

## On the Alleged Insignificance of the Primordial Existential Question\*

By

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### Zusammenfassung

Leibniz' Frage „Warum gibt es etwas und nicht vielmehr nichts?“, auch bekannt als die erste Frage der Metaphysik, war oft Gegenstand intensiver philosophischer Kontroversen. Während einige Autoren dahinter ein tief liegendes metaphysisches Rätsel erkennen, bemängeln andere, dass der Idee des Nichts angeblich eine Bedeutung fehlt. In einer Reihe von Artikeln hat Adolf Grünbaum eine empiristische Kritik an Leibniz' erster Frage der Metaphysik vorgebracht, mit dem Ziel, diese Frage als Scheinproblem zu entlarven, das keiner Antwort bedarf. Grünbaums Kritik hat scharfe Debatten in der neueren Forschungsliteratur ausgelöst. In diesem Aufsatz werde ich jeden Schritt von Grünbaums Argumentation prüfen und zeigen, dass sie die Unbegründetheit von Leibniz' Frage nicht belegt. Außerdem werde ich mehrere Strategien zur Verstärkung von Grünbaums Kritik identifizieren und widerlegen. Hierdurch werden verschiedene weitere Fragen geklärt, die mit Leibniz' Frage zusammenhängen, einschließlich des angeblichen Erfordernisses, sich auf umstrittene metaphysische Annahmen und empirische Evidenz zu stützen, welche Leibniz' Frage beantwortet oder auflöst.

### Introduction

In his *Principles of Nature and of Grace Founded on Reason*, Leibniz famously asks “[w]hy is there something rather than nothing?”<sup>1</sup>. This question, also known as the Primordial Existential Question (henceforth PEQ), has been the focus of heated philosophical controversy. Some<sup>2</sup> take PEQ to constitute a

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1 G. W. Leibniz: *Philosophical Writings*, ed. by G. H. R. Parkinson, trans. by M. Morris and G. H. R. Parkinson, London 1973, p. 199.

2 E. g. R. Nozick: *Philosophical Explanations*, Cambridge (MA) 1981, p. 116, D. Parfit: “The Puzzle of Reality: Why Does the Universe Exist?”, in: P. van Inwagen and D. Zimmerman (eds.): *Metaphysics: the Big Questions*, Malden (MA) 1998, pp. 418-427, p. 420, D. Parfit: “Why Anything? Why This? Part 1”, in: *London Review of Books* 20/2 (1998), pp. 24-27,

deep metaphysical puzzle or even the most fundamental question of metaphysics<sup>3</sup>. Others, instead, call the logico-semantic status of PEQ into question. Among those who criticize PEQ, one consolidated line of attack<sup>4</sup> argues that the very idea of nothingness is meaningless. Other authors<sup>5</sup> deny that nothingness is a logical possibility, and still others<sup>6</sup> doubt that it is a conceivable state of affairs.

In a series of articles<sup>7</sup>, Adolf Grünbaum joins the debate and develops an empirically informed critique of PEQ. More specifically, he does not revisit “early positivist indictments of meaningfulness”<sup>8</sup>, but contends that it is simply “wrong-headed [...] to ask for the external cause or reason of the bare existence and persistence of the world”<sup>9</sup>. In particular, he maintains that PEQ poses a “pseudo-problem”, in the sense that it would present a “non-issue” which “does not require explanation”<sup>10</sup>. In attempting to show that PEQ poses a “pseudo-problem”, Grünbaum<sup>11</sup> employs the following three-stage strategy. Firstly, he argues that such a question – if not properly reformulated (see PEQ\* below) – falls prey to trivialization<sup>12</sup>. Secondly, he identifies and criticizes some purported

p. 24, R. Swinburne: *The Existence of God*, Oxford 1991, p. 283, and R. Swinburne: *Is There a God?* Oxford – New York 1996, p. 48.

- 3 See e. g. M. Heidegger: *An Introduction to Metaphysics*, transl. by R. Manheim, London 1953 (reprint 1959), p. 1.
- 4 E. g. H. Bergson: *The Two Sources of Morality and Religion*, trans. by R. A. Audra and C. Brereton, London 1935 (reprint 1974), p. 240, and R. Carnap: “The Elimination of Metaphysics through Logical Analysis of Language”, in: A. J. Ayer (ed.): *Logical Positivism*, Glencoe, Ill. 1931 (reprint 1959), pp. 60-81, p. 69.
- 5 E. g. R. M. Gale: *Negation and Non-Being* (= *American Philosophical Quarterly Monograph Series* 10), Oxford 1976, p. 116, and D. Goldstick: “Why Is There Something Rather Than Nothing?”, in: *Philosophy and Phenomenological Research* 40/2 (1979), pp. 265-271.
- 6 E. g. B. Rundle: *Why There Is Something Rather Than Nothing*, Oxford 2004, pp. 112-113.
- 7 A. Grünbaum: “The Pseudo-Problem of Creation in Physical Cosmology”, in: *Philosophy of Science* 56/3 (1989), pp. 373-394, A. Grünbaum: “Some Comments on William Craig’s ‘Creation and Big Bang Cosmology’”, in: *Philosophia Naturalis* 31/2 (1994), pp. 225-236, A. Grünbaum: “Theological Misinterpretations of Current Physical Cosmology”, in: *Philo* 1 (1998), pp. 15-34 (revised version of A. Grünbaum: “Theological Misinterpretations of Current Physical Cosmology”, in: *Foundations of Physics* 26/4 (1996), pp. 523-543), A. Grünbaum: “A New Critique of Theological Interpretations of Physical Cosmology”, in: *British Journal for the Philosophy of Science* 51 (2000), pp. 1-43, A. Grünbaum: “The Poverty of Theistic Cosmology”, in: *British Journal for the Philosophy of Science* 55 (2004), pp. 561-614, and A. Grünbaum: “Why is There a World at All, Rather Than Just Nothing?”, in: *Ontology Studies* 9 (2009), pp. 7-19.
- 8 Grünbaum: “A New Critique of Theological Interpretations of Physical Cosmology” (see note 7), p. 19.
- 9 Grünbaum: “Theological Misinterpretations of Current Physical Cosmology” (1996 (see note 7)), p. 532.
- 10 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 564; see also Grünbaum: “Theological Misinterpretations of Current Physical Cosmology” (1998 (see note 7)), p. 16, and Grünbaum: “A New Critique of Theological Interpretations of Physical Cosmology” (see note 7), p. 5.
- 11 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), sec. 1.
- 12 Grünbaum does not specify what exactly he means by “trivialization” in his papers. The way he employs this term (see Grünbaum: “A New Critique of Theological Interpretations

presuppositions of PEQ\*. Finally, he tries to prove that PEQ\* *crucially* rests on *at least one* “either ill founded or demonstrably false” assumption and can thus be “aborted as a non-starter” for cosmological and metaphysical speculation<sup>13</sup>.

Grünbaum’s critique of PEQ prompted intense debates in the recent literature<sup>14</sup>. In particular, the 2004 article where Grünbaum expounds his case against PEQ in greatest detail has attracted sustained attention<sup>15</sup>. In this paper, I assess each step of Grünbaum’s reasoning and argue that it fails to demonstrate that PEQ is an ill-founded philosophical question. In doing so, I consider several ways in which Grünbaum’s reasoning may be amended and show that even these amended versions of Grünbaum’s critique of PEQ do not withstand scrutiny.

Before proceeding, two preliminary remarks need to be made concerning the main aims of this article. Firstly, I do not discuss all the evidential and logico-semantic concerns that have been articulated regarding PEQ. In particular, I do not argue in favour of a specific position as to whether PEQ constitutes a “non-starter”, or as to whether answering it is in principle beyond the reach of scientific investigation. Rather, my point is that the prominent line of attack Grünbaum developed against PEQ is vulnerable to severe objections that have not been adequately elucidated in the literature. Secondly, while aimed primarily at Grünbaum’s critique of PEQ, my considerations are intended not just as a response to Grünbaum, but also as a constructive contribution to the ongoing philosophical reflection on PEQ. In this spirit, I shall examine various issues debated in relation to PEQ, including the possibility of providing non-trivial qualifications of PEQ (*Section 1*), the alleged need for the proponents of PEQ to rely on controversial metaphysical presuppositions (*Sections 1* and *2*), and the purported availability of empirical evidence which enables us to answer or dissolve some refined versions of PEQ (*Section 2*).

of Physical Cosmology” (see note 7), p. 26, and Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 563), however, clearly suggests that he is referring to a question whose answer is straightforwardly determinable in light of one’s background knowledge or available evidence.

13 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), pp. 561-564.

14 See e. g. W. L. Craig: “The Origin and Creation of the Universe: A Reply to Adolf Grünbaum”, in: *British Journal for the Philosophy of Science* 43 (1992), pp. 233-240, W. L. Craig: “Prof. Grünbaum on Creation”, in: *Erkenntnis* 40 (1994), pp. 325-341, and W. L. Craig: “Prof. Grünbaum on the ‘Normalcy of Nothingness’ in the Leibnizian and *Kalam* Cosmological Arguments”, in: *British Journal for the Philosophy of Science* 52 (2001), pp. 371-386, P. Quinn: “Creation, Conservation and the Big Bang”, in: J. Earman, et al.: *Philosophical Problems of the Internal and External Worlds: Essays on the Philosophy of Adolf Grünbaum*, Pittsburgh 1993, pp. 589-612, and Swinburne: *Is There a God?* (see note 2) and R. Swinburne: “Reply to Grünbaum”, in: *British Journal for the Philosophy of Science* 51 (2000), pp. 481-485, for a series of responses.

15 See e. g. R. Swinburne: “Second Reply to Grünbaum”, in: *British Journal for the Philosophy of Science* 56 (2005), pp. 919-925, G. F. R. Ellis: “Issues in the Philosophy of Cosmology”, in: J. Butterfield and J. Earman (eds.): *Philosophy of Physics. Part A*, Amsterdam 2007, pp. 1183-1286, and S. Maitzen: “Stop Asking Why There’s Anything”, in: *Erkenntnis* 77 (2012), pp. 51-63.

### 1. A Refinement of PEQ

As the starting point of his critique, Grünbaum contends that PEQ “must” be reformulated as the question “why is there something *contingent* at all, rather than just nothing *contingent*?”<sup>16</sup>. Let us call this new question PEQ\*, so as to distinguish it from PEQ. In advocating this modification, Grünbaum focuses on Leibniz’s<sup>17</sup> early formulation of PEQ and puts forward the following argument:

Premise 1: Leibniz believes that God is a necessary being.

Premise 2: “There can be no question” as to why a necessary being exists, since – being necessary – such a being “could not possibly fail to exist”.

Conclusion (1): If the scope of the terms “something” and “nothing” in PEQ was not restricted to entities whose existence is logically contingent, PEQ would fall prey to trivialization.

Conclusion (2): In order to preclude a trivialization, PEQ “must” be qualified as PEQ\*.

This reasoning might seem *prima facie* plausible, yet is vulnerable to at least two criticisms. Firstly, it apparently overlooks that Leibniz<sup>18</sup> does not pose PEQ under the presupposition that God necessarily exists, but rather asks PEQ in order to substantiate such a conviction<sup>19</sup>. And secondly, Grünbaum fails to cogently support his claim that PEQ “must” be refined as PEQ\* in order to avoid trivialization. Let us examine these two issues in turn.

Consider the first criticism. In his works, Leibniz repeatedly maintains<sup>20</sup> that a necessary being (God) exists. However, Grünbaum seemingly fails to recognize that Leibniz<sup>21</sup> does not pose PEQ under the presupposition that God necessarily exists, but rather assumes his Principle of Sufficient Reason (see *Section 2* below) and asks PEQ in order to provide a cosmological argument for God’s existence<sup>22</sup>. This remark does not *per se* undermine Grünbaum’s conten-

16 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 563, italics added.

17 “Principles of Nature and of Grace Founded on Reason”, in: *Leibniz: Philosophical Writings* (see note 1), pp. 195-204.

18 *Ibid.*, p. 199.

19 See Craig: “Prof. Grünbaum on the ‘Normalcy of Nothingness’ in the Leibnizian and *Kalam* Cosmological Arguments” (see note 14), pp. 377-378.

20 E. g. *G. W. Leibniz: Selections*, ed. by P. P. Wiener, New York 1951, “Monadology” (pp. 533-552), §§ 38, 40 and 45, *G. W. Leibniz: New Essays Concerning Human Understanding*, transl. and ed. by P. Remnant and J. Bennett, Cambridge 1993, book IV, chap. 10 (pp. 434-443), *G. W. Leibniz: De Summa Rerum. Metaphysical Papers, 1675-1676 (= The Yale Leibniz)*, ed. and trans. by G. H. R. Parkinson, New Haven – London 1992, “That a Most Perfect Being Exists” (pp. 100-101), and “A Chain of Wonderful Demonstrations About the Universe” (pp. 106-110).

21 *Leibniz: Philosophical Writings* (see note 1), p. 199.

22 In Leibniz’s words (*ibid.*, p. 199): “this sufficient reason of the existence of the universe [...] must be outside this series of contingent things, and must lie in [...] a necessary being,

tion that PEQ must be qualified as PEQ\* on pain of trivialization, as there might be independent reasons that support this contention. Even so, the point remains that the reconstruction of Leibniz's reasoning<sup>23</sup> from which Grünbaum develops his critique of PEQ is both exegetically and logically inaccurate.

As to my second objection, two issues are to be distinguished. On the one hand, one may wonder whether *Leibniz* would deem PEQ to be trivial and would reformulate it as PEQ\*. On the other hand, there is the question whether, *in general*, PEQ must be qualified as PEQ\* in order to preclude a trivialization. Let us suppose, for the sake of argument, that Leibniz would ultimately regard PEQ as trivial and would refine it as PEQ\*<sup>24</sup>. This, by itself, falls short of licensing Grünbaum's assertion that PEQ must be reformulated as PEQ\* to avoid trivialization. So let us inspect on what grounds Grünbaum attempts to substantiate this assertion.

In his 2004 article, Grünbaum reaches such a conclusion on the sole basis of his claim that "it would clearly trivialize Leibniz's cardinal PEQ, if it were asked concerning [...] entities whose existence is logically or metaphysically necessary"<sup>25</sup>. In doing that, he implicitly presupposes that PEQ\* is the only – or at least, the only plausible – non-trivial refinement of PEQ. Now, one may agree that PEQ could be given a straightforward answer if it was asked concerning entities that are known to exist necessarily, as in this case no contrasting state of

bearing the reason of its existence within itself". For a critical discussion of the cosmological argument that Leibniz develops in answering his PEQ, see R. M. Gale: *On the Nature and Existence of God*, Cambridge 1991, chap. 7, D. Hume: *Dialogues Concerning Natural Religion*, ed. and with comm. by N. Pike, Indianapolis 1980, I. Kant: *Critique of Pure Reason*, transl. by P. Guyer and A. Wood, Cambridge 1998, J. L. Mackie: *The Miracle of Theism*, Oxford 1982, chap. 5, A. Plantinga: *God and Other Minds*, Ithaca 1967, chap. 1, W. Rowe: *The Cosmological Argument*. Princeton 1975, and W. L. Craig and Q. Smith: *Theism, Atheism, and Big Bang Cosmology*, Oxford 1993.

23 *Leibniz: Philosophical Writings* (see note 1), p. 199.

24 I am not concerned here with settling the merits of this supposition. Still, I deem the following remarks to be of exegetical interest. In developing the reasoning *via* PEQ that he formulates in his *Principles*, Leibniz (*Leibniz: Philosophical Writings* (see note 1), p. 199) does not presuppose the existence of a necessary being, so PEQ does not appear to be asked trivially. However, in some of his works (e. g. *Leibniz: New Essays Concerning Human Understanding* (see note 20), book IV, chap. 10, *Leibniz: De Summa Rerum* (see note 20), pp. 100-101, and pp. 106-110), Leibniz does reach the conclusion that a necessary being (God) exists independently of the reasoning *via* PEQ that he elaborates in his *Principles* (*Leibniz: Philosophical Writings* (see note 1), p. 199). On this basis, one may argue that Leibniz would presumably consider PEQ tantamount to asking trivially why there is something rather than a logically impossible state of nothingness. This, by itself, does not imply that Leibniz would qualify PEQ as PEQ\* rather than as some other question. Yet, there are some reasons to think that he would endorse such a reformulation. For instance, in his writings Leibniz frequently emphasizes the contrast between God's necessary existence and the contingency of the world (see N. Rescher: *On Leibniz*, Pittsburgh 2003, chap. 2). Furthermore, he occasionally addresses (e. g. in "On the Ultimate Origination of Things", in: *Leibniz: Philosophical Writings* (see note 1), pp. 136-144, p. 136) questions that look remarkably similar to PEQ\*.

25 Grünbaum: "The Poverty of Theistic Cosmology" (see note 7), p. 563.

affairs in which those entities fail to exist could obtain. Furthermore, reformulating PEQ as PEQ\* suffices to avoid the trivialization that would derive from posing PEQ with regard to logically or metaphysically necessary entities. Still, Grünbaum's implicit presupposition that PEQ\* is the only plausible non-trivial refinement of PEQ does not withstand scrutiny, as there is more than one plausible way in which PEQ can be non-trivially qualified.

By way of illustration, consider the question "why are there some concrete existents at all, rather than no concrete existents?", with the notion of concreteness being characterized as conceptually distinct from the notion of contingency<sup>26</sup>. Showing that this refined version of PEQ falls prey to trivialization would require one to demonstrate either that some concrete existents exist necessarily, or that it is necessarily the case that at least some concrete existent exists. To date, neither of these claims has been given compelling support<sup>27</sup>. Hence, it seems that the proposed question can be provisionally regarded as a plausible non-trivial refinement of PEQ in the sense of "trivial" specified above (footnote 12)<sup>28</sup>.

A defender of Grünbaum might protest that this refined version of PEQ would not prompt the feeling of puzzlement that many associate with PEQ\* and would constitute a less interesting starting point for cosmological or metaphysical speculation. Still, even this would not preclude it from constituting a plausible non-trivial refinement of PEQ. To put it differently, there appears to be no need to focus one's attention on contingent existents when posing or refining PEQ, if one is not presupposing the existence of a necessary being. In particular, Grünbaum's proposed reformulation of PEQ as PEQ\* seems to constitute just one among several plausible non-trivial refinements of PEQ. In this respect, Grünbaum fails to specify why exactly precluding a trivialization would require one to reformulate PEQ as PEQ\* rather than as some other question. This flaw, in turn, calls into question the implications that his subsequent critique of PEQ\* may be taken to have for the more general PEQ.

- 26 Various criteria – ranging from spatio-temporal extendedness to causal efficacy – have been proposed to explicate the abstract / concrete distinction. On most of these accounts, the notion of concreteness is defined in a way which does not make the set of concrete objects and the set of contingent objects co-extensional (see e. g. J. Burgess and G. Rosen: *A Subject with No Object*, Oxford 1997, part IA).
- 27 See e. g. T. Baldwin: "There might be nothing", in: *Analysis* 56/4 (1996), pp. 231-238, E. J. Lowe: "Why is There Anything at All?", in: *Aristotelian Society. Supplementary Volume* 70 (1996), pp. 111-120, and E. J. Lowe: *The Possibility of Metaphysics. Substance, Identity and Time*, Oxford 1998, G. Rodriguez-Pereyra: "There Might Be Nothing: The Subtraction Argument Improved", in: *Analysis* 57 (1997), pp. 159-166, and G. Rodriguez-Pereyra: "Lowe's Argument Against Nihilism", in: *Analysis* 60 (2000), pp. 335-340, for a debate).
- 28 Other *prima facie* plausible non-trivial refinements of PEQ could be provided along similar lines. The idea would be to pose PEQ concerning some class of existents such that: (i) none of the existents belonging to this class is known to exist necessarily; and (ii) it is not known that it is necessarily the case that some of the existents in this class exist. The example in the main text suffices for the purpose of my critical evaluation.

## 2. Presuppositions of PEQ\*

Let us suppose, for the sake of argument, that Leibniz's PEQ must be reformulated as PEQ\* in order to preclude a trivialization. According to Grünbaum, PEQ\* *crucially* rests on some specific presuppositions, in the sense that “[i]f one or more of these presuppositions is either ill founded or demonstrably false”, then PEQ\* “is aborted as a non-starter”<sup>29</sup>. In Grünbaum's view, these presuppositions are: (1) the “logical robustness of the Null Possibility”, i. e. the supposition that “the notion of a state of affairs in which absolutely nothing contingent exists is both [meaningful] and free from contradiction”<sup>30</sup>; and (2) the “spontaneity of nothingness” (SoN), i. e. the presumption that “*de jure*, there *should* be nothing contingent at all, and indeed there *would* be nothing contingent in the absence of an overriding external cause (or reason)”<sup>31</sup>.

In his 2004 paper, Grünbaum calls both presuppositions into question and dismisses the Principle of Sufficient Reason (PSR) to which Leibniz<sup>32</sup> appeals right before posing PEQ<sup>33</sup>. In dismissing this principle as untenable, Grünbaum<sup>34</sup> correctly notes that Leibniz's justification of his answer to PEQ turns on the cogency of his PSR. At the same time, he wisely avoids characterizing PSR as a fundamental presupposition of either PEQ or PEQ\*. For clearly, one may concede that the occurrence of some events cannot – even in principle – be explained, and still argue that those questions can be given an intelligible and logically consistent answer<sup>35</sup>.

Since the cogency of Grünbaum's attempt to undermine PEQ\* as a “non-starter” does not rest on the validity of Leibniz's PSR, in what follows I do not examine his appraisal of that principle. Rather, I specifically focus on the criticisms that Grünbaum formulates regarding the logical robustness of the Null Possibility (section 2.1) and the spontaneity of nothingness (section 2.2). As I argue below, the plausibility of his critique of PEQ\* depends on whether he succeeds in showing that *at least one* of these assumptions *does* constitute a crucial presupposition of PEQ\* and really *is* demonstrably untenable.

29 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 564.

30 Ibid., p. 564.

31 Ibid., p. 561; see also Grünbaum: “A New Critique of Theological Interpretations of Physical Cosmology” (see note 7), p. 5.

32 *Leibniz: Philosophical Writings* (see note 1), p. 199.

33 According to Leibniz's PSR, “nothing happens without its being possible for one who has enough knowledge of things to give a reason sufficient to determine why it is thus and not otherwise”. For another formulation of PSR, see *Leibniz: Selections* (see note 20), “Monadology” §32. For a debate over the tenability of various versions of PSR, see Craig and Smith: *Theism, Atheism, and Big Bang Cosmology* (see note 22), pp. 178-191, Q. Smith: “A Defense of a Principle of Sufficient Reason”, in: *Metaphilosophy* 26 (1995), pp. 97-106, P. Van Inwagen: *Metaphysics*, London 1993, pp. 104-107, and P. Van Inwagen: “Why is There Anything at All?”, in: *Proceedings of the Aristotelian Society* 70 (1996), pp. 95-110, p. 98.

34 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 574.

35 See Swinburne: “Second Reply to Grünbaum” (see note 15), p. 921.

### 2.1. On the Logical Robustness of the Null Possibility

Grünbaum<sup>36</sup> makes some cogent remarks concerning the logical robustness of the Null Possibility. In particular, he rightly maintains that enumerating a finite number of entities, each of which – taken individually – contingently exists, would be insufficient to demonstrate that all those entities – taken collectively – might have failed to exist<sup>37</sup>. At the same time, there are two major reasons to dispute his assertion that “in the absence of an assurance that the Null Possibility is logically authentic”, PEQ\* may be “aborted as a non-starter *for that reason alone*”<sup>38</sup>. In the first place, it appears that Grünbaum presupposes – rather than shows – that legitimately posing PEQ\* requires one to previously prove that the Null Possibility is logically authentic. In the second place, his assumption that the proponents of PEQ\* must demonstrate that the Null Possibility is logically authentic seems excessively restrictive. I shall explicate these two criticisms in turn in points *i* and *ii* below. In doing so, I follow Grünbaum<sup>39</sup> in using the expressions “logically robust”, “logically authentic” and “genuinely possible” interchangeably to refer to a logically possible state of affairs.

*i)* According to my first criticism, Grünbaum *presupposes* – rather than *shows* – that legitimately posing PEQ\* requires one to previously prove that the Null Possibility is logically authentic. To render this point more vivid, suppose that we lacked the information to ascertain whether a state of affairs in which nothing contingent exists is genuinely possible. To our knowledge, it might be the case that PEQ\* merely asks why an impossible state of affairs is not actualized. Yet, for all we know, the Null Possibility may well be logically robust. In this context, one may question whether we can claim it to be a virtue of an explanatory framework (e. g. think of some theistic cosmology) that it provides an answer to PEQ\*. Nonetheless, it is hard to see why the mere fact that we are unable to prove that the Null Possibility is logically authentic would prevent us from legitimately posing PEQ\*. In this respect, Grünbaum does insist that the logical robustness of the Null Possibility “needs to be demonstrated” by the proponents of PEQ\*<sup>40</sup>. Even so, he fails to explain why exactly legitimately asking PEQ\* would require one to show beforehand that the Null Possibility is logically authentic.

To better appreciate why this shortcoming weakens Grünbaum’s critique of PEQ\*, it is helpful to distinguish two ways in which the logical robustness of the Null Possibility could be called into question. On the one hand, one may attempt to establish a priori that we cannot specify a condition that a given state of affairs would have to meet in order to instantiate the Null Possibility, on the

36 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), pp. 564-568.

37 See W. Rowe: “The Fallacy of Composition”, in: *Mind* 71 (1962), pp. 87-92, and B. Russell and F. Copleston: “Debate on the Existence of God”, in: J. Hick (ed.): *The Existence of God*, New York 1964, pp. 167-191, on the fallacy of composition).

38 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 568, italics added.

39 Ibid.

40 Ibid., p. 561.

alleged ground that the notion of Null Possibility is *meaningless*. On the other hand, one may try to demonstrate that the concept of Null Possibility is *empty*, i. e. that although we can specify which condition a given state of affairs would have to satisfy to actualize the Null Possibility, no state of affairs could possibly meet such a condition. Let us examine how Grünbaum's critique fares in these two respects.

In the former respect, the characterization of the Null Possibility as "the notion of a state of affairs in which absolutely nothing contingent exists" does seem to determine a meaningful concept, in that it specifies a condition that a given state of affairs would have to satisfy in order to instantiate the Null Possibility. This being the situation, it would seem up to Grünbaum to provide us with some reason to think that the notion of Null Possibility is meaningless. Unfortunately, Grünbaum simply assumes<sup>41</sup> that the onus of demonstrating that the Null Possibility is logically robust rests on the proponents of PEQ\*, and does not even attempt to show that the concept of Null Possibility is meaningless.

Similar remarks apply to the emptiness issue. In his articles, Grünbaum does not offer reasons to think that the concept of Null Possibility is empty. A defender of Grünbaum might contend that the concept of Null Possibility applies to an entire universe and that if this universe containing contingent existents is all there is, then no state of affairs can in fact instantiate the Null Possibility. Nonetheless, this conditional statement does not license the conclusion that no state of affairs devoid of contingent existents could have possibly been actualized. In this respect, it would be of little import for the defender of Grünbaum to claim that unless we proved that the concept of Null Possibility is not empty, we could not legitimately use it in posing PEQ\*. For the mere fact that we are unable to exclude that a concept is empty does not *per se* prevent us from legitimately employing it in our investigations.

To be sure, if it was established that the concept of Null Possibility is empty, then it seems that PEQ\* could be given a straightforward answer. After all, it is true that we often benefit from employing empty concepts in our mathematical and metaphysical enquiries (e. g. think of proofs by contradiction in mathematics). Still, if the concept of Null Possibility was shown to be empty, then posing PEQ\* would amount to asking trivially why there is a world containing contingent existents rather than a logically impossible state of affairs. This, however, falls short of implying that the proponents of PEQ\* have the onus of proving that the Null Possibility is logically robust. In this respect, Grünbaum's reiterated attack<sup>42</sup> against Parfit<sup>43</sup> and Swinburne<sup>44</sup> appears to be misguided. For it is highly doubtful that these authors – by merely listing some entities which

41 Ibid., p. 568.

42 Ibid., p. 564, and A. Grünbaum: "Rejoinder to Richard Swinburne's 'Second Reply to Grünbaum'", in: *British Journal for the Philosophy of Science* 56 (2005), pp. 927-938, p. 928.

43 Parfit: "Why Anything? Why This? Part 1" (see note 2), p. 24.

44 Swinburne: *Is There a God?* (see note 2), p. 48.

contingently exist – meant to prove that the Null Possibility is a logically possible state of affairs. In the words of Swinburne: “I was not [...] adducing a fallacious inference from it being logically possible for each actual contingent object of our world not to exist to it being logically possible that none of them exist [...] I was simply beginning to spell out what it would be like for [such a] world to exist”<sup>45</sup>.

ii) According to my second criticism, Grünbaum’s assumption<sup>46</sup> that the proponents of PEQ\* must demonstrate that the Null Possibility is logically authentic is excessively *restrictive*. To see this, suppose that we had a specific question  $Q$ , and that we were unable to prove that  $Q$  can be given a logically consistent answer. There are at least two respects in which conditioning our legitimacy in posing  $Q$  on our showing beforehand that  $Q$  has a logically consistent answer can be criticized. Firstly, our being unable to demonstrate that  $Q$  may receive a logically consistent answer falls short of implying that this question cannot be intelligibly posed. Consider, for example, any of the open research questions of ZFC set theory. Since we do not know whether ZFC is logically consistent, we do not know if any of these questions can be answered in a logically consistent way. Yet, it would be implausible to deny that we can intelligibly ask them.

Secondly, conditioning our legitimacy in posing question  $Q$  on our proving that  $Q$  can be given a logically consistent answer would impose a detrimentally strict constraint on our enquiries<sup>47</sup>. For clearly, we would be prevented from addressing many meaningful issues, if we were precluded from posing a question for the sole reason that we are unable to show that it has a logically consistent answer. This remark applies also to several questions that, being asked without knowledge of whether they have a logically consistent answer, are later shown to have no such answer. By way of illustration, think of Hilbert’s Program for the foundation of classical mathematics. Even though Hilbert’s project was eventually shown to be logically impossible, pursuing it was conducive to major developments in proof theory. Moreover, the mere fact that Hilbert’s aims were proved to be unachievable by no means undermines the significance of the question he originally posed.

To recapitulate, an advocate of Grünbaum may well emphasize how difficult it would be for the proponents of PEQ\* to prove that the Null Possibility is logically robust. Nonetheless, Grünbaum’s assumption that the proponents of PEQ\* must provide such a proof apparently overlooks that even if they were unable to do so, their failure could be due to reasons (such as their epistemic limitations) which have no bearing on the issue whether the Null Possibility is logically authentic.

45 Swinburne: “Second Reply to Grünbaum” (see note 15), p. 919.

46 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 568.

47 Matthew Parker raised a similar concern in a lecture on the mystery of existence given at the London School of Economics in 2006. I am grateful to him for allowing me to cite this unpublished material.

## 2.2. On the Spontaneity of Nothingness

Grünbaum defines the Spontaneity of Nothingness (SoN) as the presumption that “*de jure*, there *should* be nothing contingent at all, and indeed there *would* be nothing contingent in the absence of an overriding external cause (or reason)”<sup>48</sup>. In his view, SoN “asserts the ontological spontaneity of the Null World”, i. e. “a supposed world in which there is nothing contingent”<sup>49</sup>. In criticizing some proponents of PEQ\*, Grünbaum argues<sup>50</sup> that various authors (e. g. Aquinas<sup>51</sup>) fail to vindicate their acceptance of SoN. Furthermore, he observes<sup>52</sup> that the alleged ontological and conceptual simplicity of the Null World does not *per se* license SoN. For even if the Null World was the ontologically and conceptually simplest possible world<sup>53</sup>, whether such a world (in the absence of an overriding external cause or reason) would *ipso facto* be actualized is a separate issue<sup>54</sup>.

At the same time, the remarks that Grünbaum puts forward in relation to SoN seem themselves vulnerable to two major objections. In the first place, Grünbaum does not cogently support his assertion<sup>55</sup> that SoN constitutes a “cardinal presupposition” of PEQ\*. In the second place, the reasoning by means of which he purports to show that SoN is untenable appears to be severely flawed. In points *i* and *ii* below, I explicate these two objections in turn and rebut various claims that a defender of Grünbaum may put forward in support of his critique.

*i*) In his attempt to dismiss PEQ\* as a “non-starter”, Grünbaum maintains that SoN constitutes a “cardinal presupposition” of PEQ\* and that such a question is “undermined [...] by the failure of a priori defences of SoN, and by the unavailability of any empirical support for it”<sup>56</sup>. However, it appears that one may legitimately pose PEQ\* without relying on such a demanding assumption. To make this point more vivid, I propose the following example. Let us call a world containing contingent existents C-world. Suppose that SoN failed to

48 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 561; see also Grünbaum: “A New Critique of Theological Interpretations of Physical Cosmology” (see note 7), p. 5.

49 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), pp. 564 and 569.

50 Ibid., p. 585, and Grünbaum: “Rejoinder to Richard Swinburne’s ‘Second Reply to Grünbaum’” (see note 42), p. 929.

51 Thomas Aquinas: *Summa Theologica*, cura et studio P. Caramello, cum textu ex recensione Leonina, Turin 1948, Ia, 50, art.2, ad3.

52 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 573.

53 For a related debate, see E. Carlson and E. J. Olsson: “The Presumption of Nothingness”, in: *Ratio* 14/3 (2001), pp. 203-221, pp. 205-206, Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), pp. 572-573, J. Leslie: “Efforts to Explain All Existence”, in: *Mind* 87 (1978), pp. 181-194, p. 187, and J. Leslie: *Universes*, London – New York 1989, p. 98, Parfit: “The Puzzle of Reality: Why Does the Universe Exist?” (see note 2), pp. 420-421, and D. Parfit: “Why Anything? Why This? Part 2”, in: *London Review of Books* 20/3 (1998), pp. 22-25, p. 25.

54 See Carlson and Olsson: “The Presumption of Nothingness” (see note 53), p. 216, and Van Inwagen: “Why is There Anything at All?” (see note 33), p. 106.

55 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 571 and p. 597.

56 Ibid., p. 571.

obtain, with the probability  $p_N$  of the Null World existing (in the absence of an overriding external cause or reason) being somewhat lower than one. Assume further that, in spite of SoN's failure,  $p_N$  was higher than the probability  $p_C$  of a C-world existing (in the absence of an overriding external cause or reason). Let us call this latter presupposition SoN<sup>^</sup><sup>57</sup>.

SoN<sup>^</sup> is less demanding than SoN. For while SoN appears to assume that  $p_N$  equals or is very close to one, SoN<sup>^</sup> merely requires that this probability is higher than the probability  $p_C$  that a world containing contingent existents would exist (in the absence of an overriding external cause or reason). Now, if SoN constituted a "cardinal presupposition" of PEQ\*, then the fact that SoN fails to hold would *per se* license the conclusion that PEQ\* is a "non-starter"<sup>58</sup>. However, SoN<sup>^</sup> does appear to suffice to motivate PEQ\*. Moreover, Grünbaum nowhere specifies why exactly PEQ\* would crucially rest on SoN rather than on some other *less demanding* assumption such as SoN<sup>^</sup>. This being the situation, his assertion that SoN constitutes a "cardinal presupposition" of PEQ\* seems excessive and remains unsupported<sup>59</sup>.

At this point, an advocate of Grünbaum may concede that SoN does not constitute a cardinal presupposition of PEQ\*, and yet object that SoN<sup>^</sup> is as dubious as SoN. In particular, she may contend that Grünbaum's critique of PEQ\* would not be weakened if he moved to the disjunctive position that PEQ\* rests on either SoN or an untenable SoN<sup>^</sup>. To such a rebuttal, my rejoinder is two-fold. To begin with, it remains an open question whether SoN<sup>^</sup> really is untenable. Indeed, if the reasoning I present in point *ii* below is correct, Grünbaum fails to provide reasons which undermine the tenability of SoN and of the less demanding SoN<sup>^</sup>. Secondly, a proponent of PEQ\* may argue that we could legitimately ask PEQ\* even without having to assume SoN<sup>^</sup>. For instance, one may note that, by itself, the fact that some event X is less likely to occur than another event Y does not prevent us from intelligibly asking why Y rather than X occurs on a given occasion<sup>60</sup>. On this basis, she may assert that we could legitimately pose PEQ\* even if the probability  $p_N$  of the Null World existing (in the absence of an overriding external cause or reason) was somewhat lower than the probability  $p_C$  of a C-world existing (in the absence of an overriding external cause or reason).

The defender of Grünbaum might further contend that if we knew that probability  $p_N$  was considerably lower than probability  $p_C$ , then we could not plausibly take PEQ\* to pose a meaningful question. The idea would be that our

57 In providing this example, I assume that an 'event' such as the Null World coming into existence can be meaningfully assigned a probability value. This assumption may be called into question. Even so, I take my point that one can legitimately ask PEQ\* without relying on SoN to stand independently of the merits of my example.

58 Grünbaum: "The Poverty of Theistic Cosmology" (see note 7), p. 564.

59 I am not concerned here with ascertaining why Grünbaum insists in claiming that SoN is a crucial presupposition of PEQ\*. Presumably, he is induced to make this erroneous claim by the fact that many of the authors he criticizes focus on the theistic notion of *creatio ex nihilo* and seem to share a commitment to SoN.

60 Matthew Parker also made this point in the lecture mentioned in note 47.

legitimacy in asking PEQ\* is conditional on the probability of the Null World existing (in the absence of an overriding external cause or reason) not being much lower than the probability of a C-world existing (in the absence of an overriding external cause or reason). Yet, one may endorse these contentions and still hold that we can legitimately pose PEQ\* without having to assume SoN<sup>^</sup>. Moreover, as I argue in point *ii* below, Grünbaum does not provide convincing reasons to think that (in the absence of an overriding external cause or reason) the existence of a world devoid of contingent existents was considerably less likely than the existence of a world containing contingent existents.

*ii*) Let us suppose, for the sake of argument, that SoN constituted a “cardinal presupposition” of PEQ\*. According to Grünbaum, “as a lesson from the history of science”, SoN “stands or falls on empirical but not on a priori grounds”<sup>61</sup> and is “altogether ill founded empirically”<sup>62</sup>. In what follows, I examine these two assertions in turn and argue that Grünbaum’s considerations fail to undermine the tenability of SoN.

Concerning the former claim, it would be of little import to point out that even if no tenable a priori justification of SoN has been formulated so far, it might be possible to provide an a priori justification for it. For, as Grünbaum points out, his inductive appeal to the history of science is “fallible”, and he would be “open to correction, if someone were unexpectedly to come up with a cogent a priori argument for SoN”<sup>63</sup>. To be sure, Grünbaum<sup>64</sup> examines and rebuts just a limited number of a priori defences of SoN. Still, unless some compelling a priori argument for or against SoN was provided, Grünbaum’s demand<sup>65</sup> for “positive reasons to expect that a priori methods can settle the merits of SoN” appears to be legitimate.

What about the alleged absence of empirical evidence in favour of SoN and the implications that such a lack would have for the tenability of SoN? In his articles, Grünbaum does not offer any evidence showing that SoN is false. In particular, he rests content with reiterating that SoN – having not received so far “any empirical support”<sup>66</sup> – is empirically “baseless”<sup>67</sup> and “ill founded”<sup>68</sup>. Now, let us assume that SoN has never been supported empirically, i. e. that no empirical evidence showing that SoN is (likely to be) true has ever been provided. *Prima facie*, this might seem sufficient to substantiate Grünbaum’s negative verdict on the tenability of SoN. After all – the thought would be – what else could possibly license the claim that SoN is untenable, apart from showing that

61 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 584.

62 Ibid., p. 586.

63 Ibid., p. 589.

64 Ibid., sec. 1.

65 Ibid., p. 590.

66 Grünbaum: “A New Critique of Theological Interpretations of Physical Cosmology” (see note 7), p. 7, Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 571 and p. 588.

67 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), pp. 569 and 593-594.

68 Ibid., pp. 562 and 586.

SoN has not received any empirical support? A proponent of SoN, however, may advance various arguments to doubt that such evidential lack alone can be taken to undermine SoN.

A plausible argument would go as follows. A number of factors, ranging from the backwardness of our technological instruments to our cognitive and epistemic limitations, may explain why we have hitherto failed to provide empirical support for SoN. For this reason, undermining SoN would require one to show not just that SoN has not received empirical support – i. e. that it is “ill founded” – but also that the *conditional* probability of SoN being false *given* its evidential fragility is high. Unfortunately, Grünbaum does not offer any reason to think that SoN’s lack of empirical support reliably indicates that SoN is false. Hence, he fails to justify his negative verdict on SoN.

At this stage, an advocate of Grünbaum may protest that even if a number of factors could be invoked to account for SoN’s lack of empirical support, such lack is presumably due to SoN being false. The thought would be that the current absence of support for SoN – despite being possibly due to reasons other than the falsity of SoN – corroborates a negative verdict on SoN *probabilistically*. To substantiate this reply, however, the defender of Grünbaum would have to show that SoN’s current lack of support can be more plausibly ascribed to SoN’s falsity rather than to some other factor. In probabilistic terms, the task would be to show that  $\Pr(\text{SoN is false} \mid \text{SoN currently lacks empirical support}) > \Pr(x_1 \vee x_2 \vee \dots \vee x_n \mid \text{SoN currently lacks empirical support})$ , where  $x_1, x_2, \dots, x_n$  represent some set of factors other than the falsity of SoN which suffice to explain – but do not trivially imply – the current absence of empirical support for SoN. Regrettably, no such account has been put forward in the literature.

The advocate of Grünbaum may further object that the lack of empirical support for SoN does not have to be due to SoN’s falsity for the belief in SoN to be questionable. In particular, she might maintain that – in the absence of empirical evidence for SoN – endorsing this assumption appears to be quite arbitrary. Yet, as I argued above, no empirical evidence that clearly bears against the tenability of SoN has been provided by Grünbaum or by other authors. In this respect, it remains unclear why exactly endorsing SoN would be more arbitrary than rejecting it on empirical grounds.

What if the defender of Grünbaum reversed the burden of proof, arguing that it is up to the advocates of SoN to demonstrate that some factor other than the falsity of SoN can persuasively explain SoN’s lack of empirical support? *Prima facie*, this might seem a convenient strategy. Still, legitimately taking SoN’s current lack of empirical support to count against such an assumption would require one to show that SoN is empirically testable by us. To put it differently, one might well allege that if it was impossible to supply empirical evidence in favor of SoN, that “would only redound to the baselessness” of this presupposition<sup>69</sup>. Yet, the point remains that if the merits of SoN could not possibly be assessed

69 Ibid., p. 589.

in light of any available empirical evidence, then indicating that SoN has not been given empirical support would hardly bear on its tenability.

In his articles, Grünbaum does not show that SoN is empirically testable by us. Indeed, he does not even attempt to illustrate that SoN is *in principle* empirically testable, i. e. that there is some empirical evidence, currently unavailable to us, which would enable one to assess the tenability of SoN. To be clear, in asserting that SoN “stands or falls on empirical but not on a priori grounds”<sup>70</sup>, Grünbaum seems fairly confident that the merits of SoN can be settled on an empirical basis. Nonetheless, he does not cogently substantiate this conviction. For instance, in criticizing Parfit’s<sup>71</sup> alleged reliance on SoN, he rests content with claiming<sup>72</sup> that nothing is “more commonplace empirically” than that something contingent exists. Now, it is hard to see how exactly our invariably observing that something contingent exists would bear on the tenability of SoN. For the existence of contingent existents – while showing that the Null World *has not* been actualized – does not provide us with information as to whether such world *would* have been actualized in the absence of an overriding external cause or reason.

Similarly, *pace* Grünbaum<sup>73</sup>, noting that “we have never ever observed an event constituted by the non-existence” of the actual universe falls short of excluding that the non-existence of such universe would have been “natural”. For even if empirically based scientific theories were “our sole epistemic avenue to the natural behaviour of the universe”<sup>74</sup>, these theories are typically silent as to whether the coming into existence of the universe was “natural”<sup>75</sup>.

To recapitulate, in his articles Grünbaum reiterates that the existing a priori defences of SoN fail<sup>76</sup> and that the proponents of SoN have not offered any empirical evidence for it<sup>77</sup>. At the same time, he falls short of showing that this lack would constitute relevant – much less conclusive – evidence against SoN. In particular, he fails to demonstrate that the alleged absence of empirical support for SoN can be plausibly taken to undermine the tenability of SoN. That is to

70 Ibid., p. 584.

71 Parfit: “Why Anything? Why This? Part 1” (see note 2).

72 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 565.

73 Ibid., p. 578.

74 Ibid., p. 588.

75 See Craig: “Prof. Grünbaum on Creation” (see note 14), pp. 335-337, and Craig: “Prof. Grünbaum on the ‘Normalcy of Nothingness’ in the Leibnizian and *Kalam* Cosmological Arguments” (see note 14), p. 379. As Grünbaum makes clear, he employs the terms “natural”, “spontaneous”, and “normal” to characterize the “theory-relative behavior of physical and biological systems, when they are not subject to any external influences” (Grünbaum: “A New Critique of Theological Interpretations of Physical Cosmology” (see note 7), p. 5, see also Grünbaum: “Theological Misinterpretations of Current Physical Cosmology” (1996 (see note 7)), and Grünbaum: “Theological Misinterpretations of Current Physical Cosmology” (1998 (see note 7)).

76 Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 571.

77 Grünbaum: “A New Critique of Theological Interpretations of Physical Cosmology” (see note 7), p. 7.

say, even if posing PEQ\* required one to endorse a presupposition as demanding as SoN, Grünbaum's remarks do not license a rejection of such an assumption. More generally, there appears to be no easily discernible way for a defender of Grünbaum to amend his critique so as to substantiate his dismissal of PEQ\*.

### *Concluding Remarks*

The reasoning by means of which Grünbaum<sup>78</sup> purports to show that PEQ poses a "pseudo-problem" can be summarized as follows:

Premise 1: In order to preclude a trivialization, PEQ *must* be reformulated as PEQ\*.

Premise 2: PEQ\* *crucially* rests on SoN and on the logical robustness of the Null Possibility, i. e. if "one or more of these presuppositions is either ill founded or demonstrably false", then PEQ\* poses a non-issue, which does not require explanation.

Premise 3: *At least one* of those crucial presuppositions of PEQ\* *is* either ill-founded or demonstrably false.

Conclusion (1): PEQ\* poses a non-issue, which does not require explanation.

Conclusion (2): PEQ poses a non-issue, which does not require explanation.

As I argued in the previous sections, this argument is vulnerable to severe objections. Let us briefly summarize them. Concerning *premise 1*, Grünbaum can be criticized in at least two respects. Firstly, he falls short of demonstrating that PEQ "must" be qualified as PEQ\*, as opposed to some other question, in order to avoid trivialization. And secondly, the reconstruction of Leibniz's reasoning<sup>79</sup> from which Grünbaum develops his critique of PEQ seems both exegetically and logically inaccurate. In particular, it appears to overlook that Leibniz<sup>80</sup> does not pose PEQ under the presupposition that God necessarily exists, but rather asks PEQ in order to argue for the existence of a necessary being.

With regard to *premises 2 and 3*, Grünbaum makes some cogent remarks concerning the merits of SoN and the logical robustness of the Null Possibility. At the same time, he falls short of undermining the tenability of these assumptions. In particular, he does not demonstrate that SoN constitutes a crucial presupposition of PEQ\*. Furthermore, he presupposes – rather than shows – that one's inability to prove that the Null Possibility is logically robust would preclude her from posing PEQ\* as a meaningful question.

78 Grünbaum: "The Poverty of Theistic Cosmology" (see note 7).

79 Leibniz: *Philosophical Writings* (see note 1), p. 199.

80 Ibid.

What about *conclusion (1)*? Does Grünbaum substantiate his claim that PEQ\* poses a non-issue which does not require explanation? In this crucial respect, one may agree with him that a question “cannot be regarded as a well-posed challenge, merely because the questioner [...] experiences a strong feeling of puzzlement, and desires an answer to it”<sup>81</sup>. However, proving that PEQ\* does constitute a “pseudo-problem” requires Grünbaum to show that this question *crucially* rests on *at least one* either ill-founded or demonstrably false presupposition. For this is the definition of “pseudo-problem” he provides in the first place<sup>82</sup>. In his articles, Grünbaum reiterates that PEQ\* has not been proven to rest on defensible presuppositions, yet fails to substantiate his negative verdict on PEQ\*. Moreover, it is difficult to see how a defender of Grünbaum could amend his critique so as to license a dismissal of PEQ\*.

To conclude, several flaws prevent Grünbaum from showing that PEQ poses a non-issue which does not require explanation (*conclusion 2*). For although his argument seems valid, and although his argument’s conclusion might be true, he does not cogently support the premises from which this conclusion is derived. As anticipated in the *Introduction*, these considerations do not rule out the possibility of questioning the significance of PEQ on independent grounds. Still, it remains hard to see what, in Grünbaum’s reflections, would exclude that PEQ poses a genuine philosophical puzzle.

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81 Grünbaum: “The Pseudo-Problem of Creation in Physical Cosmology” (see note 7), p. 377.

82 Grünbaum: “A New Critique of Theological Interpretations of Physical Cosmology” (see note 7), p. 19, and Grünbaum: “The Poverty of Theistic Cosmology” (see note 7), p. 564.