposition expressed by (B) is eternally true because, unlike the bare property of *being queen*, the property of *being queen-in-2017* is one that you either eternally have or eternally fail to have. The proposition expressed by (C) is eternally true because Elizabeth's 2017-stage does not change over time – how Elizabeth is in 2017 is settled once and for all. And the proposition expressed by (D) certainly *seems* to be eternally true, for, subtleties aside, the meaning of (D) does not differ substantially from the meaning of (B).

All this suggests a general lesson. The solutions discussed in the previous section are nothing else than variations on the two main strategies a metaphysician has at her disposal to reduce 'tensed' propositions to 'tenseless' ones – appealing to temporal parts or relativizing various components of the proposition to times or intervals of time. If none of the solutions discussed in the previous sections can be made to work, the conclusion we should draw is that there is not much leeway for ascribing to Leibniz a 'tenseless' theory of propositions. Not only is such a theory not required by Leibniz's reductionist views about time and explicitly denied in his writings. More likely than not, it is not even a theory that Leibniz – given his overall commitments – *could* have embraced.

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17 See Mates (1989, 53).

18 I submit that this is also the most charitable way of interpreting Leibniz's use of '*tempus*' in the *De Affectibus* (A6.4.1441). It may be asked what Leibniz's interpretation of the grammatical category of tense was, but – for reasons that should be familiar at this point – it is unlikely to suppose that it involved any kind of time-indexing or time-relativization. Perhaps Leibniz would have used tense to paraphrase away reference to times in roughly the way suggested by some contemporary advocates of tense logic (see, for instance, Prior 1969). For some related speculations on the role of tense in Leibniz's logic, see Øhrstrøm & Hasle (1995, 115-117).

4. A different tack

Let us now try to be more constructive. If the approaches discussed so far do not work (§ 2) and ascribing to Leibniz a 'tenseless' theory of propositions is not an option (§ 3), how should we deal with the Problem of Temporary Truths? As a first step towards an alternative solution, I suggest we should provide a more careful formulation of Leibniz's concept-containment doctrine. Leibniz says that this doctrine applies not only to singular truths, but also to "every affirmative truth, universal or particular" (AG 31).[19] Clearly this cannot mean that sentences like 'A is B', 'All As are B' and 'Some A is B' are *all* true if and only if A's concept contains B's concept. What is the right way of formulating their truth-conditions in concept-containment terms, then?

Let us start with *singular propositions*, i.e. propositions expressed by sentences of the form 'A is B'. It must be admitted that there is something slightly inaccurate in saying (as I did at the outset of this paper) that, according to Leibniz, the truth of these propositions consists in the analytic containment of the concept expressed by predicate in the concept expressed by the subject. Strictly speaking, that B's concept be contained in A's concept is a *necessary* condition for truth, but not *sufficient* one. To see why, consider:

(E) The necessary body is necessary

The proposition expressed by (E) involves two concepts – NECESSARY BODY and NECESSARY – the first of which contains the second. Yet Leibniz regards this proposition as false (G III, 443), on the ground that the concept expressed by the subject (i.e. NECESSARY BODY) involves some kind of contradiction (for Leibniz, there is not and cannot be such a thing as a *necessary* body).

Call concepts like NECESSARY BODY *inconsistent concepts* and concepts that do not involve any kind of contradiction *consistent concepts*. It seems clear that only when a concept is consistent its containing another concept makes for the truth of the corresponding singular proposition. So I submit that the truth-conditions of singular propositions should be stated, more cautiously, as follows:

  (C-S) The proposition *that A is B* is true iff A's concept is consistent and contains B's concept.

Next, let us consider *particular propositions*, i.e. propositions expressed by sentences of the form 'Some A is B'. Obviously enough, the truth of these propositions cannot require that A's concept contain B's concept. For then the truth of the proposition *that some A is not B* would require that A's concept contain the negation of B's concept. And so the propositions *that some A is B* and *that some A is not B* could not be jointly true without A's concept being inconsistent. Leibniz's solution to this problem is to say that "if the proposition is particular affirmative, then the predicate is not contained in the notion of the subject considered by itself, but in the notion of the subject with something extra added; that is, the predicate is contained in some special case of the subject." (AG 11). For instance, the proposition *that some metal is gold* is true if and only if "some metal, with some addition or specification […] is of such a nature as to involve the nature of gold" (C 51), and not only if METAL contains GOLD.[20]

One simple way of implementing this suggestion is the following. Call a *specification* of a concept X any concept that is either identical to X or contains X among its ingredients. Then the proposition *that some A is B* could be said to be true if and only if there is some specification of A's concept that contains B's concept. But not just any specification will do – plausibly, in adding new ingredients to A, one should not be allowed to generate any contradiction. The truth-conditions for particular propositions should therefore be stated as follows:

  (C-P) The proposition *that some A is B* is true iff there is some consistent specification of

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19 See also AG 95.
20 For discussion of some potential difficulties with this solution, see Levey (2014, 113-117).

A's concept which contains B's concept.

And now universal propositions, i.e. propositions expressed by sentences of the form 'All As are B'. Leibniz says that "in a universal affirmative proposition, it is obvious that the predicate is contained in the subject considered by itself" (AG 11). But what does the expression 'considered by itself' mean in this context? Consider the concept HUMAN and two consistent specifications of it, BLOND-HUMAN and NOT-BLOND-HUMAN. The first of these specifications contains BLOND, while the second contains the negation of BLOND. What should we say about HUMAN *considered by itself*, then?[21] If we want the proposition *that all humans are blond* to come out false, two options suggest themselves. One option is to say that HUMAN considered by itself contains BLOND if and only if *every* consistent specification of it does. Another option is to say that HUMAN considered by itself contains BLOND if and only if no consistent specification of it contains NOT-BLOND. Coordinately, we have two candidate clauses for the truth-conditions of universal propositions:

(C-U*) The proposition *that all As are B* is true iff every consistent specification of A's concept contains B's concept.

(C-U) The proposition *that all As are B* is true iff no consistent specification of A's concept contains the negation of B's concept.

(C-U) may seem more convoluted, but notice, given (C-P), it has the advantage of making 'All As are B' equivalent to 'It is not the case that some A is not-B'. Since Leibniz accepts this equivalence (G VII 212; A6.4.780), I think we should prefer it to (C-U*).[22]

Now that the truth-condition of singular, particular propositions and universal propositions have been clearly identified, we are in a position to make a crucial observation. *Two* notions are at play in (C-S), (C-P) and (C-U) – not only the familiar notion of one concept *containing* another, but also the notion of a concept being *consistent*. For a singular proposition to be true, it is not enough that the subject contain the predicate – the subject has to express a consistent concept. For a particular proposition to be true, it is not enough that some specification of the subject contains the predicate – the relevant specification has to be consistent. And for a universal proposition to be true, it is not necessary that every specification of the subject's concept fail to contain the negation of predicate's concept – only consistent specifications matter. This means that there is no immediate *incompatibility* between the existence of temporary truths and the concept-containment doctrine. For even if the relation a concept bears to its ingredients is eternal and unchanging, something else might still be temporary, namely whether that concept (given, among other things, the eternal and unchanging ingredients it has) is consistent or inconsistent. Could temporary truths depend for their temporariness on the temporariness of consistency?

The suggestion may be met with scepticism. For how can a concept which is consistent at one time be inconsistent at another unless it can gain or lose some of its ingredients over time? Moreover, if we allow concepts that are consistent to become inconsistent (or vice versa) shouldn't we also allow things that are possible to become impossible (or vice versa), contrary to the thought that matters of possibility and necessity are not subject to change? These questions are pressing, but, before trying to tackle them, I want to explain why, despite the problems it faces, the approach I am suggesting deserves to be taken seriously. Treating consistency as a temporary feature of (at least, some) concepts is not just the main or only residual option once the accounts reviewed in § 2 and 3 are set aside. It is Leibniz's own views about propositions that exert significant pressure towards adopting this solution.

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21 Notice that the same question does not arise with individual concepts, because each individual concept admits of only one specification, namely itself.

22 At AG 16, Leibniz says that "*from a universal affirmative follows a particular affirmative*. Every wise person is pious. Therefore some wise person is pious". To accommodate this remark one could add to (C-U) that some specification of A's concept should contain B's concept. Since nothing crucial hinges on this amendment, I will omit it for simplicity.

4.1. The case for temporarily consistent concepts

Leibniz offers many examples of inconsistent concepts: not only the concept of the necessary body, but also the concept of the greatest speed (G III, 443), of 'the squaring of the circle', of 'the number of all possible units' and of 'the greatest circle of all' (AG 238). What makes these concepts inconsistent is the fact that they 'involve a contradiction' (AG 26). (The terms 'consistent' and 'inconsistent' are coined by Mates (1989, 67) – Leibniz only says only that these concepts express 'false ideas' (AG 16) and characterizes them as 'unsuitable' (*ineptus*) (C 513) and 'pointless' (*inutilis*) (G VII 293)).

   The question whether consistency is a temporary or eternal feature of concepts is one that, to my knowledge, Leibniz never explicitly addresses. Still, an argument can be made that, given his general views about propositions, Leibniz *should* have endorsed the view that (some) concepts are only temporarily consistent. Once again, let us start with (A):

(A) Elizabeth is queen

   According to Leibniz, to say that Elizabeth is queen is tantamount to saying that it is Elizabeth *the queen* – rather than any of the infinitely many counterparts of Elizabeth who are *not* queen – that exists in the actual world. This means that the proposition expressed by (A) is equivalent in meaning (hereafter, more simply, 'equivalent') to the proposition expressed by (A'):[23]

(A') Elizabeth-queen exists

But Leibniz allows us to go further than this. Just as we can transpose 'queen' into the subject term of (A) and transform (A) into (A'), he thinks we can also transpose 'exists' into the subject term of (A') and transform (A') into (A"):

(A") Elizabeth-queen-existing is

Notice that this is just a special case of transforming a sentence of the form 'A is B' into a sentence of the form 'AB is', when the predicate involved is 'exists'. For reasons that will become clear later on (§ 4.2), transformations of this kind may appear to turn contingent claims into necessary ones. But, as Leibniz himself points out (C 271; A6.4.1632), this appearance is misleading and propositions like (A") are, in fact, equivalent to propositions like (A'). By transitivity, then, (A), (A') and (A") are all equivalent to one another.

   Now, we know that, in sentences like (A"), which result from transposing the existence predicate into the subject term, 'is' means 'is an *ens*' or 'is a *possibile*', where saying that x is an *ens* or is a *possibile* is tantamount to saying that x's concept is consistent (I will explain later why I prefer to leave these terms untranslated):

   An *ens* or *possibile* is what does not involve *A not A*. (A6.4.631)

   A *non-ens* or *impossibile* is what involves a contradiction (A6.4.935)

   Something is a *possibile* if no falsehood follows from positing it, that is to say, if it does not
   imply any contradiction. (A6.4.277)

So we reach the following, conditional conclusion: *if* (A) is temporarily true, the concept ELIZABETH-QUEEN-EXISTING *must* be only temporarily consistent. For (A) is equivalent to (A") and (A") asserts that Elizabeth-queen-existing is an *ens*, which is just another way of saying that the concept ELIZABETH-QUEEN-EXISTING is consistent. A temporary truth like (A) requires the existence of a temporarily consistent concept.

   An analogous line of reasoning applies also to temporary universal truths and temporary particular truths. As an example from the former category, take again (a):

(a) All dinosaurs are extinct

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23 For this equivalence, see C 317. The other equivalences discussed in this section are endorsed by Leibniz in a text
    entitled *De Propositionibus Existentialibus* (A6.4.1631-3). In what follows, I will mostly leave implicit the
    specification 'the proposition expressed by...'.

According to Leibniz, to say that all dinosaurs are extinct is tantamount to saying that no non-extinct dinosaurs exist in the actual world (there could, of course, be non-extinct dinosaurs in other possible worlds). This means that (a) is equivalent to (a'):

(a') Dinosaur-not-extinct does not exist

But here too, as before, the existence predicate can be transposed into the subject term and (a') can be transformed into (a"):

(a") Dinosaur-not-extinct-existing is not

What (a") asserts is that dinosaur-not-extinct-existing is not an *ens* or *possibile*, which is just another way of saying that the concept DINOSAUR-NOT-EXTINCT-EXISTING is inconsistent. But (a") is equivalent to (a') and, by transitivity, to (a). So, given the temporary truth of (a), (a") itself is only temporarily true and the concept DINOSAUR-NOT-EXTINCT-EXISTING is only temporarily inconsistent.

Finally, consider a particular truth like (a):

(a) Some humans are saved

Given that no human was saved before Jesus's death on the cross, (a), which is now true, was false 3000 years ago. But (a) is equivalent to (a') and (a"):

(a') Human-saved exists

(a") Human-saved-existing is

So (a") itself, which asserts the consistency of the concept HUMAN-SAVED-EXISTING, must be temporarily true. Hence HUMAN-SAVED-EXISTING is a temporarily consistent concept.

The arguments I just offered rely on treating EXISTENCE on a par with a proposition's other ingredients. Against this, one might invoke the thesis, defended by Mates (1986, 74f and 112f), that EXISTENCE provides an exception to the concept-containment doctrine. But this thesis is untenable. Occasionally, Leibniz says that the predicate "exists" does not apply to created substances *essentially* or *by definition* (AG 19). But he never says that, unlike other predicates and in violation of the concept-containment doctrine, "exists" is not contained in every subject of which it can be truly predicated. In fact, he suggests the opposite. For he is adamant that "when it is said that something exists […], this existence itself is the predicate; that is, the notion of existence is linked with the idea in question, and there is a connection between these two notions" (A6.6.358).

My arguments also rely on the principle that, if p is equivalent to q, p is temporarily true if and only if q is. In the context of Leibniz's philosophy, this principle strikes me as relatively uncontroversial: it is hard to see how by 'unpacking' and 'reshuffling' concepts – which is all analytic transformations allow us to do – one could turn a truth that is temporary into one that is not, or vice versa. At any rate, if we apply the concept-containment doctrine to (A), (a) and (a), we can show independently that their truth-conditions coincide with those of (respectively) (A"), (a") and (a"). Very briefly:

- Given (C-S), (A) is true iff (A") is. Left-to-right: if (A) is true, Elizabeth's concept is consistent and contains both QUEEN and EXISTING. But if Elizabeth's concept is consistent and contains both QUEEN and EXISTING, the concept ELIZABETH-QUEEN-EXISTING is consistent, and (A") is true. Right-to-left: if (A") is true, there is a concept which is consistent, contains QUEEN and is Elizabeth's concept, so (A) is true.
- Given (C-U), (a) is true iff (a") is. Left-to-right: if (a) is true, no consistent specification of the concept EXISTING-DINOSAUR contains the concept NOT-EXTINCT. But then the concept DINOSAUR-NOT-EXTINCT-EXISTING must be inconsistent, and (a") is true. Right-to-left: if (a") is true, every specification of the concept EXISTING-DINOSAUR containing the concept NOT-EXTINCT is inconsistent, so (a) is true.
- Finally, given (C-P), (a) is true iff (a") is. Left-to-right: if (a) is true, there is some consistent way of specifying the concept HUMAN-EXISTING that contains the concept SAVED. But then the concept HUMAN-SAVED-EXISTING must be consistent and (a") true. Right-to-left: if is (a")

true, at least one specification of the concept HUMAN-EXISTING is consistent (namely, HUMAN-SAVED-EXISTING), and so (a) is true.

To sum up, against the backdrop of Leibniz's general theory of propositions and concept-containment doctrine, the temporariness of singular, particular and temporary truths turns out to require and be required by the temporary consistency (or inconsistency) of certain concepts. Given his acceptance of 'tensed' propositions, it seems that Leibniz *should* escape the Problem of Temporary Truths by claiming that some concepts are only temporarily consistent. This solution would not require the relativization of properties to times or intervals of time, nor the replacement of substances with their stages as the primary bearers of properties. It would also provide Leibniz with a uniform solution to all instances of the problem, for all truths to which the concept-containment doctrine applies can be transformed into truths of the form 'A$_1$, A$_2$...A$_n$ is (not)' – truths asserting the consistency (or inconsistency) of a concept having as its ingredients A$_1$, A$_2$...A$_n$.[24] The question at this point should be: can we make sense of temporary consistency, without doing violence to other aspects of Leibniz's thought?

4.2. Making sense of temporary consistency

As far as I can see, the suggestion that we should treat consistency as a temporary feature of concepts faces at least three challenges. First, there is a challenge of showing how consistency can be a temporary feature of concepts if matters of possibility and necessity are eternal and unchanging. Second, there is a challenge of explaining how a concept can be temporarily consistent if its ingredients do not change over time. Third, there is a challenge of squaring the temporariness of consistency with Leibniz's views about concepts – in particular, complete individual concepts. In explaining how I think these challenges could be met, I will try to be upfront about the costs of the solution to the Problem of Temporary Truths I am putting forward. While a full assessment of such costs falls beyond the scope of this paper, my hope is to show that they do not deprive the proposal of its philosophical and exegetical interest. As should be clear at this point, *no* solution to the Problem of Temporary Truths is without costs. And if the arguments I offered in the last section are sound, Leibniz's theory of propositions indirectly commits him to treating consistency as a temporary feature of concepts, given his acceptance of temporary truths.

Consistency and possibility – Let me start with the worry that, if (some) concepts are only temporarily consistent, (some) things must be only temporarily possible, contrary to the natural thought that matters of possibility are not subject to change. The worry may be motivated by the principle that the possibility of something requires the consistency of its concept or, equivalently, that "a subject whose concept is contradictory is not possible" (Rodriguez-Pereyra and Lodge 2011, 233).

Leibniz's treatment of iterated and mixed modalities raises delicate issues,[25] but I agree that if the temporariness of consistency implied the temporariness of possibility the present approach would raise more problems than it solves. Fortunately, though, there is good reason to think that, in the context of Leibniz's thought, consistency and possibility should *not* be equated with one another – this why, earlier on, I preferred not to translate Leibniz's "*possibile*" as "possible".

Consider again the concept of a Elizabeth-not-queen's existing, i.e. ELIZEBETH-NOT-QUEEN-EXISTING. For Leibniz, this concept is inconsistent (its inconsistency follows from the falsity of "Elizabeth is not queen" and the equivalence between this sentence, "Elizabeth-not-queen exists" and "Elizabeth-not-queen-existing is", the latter of which ascribes consistency to the concept of Elizabeth-not-

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24 The transformations offered at G VII 212 and A6.4.780 allows one to transform even negative singular, universal and particular truths into truths of the form 'A$_1$, A$_2$...A$_n$ is (not)'.
25 See Lenzen (2004).

queen existing). Yet we know that Elizabeth-not-queen *could* exist, for Elizabeth is not *necessarily* queen. So we have a straightforward counterexample to the following schema:

It is possible that A is B → AB is an *ens* or *possibile* (i.e. the concept of A being B is consistent)

Given what Leibniz means by "*ens* or *possibile*", this should not come as a surprise. As we've seen, for AB to be an *ens* or *possibile* is for the concept of A being B not to imply any contradiction. But, on Leibniz's infinite-analysis account of contingency, for it to be possible that A be B is for the concept of A being B not to imply any contradiction *in a finite number of steps*. So consistency is *stronger* than possibility, because a concept can imply a contradiction without implying it in a finite number of steps. The concept ELIZABETH-NOT-QUEEN-EXISTING is inconsistent, because it implies something false (i.e. that Elizabeth is not queen) and, for Leibniz, any falsehood is some kind of unanalyzed contradiction. Nevertheless, that concept expresses something possible, because no contradiction could be derived from it in a finite number of steps.

The point can be put, more clearly, as follows. Call an inconsistent concept *explicitly inconsistent* if it implies a contradiction in a finite number of steps and *implicitly inconsistent* if it doesn't. Implicitly inconsistent concepts *are* inconsistent – so they do not designate *entia* or *possibilia*. But they are *implicitly* inconsistent – so they designate something possible. The schema above is, therefore, invalid – it fails whenever the concept of A being B is implicitly inconsistent.

These subtle distinctions were never explicitly drawn by Leibniz – in fact, Leibniz's choice of calling '*possibile*' the referent of a consistent concept invites precisely the kind of confusion between consistency and possibility that I am arguing against. But it would be hard to make sense of some of Leibniz's remarks without assuming these distinctions. In the *Calculus Ratiocinator*, for example, Leibniz says that "something is a *possibile* if no falsehood follows from positing it, that is to say, if it does not imply any contradiction" (A6.4.277). Now, every false proposition implies a contradiction, whether in a finite or infinite number of steps. So, if being possible implied being a *possibile*, Leibniz's claim would imply the absurd result that no falsehood expresses a possibility.

What's more, Leibniz himself offers us counterexamples to the schema above, warning us against thinking that, if the concept of A being B involves a contradiction, it is impossible that A be B. In a text from 1688 entitled *De Propositionibus Existentialibus*, Leibniz considers three examples of implicitly inconsistent concepts: the concept of an existing pious man not being oppressed (*pius existens non tribulatus*), the concept of an existing abandoned just man (*justus derelictus existens*) and the concept of an existing man who does not sin (*homo existens non peccans*) (A6.4.1632). Leibniz says that the referents of these concepts are '*non entia*' or '*impossibilia*', but, as soon as he does that, he also emphasizes that, according to his position on matters of possibility and necessity, there *could* exist non-oppressed pious men, abandoned just men and men who do not sin. He does not call the concepts of such men "implicitly inconsistent" (the label is mine, not Leibniz's), but he does say that what they designate is only "hypothetically impossible" and defends the coherence of his position by appealing to the infinite-analysis account of contingency.

To go back to our original problem, then, the principle that a subject whose concept is inconsistent is not possible should be rejected. Without such a principle, there is no direct route from the thesis that consistency is a temporary feature of (some) concepts to the problematic claim that (some) things are only temporarily possible. Only the thesis that *explicit* consistency is temporary would lead to such a result, and nothing in the present account commits Leibniz to that thesis.

Consistency and eternal ingredients – A second argument against treating consistency as a temporary feature of concepts goes as follows. Recall that for a concept to be consistent is for it not to involve any contradiction. On the face of it, this definition implies that for a concept to be inconsistent is for it to include among its ingredients two concepts that contradict one another. But I have been assuming that the ingredients of a concept *cannot* change over time. So it would seem impossible to explain how one and the same concept could change from being consistent to being

inconsistent, or vice versa.

The argument touches on a crucial point. I agree that, if for a concept to be inconsistent were for it to include contradictory ingredients, the temporariness of consistency would be incompatible with the eternal and unchanging nature of containment relations. But the idea of reducing a concept's inconsistency to its including contradictory ingredients – herafter: the 'inclusion model' of inconsistency – strikes me as fundamentally mistaken.

One basic problem with it is that it makes it very hard to see how there could be what I called "implicitly inconsistent concepts". If a concept C is *implicitly* inconsistent no contradiction can be derived from C in a finite number of steps. But suppose that for C to be inconsistent were for it to literally include two contradictory ingredients, A and not-A. Then there is no reason why it should take us infinitely many steps to come across these ingredients in our analysis – we might, as it were, stumble upon them after a finite number of substitutions. In other words, the inclusion model plays a villain's part in generating the well-known *Problem of Lucky Proof*, as applied to false propositions.[26]

Even more worryingly, the inclusion model of inconsistency makes it very easy to prove *true* all sorts of falsehoods. For example, consider the false proposition expressed by:

(a*) Not all dinosaurs are extinct

For Leibniz, the falsity of (a*) depends on the implicit inconsistency of the concept DINOSAURS-NOT-EXTINCT-EXISTING. If the inclusion model is correct, this means that the concept DINOSAUR-NOT-EXTINCT-EXISTING includes contradictory ingredients. But what are these ingredients? Considered by themselves, neither the concept of existence (i.e. EXISTING) nor the concept a possible not-extinct-dinosaur (i.e. DINOSAUR-NOT-EXTINCT) are inconsistent, so their conjunction can only include contradictory ingredients if the latter includes the negation of the former (i.e. NOT-EXISTING). But now take the concept of a possible not-extinct dinosaur, *remove* from it the concept NOT-EXISTING, and *add* to it the concept EXISTING. Certainly it must be possible to construct a concept in this way – indeed, the concept in question must exist *already*, for it's the concept one would have used to think of non-extinct dinosaurs *at the time when dinosaurs were not extinct*; and it must be a *consistent* concept, since, by hypothesis, we removed from it any source of inconsistency. So the embarrassing question arises why we couldn't use *that concept* to prove (a*), contrary to the assumption that (a*) is false. Call this the *Problem of Spurious Truths*.

Now, something must be badly awry in a model that allows us to generate such straightforward problems for the concept-containment doctrine as the Problem of Lucky Proof and the Problem of Spurious Truths. If we are to take that doctrine seriously, we should, I think, abandon the inclusion model altogether. Instead, we have to understand and apply to inconsistency the 'approximation model' suggested by Leibniz in passages like the following:

> A contingently true proposition cannot be reduced to identities, but can nevertheless be proved, by showing that, as one pushes the analysis further and further, one *approximates* the identities more and more, but never reaches them. (A6.4.776; my emphasis)

Just as a contingent truth is one that, when analysed, can be shown to constantly *approximate* (but never reach) an identity, an implicitly inconsistent concept is one that, when analysed, can be shown to constantly *approximate* (but never reach) a contradiction. It is only in this sense that implicitly inconsistent concepts 'involve' a contradiction. There is no chance of being lucky and hitting upon the contradictory ingredients – nor any possibility of generating spurious truths by removing or replacing them – because the concept *includes* no contradictory ingredients, in the strict sense of the term.

It might be objected that, even if we can make sense of the approximation model and abandon the inclusion model in its favour, the original problem does not go away. If the ingredients of a concept

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26 For discussion, see, among others, Hawthorne & Cover (2000), Rodriguez-Pereyra & Lodge (2011) and Steward (2014).

do not change over time, why should an analysis of that concept approximate a contradiction at one time and not at another?

I admit that Leibniz's writings provide no satisfactory answer to this question. But I want to make a qualification and advance a tentative suggestion. The qualification is that, if there is a difficulty here, it does *not* arise specifically from the claim that consistency is a temporary feature of concepts. Consider again:

(A") Elizabeth-queen-existing is
(a") Dinosaur-not-extinct-existing is not
(α") Human-saved-existing is

On *any* reconstruction of the infinite-analysis account of contingency– and *independently* of the arguments offered above for the equivalence of (A"), (a") and (α") with, respectively, (A), (a) and (α) – these propositions (which predicate consistency or inconsistency of various concepts) come out *contingently* true.[27] This means that – whether or not consistency is a temporary feature of concepts – Leibniz did *not* think of it as a mere function of a concept's ingredients: while concepts have their ingredients necessarily, they are *not* necessarily consistent (or inconsistent). An objector may regard this result as incoherent. But, once the inclusion model is set aside, it falls upon him or her to explain exactly why we should so regard it.

The tentative suggestion is precisely that, with the approximation model in place, the result need *not* be seen as incoherent. One natural thought here starts with the observation that Leibniz's notion of existence is comparative in nature – it designates 'the difference between the degree of reality [or perfection] of each thing and the degree of reality [or perfection] of its opposite' (A6.4.1354). If we allow this margin of (greater or lesser) to change over time, it is not hard to see how a concept might change from being consistent to being inconsistent (or viceversa) *without* any change in its ingredients. Take again the concept ELIZABETH-QUEEN-EXISTING. The possibility represented by this concept must be presently superior to all its alternatives – otherwise God would not presently allow Elizabeth to be queen. But 70 years ago, a thorough analysis of all the implications of that very possibility would have revealed it to be *less* perfect than the possibility of Elizabeth's *not* being queen – otherwise, God would have made Elizabeth queen earlier than he actually did. This is just to say that 70 years ago a contradiction was, as it were, latent in the concept ELIZABETH-QUEEN-EXISTING that is not latent in it today. In Leibniz's terminology: the concept was 'pointless' (*ineptus*, *inutilis*), but it no longer is.

The suggestion assumes that, whenever the notion of existence is included in a concept, the consistency of that concept will be a function, not just of its ingredients, but also of its associated margin of perfection. This is no more than a speculative conjecture. But remember that our task here is not to find a solution to the Problem of Temporary Truths directly supported by Leibniz's writings – there is no such solution. Our task is to outline a way in which Leibniz could avoid the problem without giving up the concept-containment doctrine. The present approach does exactly this. Pending an argument that we cannot coherently fill in its details (or that we cannot do so without raising problems that Leibniz's doctrines would not otherwise raise), we have every reason to take it seriously.

Consistency and complete individual concepts – There is a third problem with the idea of treating consistency as a temporary feature of concepts. It plausibly follows from this idea that any changing substance must fall under different complete individual concepts as time passes. To see why, take the proposition p which expresses the complete truth about Elizabeth at the present time t. If p is a temporary truth, there must be a time t' – earlier or later than t – at which p is not true. But if p is not

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27 This is either because (A"), (a") and (α") involve infinitely complex concepts (Steward 2014) or infinitely many inclinations (Hawthorne & Cover 2000), or because they require infinitely long 'consistency checks' (Rodriguez-Pereyra & Lodge 2011) or because they involve the notion of existence (Merlo 2012).

true at t', Elizabeth's complete individual concept at t – call it C – must be inconsistent at t'. Yet at every instant of her existence Elizabeth must fall under *some* consistent complete concept. Hence there must be a concept C', distinct from C, that Elizabeth falls under at t'. So throughout her existence Elizabeth must fall under at least two distinct complete individual concepts, C and C'. In fact, supposing that the complete truth about Elizabeth at any instant of her existence is *only* true of Elizabeth at that instant (i.e. that Elizabeth is subject to constant change) and that there are infinitely many instants in Elizabeth's existence, it follows that throughout her existence Elizabeth must fall under infinitely many complete individual concepts.

This result gives pause. Most interpreters would agree that, for Leibniz, every substance must fall under the *same* complete concept throughout its existence. If the present approach conflicts with such a basic and central aspect of Leibniz's views about concepts, it's unclear why we should prefer it to other, equally unLeibnizian solutions – for example, denying that containment relations are eternal and unchanging.

Let me address this last point first. In § 1, I suggested that, if concept-containment relations reflect God's dispositions to think in certain ways, they cannot be sensibly said to change over time. I surmise that, at this point of our discussion, such worry may be dismissed as indecisive, for if there are temporary truths (as Leibniz believed) and God has knowledge of them (as his omniscience requires), there is *in any case* a problem of reconciling the temporariness of the former with the timeless nature of the latter. Let that be granted. I think we are now in a position to see that allowing concepts to change their ingredients would not advance matters in the least. Suppose that QUEEN is presently contained in Elizabeth's complete individual concept C, but was not contained in it 70 years ago. It seems clear that 70 years ago we could have entertained (or, at any rate, constructed) some *other* concept C* containing exactly all the ingredients that Elizabeth's complete individual concept C presently contains, including QUEEN. If C is presently consistent and consistency is an eternal function of a concept's ingredients, C* (which exactly resemble how C presently is) must have been consistent 70 years ago. But if C* was consistent back then, why couldn't we have used *that* concept to prove the truth of 'Elizabeth is queen'? Reflection on this variation of the Problem of Spurious Truths brings us back to square one. The move of allowing concepts to change their ingredients achieves nothing, unless we *also* treat consistency and inconsistency as temporary rather than eternal.

The question remains whether we have good reasons for upholding the traditional view that substances do *not* fall under different complete individual concepts as time passes. I cannot hope to settle that question here, but the textual evidence on this point seems to me to be, at best, inconclusive.

The locus classicus of Leibniz's views on complete individual concepts is the *Discourse on Metaphysics*. Here it is said that "the nature of an individual substance or of a complete being is to have a notion so complete that it is sufficient to contain and to allow us to deduce from it all the predicates of the subject to which this notion is attributed" (AG 41). This statement implies that each individual substance must have *a* complete individual concept, not that each individual substance must eternally fall under the *same* individual concept. It's true, throughout the *Discourse*, and in many other writings, Leibniz always speaks of *the* complete individual concept of a substance – but this might simply mean that every individual substance has at most one complete individual concept *at each moment of its existence* (something which is perfectly compatible with the view we are exploring), not that each substance has at most one complete individual concept *throughout its existence* (which is what the present view must deny).[28]

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28 On one occasion, Leibniz says that Peter's salvation is contained in his 'eternal possible notion' (AG 32). But this remark, too, does not settle the question whether Peter falls under different complete individual concepts at different moments of his existence. In speaking of Peter's 'eternal' possible notion, Leibniz could be referring to a concept that describes Peter's life *sub specie aeternitatis* and that Peter falls under throughout his existence. On the view we are

Leibniz's exchange with Arnauld contains a famous passage which might be thought to make trouble for the view that substances can switch concepts over time:

> There must necessarily be an [a priori] reason allowing us truly to say that we endure, that is to say that I, who was in Paris, am now in Germany. [...] Now, it is not possible to find any reason but the fact that both my attributes in the preceding time and state and my attributes in the succeeding time and state are predicates of the same subject—they are in the same subject. Now, what is it to say that the predicate is in the subject, except that the notion of the predicate is in some way included in the notion of the subject? And since, once I began existing, it was possible truly to say of me that this or that would happen to me, it must be admitted that these predicates were laws included in the subject or in my complete notion, which constitutes what is called I, which is the foundation of the connection of all my different states and which God has known perfectly from all eternity. (AG 73)

On one reading of it, this passage says that Leibniz's diachronic identity (i.e. the identity of the person who was in Paris with the person who is in Germany) requires the diachronic identity of its complete concepts (i.e. the identity of the concept LEIBNIZ-IN-PARIS with the concept LEIBNIZ-IN-GERMANY). But this is not the only possible reading, nor the most plausible. On an alternative reading, the a priori reason allowing us to say that Leibniz endures is that, when he is in Paris, his concept contains 'will be in Germany' (i.e. an attribute of his succeeding state) and, when he is in Germany, his concept contains 'was in Paris' (i.e. an attribute of the preceding state). Leibniz's concept in Paris and Leibniz's concept in Germany need *not* be one and the same. The alternative reading is more plausible because it does not commit a nominalist like Leibniz to the odd view that the endurance of *substances* is grounded in the endurance of *concepts*. Leibniz's official doctrine on this matter was rather different: a substance endures in virtue on there being a unique *law of the series* governing its changes, where a substance's law of the series corresponds, roughly, to its essence or entelechy – not to something as ideal as a concept.[29]

In effect, what Leibniz says about complete individual concepts is more than just *compatible* with their temporariness. Even setting aside the arguments I offered in the last section for thinking that Elizabeth's concept must be temporarily consistent if (A) is to be temporarily true, some of Leibniz's remarks seem to imply this result directly. In *Primary Truths*, we are told that 'the complete or perfect notion of an individual substance contains all of its predicates, past, present, and future' (AG 32). Note that Elizabeth's predicates presently include 'being queen', while 70 years ago they included 'not being queen'. How could a *single* concept contain *both* the predicate 'being queen' *and* the predicate 'not being queen'? Leibniz never says that the complete individual concepts of existing substances contain contradictions.[30] Yet he thinks that substances are subject to change and that change requires contradictory predicates to be true of the same substance (A6.4.556; A6.4.569; A6.4.629; A6.4.869). Given that that concept-containment itself *cannot* be relativized to times (§ 2.3), I find it hard to see how Leibniz could possibly avoid the conclusion that Elizabeth's complete individual concept in 2017 is distinct from Elizabeth's complete individual concept in 1945. Not only is this *not* a distinction without a difference (the two concepts have different ingredients); it is a distinction that Leibniz *has* to draw (the ingredients in question are literally incompatible).

I acknowledge that – setting aside the question of its exegetical coherence – there remains something unappealing in the claim that individual substances must fall under different concepts at different times. A one-one mapping between enduring substances and enduring concepts would be

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exploring, this concept would be distinct from any of Peter's complete individual concepts. Alternatively, the expression 'eternal possible notion' could refer to Peter's complete individual concept – in this case, the adjective 'eternal' would merely signal the fact that, for any time t, Peter's complete individual concept at t specifies everything that has happened to Peter before t and will happen to him after t, and not just what happens to him at t.

29 See, for instance, G II 263.

30 The suggestion is briefly considered and discarded by Curley (1982, 321).

more natural. But if this turned out to be the main cost of treating consistency as a temporary feature of concepts, the present approach might well remain the best (if not the only) live option for someone sharing Leibniz's views on truth, time and concept-containment.

6. Conclusion

A tension lies at the heart of Leibniz's theory of truth. If truth *is* concept-containment, it can only be eternal. And yet truth is *not* eternal – propositions can change their truth-value with the passage of time. I have argued that Leibniz could resolve this tension in two steps. First, by properly qualifying the concept-containment doctrine: the truth of a proposition depends not only on the eternal and unchanging containment-relations among concepts, but also on certain concepts being consistent (or inconsistent). Second, by treating consistency as a temporary feature of concepts – with the passage of time, consistent concepts can become inconsistent and vice versa. This solution finds independent (albeit indirect) support in Leibniz's theory of propositions and, unlike more traditional approaches to the Problem of Temporary Truths, it does full justice to his acceptance of 'tensed' propositions. Treating consistency as a temporary feature of concepts, however, puts considerable pressure on Leibniz's views about possibility, concept-containment and complete individual concepts. My discussion of these issues is just a first step in a hard-to-navigate territory, but I hope to have shown that there is no fundamental incoherence between Leibniz's overall commitments and the idea of temporary consistency. Whether this idea really holds the best or only key to solving the Problem of Temporary Truths – and what can be learned from its success or failure – are questions left for future investigation.

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