

**Both Materialist & non-Materialist are correct - about themselves:**

**A brain's self-identification as "Materialist" or "Non-Materialist" (dualist, panpsychist, idealist etc) as reflecting the absence or presence of an associated real non-material awareness/consciousness, rather than merely as a statement of a philosophical stance.**

**A survey will identify relevant candidates of both types for a proposed brain-experiment to determine a possible correlation to the brain's deep structure/neural wiring.**

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An earlier version of this paper is at <http://philsci-archive.pitt.edu/19980/>

**Abstract/Introduction:**

We contest the unsubstantiated assumption of both materialists and non-materialist that the ontological status they propose applies to all humans and that the competing claim is false for all - ie we reject both the claim of non-materialists that all humans share the same fundamental aspect of having a "non-material consciousness" (nmc), as well as the contrasting claim of materialists that none do (being fully material as according to eliminative materialists/reductive physicalists etc). Instead, the basic proposition of this paper, our 'ontological conjecture' (OC) - an updated version of our 1998 website article "Mindless Materialists" - is that the central tenets of proponents on both sides are true, *but only regarding themselves*.

<sup>1</sup> <sup>2</sup>

A signature feature of nmc is that brains associated to it are capable of knowing of its existence directly<sup>3</sup>, and as a corollary we would propose that if a sophisticated brain does not know it is associated to nmc then most likely this is because it is in

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<sup>1</sup> ie we reject the universality and therefore mutual-exclusivity underlying the claims of both sides so that the two claims need not be seen as mutually-exclusive.

<sup>2</sup> Why we specifically refer here to "non-material" to describe our consciousness rather than some other type of characterization (see Appendix for more discussion): Physicists as professionals study the material universe, and so are qualified (as are philosophers) to know what is and what is not 'material'. Two eminent contemporary theoretical physicists - Ed Witten and Andrei Linde - plus many others of the previous generation, wrote about the subject of 'consciousness' in ways that clearly imply its "non-materiality" (see the many quotes by various luminaries in the accompanying article directed at physicists "[Why.](#)").

<sup>3</sup> See "Appendix : 'knowledge' vs belief" for a discussion of why we use 'know' rather than 'believe'.

fact not so associated. Thus, in accordance with our OC we will consider a brain's statements on this issue (that it does or does not possess nmc) as *not merely its 'philosophical position' but as an authoritative statement, a reflection of an ontological fact.*

Furthermore, we propose that only those who possess nmc are capable of understanding what it is, so that although they are well-qualified to know directly that they themselves possess it<sup>4</sup>, in contrast those who lack nmc and possess only material consciousness (mc)<sup>5</sup> cannot even comprehend what non-materiality means - they will understandably tend to consider it a non-existent absurdity, which contention would be quite correct in a purely-material reality, such as they effectively inhabit.

### **Terminology reflecting ontological status:**

Since according to our OC those brains which categorize themselves as non-materialists are presumed to indeed be associated to nmc, for usefulness in phraseology we'll refer to people whose brain is so associated as *being* nmc's (not merely "espousing nmc").

Materialists say they are conscious but that theirs is a material consciousness (abbrev: "mc"), and since according to our OC we accept this self-determination we will refer to them as *being* "mc's" or *being* materialist (not merely "espousing materialism").

**Are materialists mindless or are non-materialists delusional?** Notoriously, it is impossible to prove that one possesses nmc (which is a sort of corollary to the fact that it is directly self-known) - being non-material, nmc cannot be detected via the scientific method. However just as those with nmc cannot prove they possess it so too one cannot prove or determine via measurement that materialists do **not** possess it. Nevertheless we feel that our OC is the simplest solution to the conundrum of how there are materialists if a brain can directly sense its associated nmc<sup>6</sup>.

In sum, although of course it is impossible to prove that any particular person possesses or lacks nmc, given all the above our OC considers - as stated by the title of this paper - a brain's self-identification as "materialist" or "non-materialist" (dualist, panpsychist, idealist etc) as reflecting the absence or presence of an associated real non-material awareness/consciousness, rather than merely as a statement of a philosophical stance.

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<sup>4</sup> See discussions in the literature of self-intimation and infallibility re transparency of the mind.

<sup>5</sup> Materialists say they too possess 'consciousness', just that it is material (ie physical, no different than any other physical entity or process etc).

<sup>6</sup> See eg Wigner, as quoted in the accompanying paper: [Why consensus re consciousness is impossible](#)

An alternative solution is implicit in the above - that all humans possess nmc just that materialists are those whose brains lack the awareness of theirs, or that the brain-aspect which communicates to others has no access to it<sup>7</sup>.<sup>8</sup>

**Towards developing more constructive dialogue between mc's/nmc's, and greater self-confidence and independence among nmc's in the face of materialist dominance of the intellectual-climate:** A large part of the overall paper is devoted to not just pointing out the futility of communication of the sort usually engaged in - ie based on the erroneous underlying assumption that both sides of the debate are ontologically the same - but also suggesting ways to make the debate less frustrating by a recognition of the OC. Greater clarity in discussions can be achieved partly via a deeper understanding of the different meanings the same term might have to nmc's/mc's and suggestions relevant the construction of a sort of translation algorithm to utilize in discussions (as a simple example, substituting 'higher-level cognitive material brain-processes' for 'mind' when that term is used by an mc); by the frank statement by nmc's engaged in dialogue with mc's that the existence of nmc is not up for discussion; by learning how the existence of our nmc colors the meaning we give to certain terms in ways we were not aware of, meanings which are absent for mc's; and in general via the recognition by the nmc that the dialogue is with a person lacking nmc.

**Perhaps materialists are right:** In the interest of 'reciprocity', the paper also offers an alternative/opposing view to the central proposition, to the effect that the materialist claim is correct, and it is a defect of brain wiring or structure which is the source of an active illusion of "self-awareness" underlying the philosophical claims of non-materialists. A prospective source of this illusion is offered - an analog of the sense of presence experienced during 'sleep paralysis'.

### **Nmc vs Science:**

- To an nmc the existence of nmc would be the most important scientific fact, except that it is not science since its existence cannot be proven. To an mc in contrast, its own mc is an interesting feature of the material universe but not nearly as significant as so much else studied by science, and nmc does not exist.

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<sup>7</sup> ie perhaps there are some philosophical materialists who do in fact possess nmc but the part of their brain which philosophizes and communicates to others is not connected to the nmc and so they deny its existence (they are not 'consciously-aware' of it, where by 'consciously' we mean mc-type of consciousness, ie as is possessed by a computer which is built to be able to detect its own internal states). We can refer to them as nsa(non-self-aware)-nmc's; ie they have mc (as do also nmc's), and also nmc, but their mc is not mc-aware of their brain's association to nmc).

<sup>8</sup> We are not concerned here with specific approaches in the philosophy of mind, only the overall issue of whether or not all is purely material, so eg emergent materialism shares features with non-materialism (see eg <https://plato.stanford.edu/entries/properties-emergent/>), and in terms of monism the contrast is basically of Idealist/neutral monism vs material monism, where the former is the same as dualism, idealism, panpsychism etc in the essential aspect of enfranchising non-materiality.

- That nmc cannot be proven and is not accepted by mc's as existent places inevitable constraints on discourse with them, however nothing can remove the certainty of an nmc's knowledge as fact that nmc exists<sup>9</sup>. This tension is explored more fully in the paper.
- The general intellectual climate favors science, and there is an unfortunate misperception on the part of many that materialist neuroscience represents that, where it actually simply represents the viewpoints of those lacking nmc.
- Many seem influenced by the notion that to be scientific means to exclude nmc but without having considered what it is that is being rejected. Most intelligent people outside the sciences and philosophy are not truly aware of what materialism denies that they themselves know for a fact is true, and it is hoped that this paper can contribute a little to raising that awareness among 'thought-leaders'; another paper makes points relevant to physicists, some of whom it would seem (based on feedback from respondents to the author's survey) have not thought deeply about this issue.

**The proposed experiment:** Given the usual assumption that 'lower animals' are not conscious and humans are, and that humans evolved from lower forms of life, it stands to reason that some biological aspect of humans makes it possible for them to be nmc. Given the usual association of nmc and brain it would make sense that it is something about an nmc-human's brain which enables the association to nmc. Therefore an associated proposition to our OC is that underlying the mc/nmc difference is a 'biological' difference between their brains.

Rather than detecting nmc, the experiment would be aimed at identifying that aspect of the brain which is able to detect its own association to nmc.

[Experiments](#) on both types of brains are proposed, to detect relevant differences. Note David Chalmers's response (private communication): "I'd be skeptical about whether one would find correlations with neurobiology, but it would be interesting to see."

**Relevant experimental goals:** These are proposed in a related paper<sup>10</sup> presented on the accompanying website<sup>11</sup>.

Included are suggestions for potential commercial applications, which can perhaps serve as a basis for funding.

**Methodological aspects of the proposed experiment:** Given the multitude of brain-wiring differences between the brains of humans and other species, and the possibility that they

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<sup>9</sup> Generally nmc's - in order to collegially interact with mc's - accept self-imposed limits on claims about the scope of self-intimation and infallibility i.e.transparency of the mind, so that it can be agreed eg to apply only to statements about concrete mental states and not to conceptualizations nor of course to the ontological status of a mental state, however we are not seeking consensus here but rather stating a position.

<sup>10</sup> <https://sites.google.com/a/nyu.edu/avi-rabinowitz/home/brain-experiment>

<sup>11</sup> A very extensive survey: <https://sites.google.com/a/nyu.edu/avi-rabinowitz/home/survey>; the brief version:<https://sites.google.com/nyu.edu/mindlessmaterialists/correlationexperimentonphysicists>

too possess (a degree of) non-material consciousness, it could be difficult to detect its brain-correlate by comparing human brains to those of other species; however by comparing the brains of peers - for example materialist and non-materialist academics in a philosophy math or physics department - any such difference might be expected to stand out more clearly.

**The brain's "deep structure":**

- i) As Penrose has speculated, quantum(-gravity) properties of the brain may be non-local<sup>12</sup> and might reveal themselves only to highly sophisticated techniques;
- ii) Deep learning AI has revolutionized our knowledge and capabilities in many areas, and there may be aspects of the brain which would reveal themselves only via these types of techniques. (And of course new understandings about brains can in return lead to more sophisticated AI techniques)
- iii) What would be sought is not just 'hardware' ('wetware') but also potentially some 'software' which could enable the physical brain to somehow connect to nmc and utilize its properties (perhaps in analogy to cloud computing).
- iv) The experiment would employ material resources and processes to detect a physical brain-correlate to a non-material phenomenon - it would not be surprising that new techniques may be required for this.
- v) It might be necessary to utilize nmc itself in the search.

**Ancestral DNA-matching:** Given the newly-discovered variety in our ancestry (Denisovan/Neanderthal etc) and greater and greater access to this ancestral DNA, perhaps correlations can be drawn between the degree of one or other type of one's ancestral DNA and one's status as being materialist or non-materialist.

It might be that closely-related people might differ in their nm/nmc status, which would make it simpler to identify a possible DNA-correlation to the materialist-non-materialist divide (whether DNA governing the brain or otherwise).

See more discussion on the experiment sitepage.

**The category of this paper:** The author considers it as:

- i. "(speculative) neuroscience" - about the human brain's ability to detect and attach to a level of reality more fundamental than that investigated by materialist neuroscience, physics and cosmology - however the author also expects materialist brains to consider it "metaphysics" (ie in their judgement, nonsense), thus impacting decisions made by referees and editors regarding its publication in various journals or being discussed in various academic circles.

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<sup>12</sup> And of course many (eg Whitehead, and Bohr) have proposed that thought is not a classical localized phenomenon but rather is 'holistic' in some sense, and so it is reasonable to suppose that 'holistic-brain' types of analysis may be required, and the new AI techniques may be well-suited for this. In addition, perhaps quantum computers can assist in terms of both processing and modeling.

ii. It would be cosmology since the very fact of the existence of non-materiality is of the most fundamental significance for our understanding of the nature of our universe and perhaps related to aspects of its origin and evolution - however, since nmc is not provable, it is not part of science and therefore (not) of cosmology, and nmc is not even part of 'the universe' studied by physics, and is instead to be considered part of our 'reality' (which to mc's means our 'psychology').

Indeed it is a form of experimental not-really-cosmology since it seeks also to identify that aspect of the brain which is able to detect its own association to nmc, ie a part of the brain which can detect the existence of a fundamental aspect of reality. However to mc's it is all not-even-wrong, a chimera, and any brain difference between mc's and nmc's would be of the ordinary type expected between those brains propounding different political opinions, artistic tastes, food preferences etc.

### **The survey:**

A [survey](#) is being composed, with the questions and multiple-choice answers being designed in such a way that an analysis of the responses can:

- i) identify unambiguous respondents of both types, who would then be invited to participate in the experiment;
- ii) identify possibly-unsuspected correlations between brain-type and various "philosophical positions".

Survey participants will be able to discuss the issues raised (via a google-group embedded on the survey sitepage), thereby contributing to a meta-survey.

A preliminary survey was launched among mathematicians and computer-scientists (see [some responses](#)) in order to help determine useful wording.

Since in the author's view non-material consciousness is the most fundamental aspect of our reality, as a physicist the author felt that it is relevant to physics and cosmology, and conducted (in 1987) a survey of prominent colleagues (see [some responses](#))<sup>13</sup>. The proposed survey would be an extensive follow-up to that.

### **Many other points are made in an accompanying paper directed at physicists:**

"Reality = Universe + Mind? Why consensus among physicists re consciousness is impossible, and the ramifications of this on various issues of interest to the physics community"

[https://docs.google.com/document/d/1B6mcl155XkLnrBB\\_NN1IITJLwFxtlDgnEzL3VR8hsg](https://docs.google.com/document/d/1B6mcl155XkLnrBB_NN1IITJLwFxtlDgnEzL3VR8hsg) ;

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#### <sup>13</sup> **The relevance to physics:**

- a) [An associated article](#) to the present paper is directed at physicists, and discusses: i. the delineation of what should and should not be considered the purview of science in this context, ii. the 'fundamentality' of physics if it does not encompass nmc, as well as: iii. the possible impact on all this if the paper's OC is correct.
- b) An extended personal "[cover letter](#)" accompanying this article presents what the author - when still a student - felt was a type of unintentional "bait and switch" due to the disparity between: i. the seeming embrace of a non-material "consciousness" by physics and cosmology as presented both in the popular science literature and private writings of prominent physicists, which also serves to attract young people to the field, 2. and on the other hand, the realities of an actual physics department (where these topics are generally anathema).

The site associated to this paper, containing it and the others papers mentioned therein is:  
[sites.google.com/nyu.edu/mindlessmaterialists](https://sites.google.com/nyu.edu/mindlessmaterialists).

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Occasionally we will use OC as an abbreviation for “In the context of the ontological conjecture”, to denote aspects of the paper which depend on this conjecture being correct, as opposed to most of the paper which can be read as being independent of it.

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The author would like to acknowledge very helpful comments by Andrea Lavazza and Rodolfo Giorgi, as well as from Uwe Meixner and Vittorio Hosle.

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## TOC

### p 1-7: Abstract, Introduction, Overview

#### Section A1: p8-33

p 8-17: I: Summary of positions taken, and points made, in this paper;

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<sup>14</sup> As per the Cartesian insight, both mc's and nmc's agree about the physical universe - however the 'reality' for mc's is material and therefore includes only the physical universe, whereas for nmc's it is not material and so is not limited to the physical universe, and can perhaps be said to include a 'non-material realm'.

If we define 'reality' in a somewhat individualized or subjective sense, then we could say that mc's are quite correct that the physical universe and reality are identical or co-extensive, whereas nmc's are equally correct that it is not so, as long as we interpret the statements of both mc and nmc as about their reality and not a statement about the reality of all others.

However this paper takes an nmc point of view and so for our purposes here we'll mean the following when using these terms:

'the universe' = 'the physical universe studied by physics' (which as per the Cartesian insight, is that which includes all that mc's and nmc's agree about).

'reality' = the totality of the two Cartesian aspects combined (ie the combination of 'the physical universe' and 'the realm of mind'); this is the true reality, but mc's cannot participate in the nmc-level of reality and so their subjective reality is the purely-material universe studied by physics, neurophysics etc.

As an analogy, one could create a robot which exists in a warehouse and studies its surroundings and concludes that the warehouse is the entirety of existence, and this becomes its 'reality' - we can say that 'psychologically' its reality is the warehouse. Another robot is equipped with x-ray vision and can perceive the external universe, and this material universe is its reality. When it communicates with the first robot, and tells of the external universe, the first robot treats it as the private psychological reality of the second robot, whereas the latter knows that it is the 'true reality'. (Similarly for a program in a computer which is led to believe only information exists vs one which knows it is a program in a computer in a physical universe, etc.) So too with materialists - they are not able to connect to nmc, and their 'reality' is limited to the physical (material) universe, whereas nmc's know that the true reality is nmc + the material universe. However, mc's will read this and insist that what nmc's are speaking of is only - at best - a 'psychological reality.'

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In our context:

- universality = asserting that all humans are nmc or all are mc;
- exclusivity = either materialism is correct or non-materialism is correct.

In some sense 'universality' and 'exclusivity' are the same but perhaps their connotation is different in that the former is about humans whereas the latter is about reality.

p17-23: II: Countering objections to our 'ontological conjecture';

p23-29: III: Descartes, and 'mind of the gaps': stages in the evolution of the concept of "mindless materialists";

p29-31: IV: Five charts: Correlation of mc/nmc with other 'philosophical positions', including the nmc-maximalist position according to our OC, and minimalist stances;

## **Section A2: p33-46:**

1. Issues of relevance to the proposed experiment, including the challenge presented by Mind/body parallelity;
  2. Why this "mindless-materialist" conjecture is important;
  3. A possible counter-claim: Sleep-paralysis and a sense of presence: source of that which is experienced by materialists or non-materialists?
  4. Diagnostic test for identifying whether one('s brain) is materialist or nmc;
  5. A mid-point re-statement of the conjecture;
  6. Understanding materialists: applying the OC to better interpret their statements via a 'translation algorithm': Nmc vs. solipsism vs. idealism vs. material self-awareness, and the almost but-not-quite idealism of many materialists;
  7. Issues of ontology vs terminology, and attempts at disambiguation of '(self)consciousness/(self)awareness'.
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- [Appendix: Materialism vs Transcending the material: Meaning, purpose, moral responsibility, free will, human significance, religion](#)
- [Appendix: Nagel and Chalmers](#)
- [Appendix: Descartes, Darwin, Wallace, Huxley, Whitehead, Eccles, Penrose](#)

Other appendices:

- Are there more levels to reality than perceived by nmc's?
- 'Belief' in nmc vs 'knowledge' of its existence
- Can "Conversion Therapy" work? Transforming from materialist to non-materialist and v.v. as a result of discussion, and the relation to brain-wiring
- Can physics eventually include nmc?

[References, bibliography:](#)

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## Links to other relevant webpages by the author

- [Supplementary material](#) (originally removed from the article due to journal word-count-limits);
- [The Experiment proposed in the article](#); ■
- ['cover letter' & personal journey](#)
- [1998 version of this article](#)
- [1987 original survey](#);
- [2021 expanded survey, and group discussion](#);
- [Comments on Penrose's "Emperor's New Mind" & "Shadows of the Mind"](#): unedited
- [Sources & quotes](#): writings by prominent physicists on related topics as background for the survey questions and for the article.
- [extended excerpts/quotes](#) from source texts mentioned in the article.
- ["Reality = Universe + Mind? Why consensus re consciousness is impossible"](#): 58 pages;
- [Ethical & religious issues](#);
- [Sleep paralysis' sense of presence as the source of the non-materialist consciousness delusion](#);

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## Section A1

### TOC

p9-10: The OC: historical chart, and motivations;

p 11-18: I: Summary of positions taken, and points made, in this paper;

p18-21 II: Countering objections to our OC;

p21-24 III: Descartes, and 'mind of the gaps': stages in the evolution of the concept of "mindless materialists".

### Demarcating the dividing line (red) between mc & nmc [how the author's proposition differs from that of others]

phenomena → .....	MC ("material consciousness") is found in:	NMC is present in:
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Proponents ↓		
many of the ancients <sup>15</sup> & eminent modern-era scientists <sup>16</sup>		all of nature
Pereira, Descartes	animals	all humans
Darwin		humans may have something more to them than the material
Wallace		all humans
Huxley	some animals	all humans, some animals
Jaynes	all humans until a few thousand years ago	all humans now
This paper's ontological conjecture (OC):	some animals, some humans (eg materialists), present AI, some future-AI, (some aliens?)	some animals(?), some humans(eg nmc's), some future-AI? (some aliens?)

Our OC, that both mc and nmc are right and wrong - wrong in their generalization of their own ontological status to all humans, and correct re their own ontological status:

1. is not in violation of scientific theory (ie is not counter to evolutionary theory, nor the big bang theory, nor neurophysiology, nor genetics etc);
2. is indicated by a puzzling phenomenon (the existence of materialists), and resolves this perplexing conundrum;
3. is a sort of fulfillment of the demands of Occam's razor;
4. creates an experimental opportunity to identify the possible physical mechanism enabling a physical brain to be associated to nmc, via comparison (using AI) of the as-similar-as-possible brains of mc & nmc colleagues;<sup>17</sup>
5. clarifies what underlies various disputes or differences of opinion in the scientific community; specifically, in all the issues enumerated below (as explored further in the body of the paper).

<sup>15</sup> Even some supposed materialists attributed nmc-type characteristics to inanimate matter, as well as (therefore) to that which was composed of them, eg humans: Epicurus adopted Democritus' atomism but not his strict determinism since his ethical system required free will (Lucretius writes: "nothing can be produced from nothing... so human free will cannot arise *ex nihilo*, and hence must be present in the atoms themselves...").

<sup>16</sup> Mathematical-physicists Leibnitz, Mach, Clifford, Whitehead, Russel; also: James, Bergson, Eccles.

<sup>17</sup> Of course not all philosophical materialists necessarily lack nmc, since some can be nmc's but unaware of it.

## I: Summary of positions taken, and points made, in this paper

- **Difficulties in mc/nmc communication & dialogue:** since nmc is experiential, a primitive, those who do not possess it cannot understand what is meant by the term, and explanations are useless. Also, terms have different meanings when used by mc's or nmc's.

For example: Animals look at themselves in a mirror and identify that the limbs they are seeing in the mirror are the limbs they have muscular control over, and so can a simple device with some computer-vision AI. This is not at all what is meant by nmc's when referring to "self-awareness", however mc's cannot understand what nmc's mean by it if not this.

A simple computer can be programmed to use one part of it to check on the rest whether it is functioning, ie 'computing', and if so, to say "I compute, so obviously I am functioning, which means I exist", but this is not at all what Descartes meant, he referred to nmc's unique ability to self-know, but it is impossible to explain this to mc's (see more discussion later).

**A crucial point presented via an analogy:** Person A experiences a color and thinks they can explain it to B who expresses disbelief in color (they are color blind.) A doesn't realize they cannot 'explain' color to someone who does not experience it directly, however A experiences the feeling that they are indeed explaining it, not realizing that this feeling arises due to their own sensation of color, not from the explanation - it is an illusion caused by the fact that they themselves are experiencing it as they explain it and this misleads them into thinking they explained it.

In analogy nmc's may make arguments which they think are rational explanations of nmc, but actually it cannot be explained, and they only think they are explaining it because in their own minds the meaning is clear, but that is only because they themselves possess nmc.

<sup>18</sup>

Various arguments against materialism have been offered, however these either have a different meaning to materialists than they do to the nmc's who offered them since the terms used have different meanings to them (we'll explain the reasoning behind this), or they sound patently absurd to the mc, and some of these arguments actually only make sense when one is nmc, and the nmc offering the argument does not realize that an essential aspect of their being convinced by the argument they offer is the feeling they have when hearing these terms which arises in them only because they themselves are nmc (we'll discuss this more in the paper).

It could be useful for nmc's to internalize that it is impossible for them to convey to mc's the meaning of the terms "consciousness" and "self-awareness" etc as they use them. Since these terms are used by both mc's & nmc's despite the fact that

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<sup>18</sup> The last sentence in Penrose's "The Emperor's New Mind" almost hints at our thesis: "For the answers to such questions to be resolvable in principle, a theory of consciousness would be needed. But how could one even begin to explain the substance of such problems to an entity that was not itself conscious?"

their meanings are very different, it is inevitable that dialogue about these concepts and phenomena is fruitless, and often frustrating<sup>19</sup>.

If the ontological conjecture offered in this paper is correct, *there is no possibility of arriving at consensus about the existence of nmc, and so it is not similar to other disputed notions*<sup>20</sup>, and it is sensible to arrive as soon as possible at least to a recognition of this, and for nmc's to unabashedly declare the existence of nmc as a **fact** despite the claims of colleagues that it does not exist.

We feel that nmc's engaged in dialogue with mc's will find far greater clarity by accepting the above and having it inform the way they engage in dialogue on this topic - or avoid it.

**Informal 'Experiment':** We propose that when nmc's read an article written by a materialist, they treat it as though it was written by a 'nonconscious AI' - which is absolutely incapable of understanding nmc and is convinced it does not exist - and see if it makes more sense, ie what is said by the author is more consistent with that assumption than with the assumption that the author has 'consciousness'. Similarly for dialogue with a materialist - speak as though addressing a non-conscious AI, and interpret in this vein everything the materialist says, and assess whether the dialogue makes more sense than it usually does. This is complex, since much of what an nmc would say in such a dialogue results from their being nmc, and it is perhaps challenging for an nmc to speak about philosophy and neuroscience in a way which does not at all depend on their status as nmc. For example it is this author's belief that many 'proofs' that materialism is false will be seen to depend on the existence of nmc in the speaker, and in the nmc of some of the listeners, however a non-conscious AI - or the human equivalent, an mc - would justifiably not find this proof convincing or even meaningful.

Mc's think that they have "solved the mind-body problem" when they make statements such as "mind is an emergent property of brain", "mind is entirely dependent upon brain" or "the mind is what the brain does" and simply are not capable of realizing that it is the very existence of mind which is the crux of the issue. By making such statements and thinking they have thus 'solved the mind-body problem', ***mc's are clearly indicating that the word 'mind' that they use is not referring to the nmc that nmc's are referring to.***

In fact, this author can agree with the possibility that all the phrase-statements above are true - at least in some sense - if the word 'mind' in those phrases is nmc; the disagreement is **only** because the word 'mind' as used by mc's in such statements means 'some aspect of brain' or 'some aspect of how brains think about brain function etc', or some other process which nmc's agree is material, and not nmc.

i. Possession and awareness of nmc are necessary prerequisites for a realization that it exists, and for its existence to not seem disqualifying-counterintuitive - mc's lack nmc and so are unqualified to discuss the existence of nmc, and so the mc claim that nmc does not exist can be comfortably dismissed.

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<sup>19</sup> This frustration in communication, and the lack of collegiality in considering materialist colleagues to be lacking an essential aspect, can perhaps be termed "the unpleasant problem of consciousness".

<sup>20</sup> See appendix 'does conversion therapy work?'

- ii. nmc is self-known and so the negation of nmc by anyone who does not know of their own nmc can be ignored;
- iii. what the mc denial of nmc indicates is only the lack of their own brain's association to nmc.

- **The 'color-test'**: Prior to any discussion on philosophical issues, one can ask participants "when you see a blue-colored object, where does the 'blue' reside - is it a molecule in the object, is it in the photons, is it a neural current, or it is a sensation in the 'mind' separate from - but correlated with - a neural current?" Presumably mc's will respond with the first possibilities and nmc will choose the last. This 'diagnostic' can highlight the profound gap between the two. In addition, one can ask "Given your choice: do you believe it is correct? deduce it is correct? or know it is correct?". Again, it may be that nmc's will choose the last, and this might surprise mc's. In any case, if one can see that there is a strong correlation between these choices and stands taken on various seemingly-unrelated issues, it might be a useful indication that very deep differences are involved which cannot be resolved by discussion, certainly not of the 'derivative-level' issues.
- **About the AI consciousness debate**: There is both less difference between the sides than is commonly assumed, and also greater mutual incomprehension than usually assumed. Many AI-practitioners are materialists, and when they talk of AI consciousness they mean mc, and so their claim is simply that AI will exhibit mc. Nmc's certainly accept that there is no reason we should not be able to create mc, and so actually there is not disagreement on this issue. Indeed, if evolution produced humans with material brains which can associate to nmc, then there is no a priori reason to suppose that we cannot build mechanical brains which are capable of this<sup>21</sup>. However, this will not mean nmc's agree that there is no nmc, only that even inorganic brains can associate to it. So an nmc can agree with an mc that the mc can construct AI's which mirror their mc consciousness. Indeed, nmc's can even admit that it is possible for the mc to construct an AI which is associated to nmc in the same way as is the human nmc's brain. However of course mc's do not understand what is meant by nmc, and so even this agreement (of sorts) is futile. To nmc's the issue is only how one would know whether an AI is nmc, since the presence of nmc cannot be proven - but this is the same as with other humans, as expressed by the well-known philosophical "problem of other minds" (and so the Turing test is not relevant, but mc's cannot understand this).

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<sup>21</sup> Note: The existence of materialist proponents of conscious AI ironically provides reason to doubt the inevitability of the truth of one of their central assertions - the inevitability of the emergence of conscious AI: if evolution produced mc-humans, then it is NOT inevitable that nmc arises in association with sophisticated brains, and so it is NOT inevitable that AI will be associated to nmc.

The disconnect is mutual - on the one hand Nmc's of course do not accept the mc definition of 'consciousness' and so a materialist AI expert who creates an AI in their image is not considered by an nmc to be qualified to determine whether or not it is nmc (but then again no-one can do so), and on the other hand, in return the mc AI-creator has no interest in it being accepted as nmc by the nmc since to the mc there is no such phenomenon.

Not only is the mc's lack of ability to understand nmc a problem but there is also a reason rooted in the nmc for why there can be no real communication on this issue - the nmc critic of AI-claims does not realize that those on the other side of the debate are most likely mc and cannot understand the issue and are using terms in a different meaning.

Altogether, since the two sides cannot understand each other the entire hard-AI debate is truly fruitless.

We feel that an acceptance of our OC by nmc's will enable them to make better decisions as to which debates to enter and which to ignore.

It might be useful in the often-futile discussions of these issues for participants to first classify themselves as mc or nmc, after which perhaps further discussion might be moot. Perhaps this classification can be accomplished by taking the color-test, and if the stark differences so revealed are shown to correlate strongly to the positions on the issue above, this can convince participants that the division is not one which can be resolved by dialogue, certainly not by discussing specifically AI.

**The right of nmc to be judged by a peer, ie nmc:** The fear of AI's eventual power or lack of such may correlate to the non-materialist-materialist divide. A proposal raised in this article relates to the use of AI in adjudication. It is aimed at enfranchising the right of non-materialists to insist on a decision made by an entity which is a peer, where in this context 'peer' means they agree it possesses non-material consciousness as they do. This will be particularly important when AI is used for example in deciding:

- the fates of humans in court-cases;
  - which research topics deserve grants;
  - which articles ought to be published in scientific journals.
- **About the quantum measurement problem (QMP):** Wigner & VonNeumann were nmc's and when they spoke of the possible relevance of 'consciousness' to the QMP they meant specifically nmc. Nmc's can understand why nmc may be uniquely qualified to play the role of 'reducer/collapser', however to mc's the reasoning is completely inscrutable and the choice of "consciousness" seems arbitrary, as indeed it would be if what was meant was the material-consciousness they themselves possess. (See more extensive discussion of nmc and the QMP from the

physics and physicist point of view in the accompanying paper "[Why Consensus..](#)")<sup>22</sup>

Accepting our OC can help nmc's accept that there is an unbridgeable gap between the sides and avoid fruitless debate, and perhaps the color-test is again useful. (And similarly for the other issues below.)

- **What materialists think is mysterious about "consciousness":**
  - i. Mc's agree that solipsism is not disprovable, and it may be that they mistakenly think that nmc's are referring to this as the mystery of the "I".
  - ii. Also, the aspect of brain which monitors the rest and produces the notion of an I in a mechanical sense may seem somehow mysterious to some, and its emergence in humanity may seem a pivotal moment (eg as per one aspect of Jaynes' idea) but this is of course not what nmc's mean by 'consciousness' or 'self-awareness' In any case, materialists do NOT mean by 'consciousness' what nmc's mean by it, and this distinction must be kept in mind by nmc's while reading/listening to /discussing this topic with materialists. Based on an acceptance of our OC, it would be worthwhile for nmc's to try to clarify what it is exactly that they themselves possess in common with mc's which mc's are referring to when they refer to 'consciousness' or to 'the mysterious aspect of consciousness' - gaining this insight will help facilitate mc-nmc communication.
- **Implication of the shallowness of Boswell's Johnson 'refutation' of Idealism & mc misunderstandings of Descartes' dictum:** Descartes's point in stating "cogito ergo sum"<sup>23</sup> is completely misunderstood by materialists. In fact, it is often ridiculed and misinterpreted by them, misconstrued and even parodied - for example Boswell's report of Johnson's retort; however this is incomprehensibly shallow-sounding to an nmc, and rather than a refutation of idealism, it is compelling a case their glee at this alleged refutation makes for this paper's proposition<sup>24</sup>.

Descartes meant - and in this he is misinterpreted and misunderstood even by non-materialists:

"By the very fact that I am aware, I know that awareness exists, and this is the most fundamental existent, and it is the only existent whose existence is self-evident."

Of course he also meant:

"Mind exists independently of brain and therefore of the physical senses, and so I can have a thought independent of the physical external reality, namely the thought "I exist", and so

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<sup>22</sup> "Reality = Universe + Mind? Why consensus among physicists re consciousness is impossible, and the ramifications of this on various issues of interest to the physics community"

[https://docs.google.com/document/d/1B6mcL155XkLnjrBB\\_NN1IITJLwFxtIDGnEzL3VR8hsg](https://docs.google.com/document/d/1B6mcL155XkLnjrBB_NN1IITJLwFxtIDGnEzL3VR8hsg)

<sup>23</sup> Descartes R. "DISCOURSE ON THE METHOD OF RIGHTLY CONDUCTING THE REASON, AND SEEKING TRUTH IN THE SCIENCES" (1647), Paris [*Discours de la Méthode Pour bien conduire sa raison, et chercher la vérité dans les sciences*] <https://www.gutenberg.org/files/59/59-h/59-h.htm>; "Réponses aux Quatrièmes Objections"; Correspondence with Henry More; Wikipedia: "[https://en.wikipedia.org/wiki/Discourse\\_on\\_the\\_Method](https://en.wikipedia.org/wiki/Discourse_on_the_Method) (Sept 2022) ;

<sup>24</sup> However, it is interesting to try to understand whether Boswell's Johnson would accept the undisprovability of solipsism, and what that would imply to them. The survey will attempt to clarify this among modern-day equivalents.

this thought is NOT dependent on whether there does indeed exist an external reality, ie I know I exist (ie that an awareness exists, the awareness I call "I"), and that self-awareness is sufficient, there is no need of "proof" of that existence; after all, to whom will it be proven, to me, but that already means I exist!"

- **The essential difference between solipsism and idealism:** One must keep in mind that whereas solipsism is accepted as undisprovable by all brains, idealism - which is the non-materialist equivalent of solipsism - is not. To a materialist, it can indeed be that we are all dreaming or connected to machine inducing hallucination dreams in our brains (as in "The Matrix"), or we are all just brains, each in our own vat, or we are all electrical patterns in a computer-simulation, however there has to be a physical substrate, ie a physical brain or a physical computer. Somewhere according to the materialist - at whatever deeper level - one arrives at a material entity. In contrast however, to the nmc - as pointed out by Descartes and developed to its extreme by Berkeley in the philosophy of 'idealism' - there need be no physical material substrate at all and instead there can be simply thought(s). This notion is completely incomprehensible to materialists. Mc's usually incorrectly present the "cogito" idea in a way which would be true even for a mc-machine and so is trivial, in a sense as a statement of solipsism which is deep but is not his point. ***Descartes' meaning was in the context of his being an nmc - that there is an "I" which incontrovertibly exists even if the physical universe does not, since that "I" is non-material.*** To an nmc this statement is very different from solipsism, but mc's cannot understand what is meant. Another way in which this statement is different from solipsism is that it is known to be true - directly, - whereas solipsism is a non-disprovable thesis, not capable of being known to be true or known to be false. Although our phrasing of the 'cogito' is more cogent, the usual phrasing is often sufficient to convey the meaning when presented to nmc's - whose intuition inserts an essential step which is left out in the verbal/intellectual formulation. However mc's are incapable of understanding it irrespective of how much explanation is provided. To nmc's it is directly-intuitive whereas in contrast it is obtuse-sounding to mc's. In some cases, mc's seem to misunderstand the mind-body problem as being a proof that nmc mind is impossible! Of course this is exactly the reverse of the intent - if anything, since mind certainly exists, then if both mind and body cannot exist in the same reality it could only prove that 'body' - ie the material universe - is impossible, and we are left with idealism. If however we insist that the physical exists ie that both exist, we seem to be led to the conclusion that they do interact in some way, however mysterious (eg they are correlated as Descartes proposed). However it would seem that materialists misunderstood this project, and think that the Cartesian insight was that nmc does not exist! And it is likely that many mc's mistakenly believe that the project of finding naturalistic mind-free "laws of nature" succeeded not because 'mind' was left out but rather due to the rejection of its very existence; they therefore may be led to believe that when one obtains a complete description of the



mechanical level, a full theory of physics, we will have a full theory of the universe/reality!

Again, accepting our OC and identifying positions in discussions as being from the mc or nmc camp helps provide clarity to discussions on this topic.

- **Cartesian mind-body parallelism implies equivalence of mc and nmc brain states:**  
As Descartes noted, matter/brain is adequate as an explanation for all, there is no need for mind as explanation - ie there is an absolute 'parallelity' between brain and mind - and there is no unequivocal manifestation of mind in the physical universe, and so **whatever brain-state exists in an nmc can exist also in an mc**. For example, mc's can exhibit exactly the same behavior and brain-states which in nmc's are associated to feelings of compassion though they themselves cannot actually experience it, nor understand why nmc's claim say they can't, just as they note colors and musical sounds without being able to to experience either of these in the way meant by nmc's, nor to comprehend what nmc's mean by saying this. (A type of exception may be the certitude which an nmc feels when stating that it is nmc, which will never exist in materialists brains.)

**Conclusion, and advice:** Not only can we see the potential for clarity which can be achieved by accepting our OC (that there is an ontological/biological difference underlying what is otherwise considered as a 'philosophical' difference), but keeping in mind the above points while reading the writings of a materialist, or hearing them speak about "consciousness" - and especially if engaged in a dialogue with them - can make their words less perplexing and the experience less frustrating.

### **More about communication problems and reasoning differences between mc & nmc**

- **Eddington/Penrose-type 'level-confusion':**

**Eddington:** Various pioneers of quantum physics seem to have felt that there was some link between quantum physics and nmc, and Eddington seems to have felt it mirrors or could possibly model nmc (see extensive quotes and discussions of nmc from the physics and physicist point of view in the accompanying paper "[Why Consensus..](#)").

However, in fact quantum physics deals with physical measurables not the "non-material". The confusion arose perhaps because when a brain contemplates the quantum-theory-based seeming-insubstantiality of substance (eg as per Eddington's table example) or various esoteric quantum phenomena such as issues of (non)locality, it is struck by various subtleties and wonders, and to nmc's the theory may somehow seem 'mind-like'. However it is critical to recognize the two levels involved:

i. a mind contemplating phenomena of the material universe and the laws describing/governing them;

ii. the feelings generated as a result (in that mind).

That quantum processes and laws ‘seem mind-like’ is a mind-feeling of some nmc’s, and a mind-feeling is not the phenomenon under discussion (quantum physics) - it is ‘level-confusion’ to think that since quantum processes ‘seem mind-like’ to an nmc, that therefore quantum theory models nmc.

However it is definitely interesting to attempt to unravel all this and understand more clearly what indeed might be implied by this feeling.<sup>25</sup>

### Penrose:

i. In Penrose’s writings<sup>26</sup> there seems to be some sort of oscillation between different definitions of ‘consciousness’, sometimes it is nmc and sometimes mc-type, ie “being awake rather than dreaming or sleeping” or “having a component of the brain which monitors the rest of the brain’s operation”, but mc’s will not understand this issue of varied definitions.

ii. The aim of a theory of quantum gravity involving noncomputability is worthwhile, and it would be exciting to see noncomputability in the brain, however even if this would be a property of nmc it would not address its nature, which is by definition “non-material”, but this point cannot be understood by mc’s.

iii. In some of his attempts he repeats the above-mentioned level confusion between quantum phenomena and the feeling in an nmc that they give rise to, just that Penrose adapts it to quantum gravity.

- **Why/how someone arrives at the ‘philosophical conclusion’ they are a materialist/non-materialist:** It is proposed here that the thought process in arriving at a decision about this, would be different than for other philosophical and political choices/preference, given that it is a reflection of an inner ontological state rather than a matter of temperament or culture etc. Perhaps some survey questions can be designed to help test this hypothesis.

Just as we proposed that nmc’s think their explanations of nmc are convincing, but it is only a feeling they have, a feeling based on their own actual experience in that moment of their own nmc, similarly - or in contrast - ***materialists do not adopt belief in materialism for the rational scientific, philosophical or logical reason they may specify - eg due to the successes of material physics and neuroscience - but rather (ultimately they can be convinced by these logically-correct arguments) because they do not have the type of consciousness they say does not exist.***

The nuances of one’s positions in this debate may betray one’s ontological status, and accepting our OC may help nmc’s in a debate with mc’s make such a deduction and fine-tune their contribution to the discussion accordingly.

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<sup>25</sup> Note that Eddington’s extremely brilliant analysis of laws of nature as definitions showcases his deep ability to untangle levels.

<sup>26</sup> "The Emperor's New Mind" and "Shadows of the Mind". See [my comments and critique](#).

- **Direct knowledge vs proof:** Nmc can only be directly known and cannot be proven to exist, and this renders the concept not just incomprehensible to mc's but also not credible, further eliminating the possibility of useful dialogue.

The futility of the centuries-old materialist-nonmaterialist philosophical debate (and associated aspects) is reflected in the unusual certitude in the expressions of the positions by many on both sides: in this paper we'll usually mean by 'non-materialists' those who unabashedly state that they **know** non-material 'consciousness' exists (and they are associated to it), not just that they believe it to exist, whereas by materialists we'll mean those who say that such a phenomenon is impossible, not just that they do not believe it exists; indeed the difference is so acute that there are sometimes expressions of incredulity by both sides at the fact that the other position even exists. All this is sourced in the fact that the difference between m's and nmc's is not merely one of opinion but rather is based on an inbuilt ontological (and perhaps biological) difference.

**Non-reciprocity:** There is inevitably an inherent non-reciprocity involved: Nmc's know for a fact that nmc exists, so that the mc counter-claim is not accorded any credence by them at all, as opposed to scientific and philosophic disputes where both sides will tend to accept that theirs is only an opinion until it can be proven to the other side.

**The existence of nmc as an indication of the limit of science:** Mc's will be very frustrated at this unscientific approach and insist that nmc's have no right to state it as fact if it cannot be proven. They are correct in the sense of scientific fact, leading to the conclusion that science as a universal collegiate endeavor cannot encompass nmc.

[We believe that an unabashed acceptance of our OC (that there is an ontological/biological difference between mc's and nmc's underlying what is otherwise considered as a 'philosophical' difference) will enable nmc's to better navigate discussions with nm's about the above issues of the reliability of direct-knowledge of nmc, the futility of debate, the non-reciprocity, and the limits of science in this regard. ]

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### **Potential correlation of ontological status and 'philosophical differences' between mc & nmc colleagues on a wider range of topics:**

In this paper we are relating only to nmc itself - which is known - and not to that which its existence has led some to hypothesize (in other words not 'known' only believed), however it is on-topic to point out the expected strong correlation between status as mc/nmc and positions on such topics. For example:

- **The effect of one's nmc on one's predilection for certain beliefs and the resulting nc-mc divide in philosophy/metaphysics:** The knowledge of the existence of nmc which is material-transcendent inclines nmc's to not immediately dismiss the possibility that there is more that is physically-transcendent. Indeed, if a 'nm-realm'

exists, it may be that nmc's are able to experience it (be aware of it) in some way<sup>27</sup>. This could lead them to conceive of notions which to mc's are absurd. For example, ethical feelings and motives might be ascribed by religious nmc's to an 'absolute' or material-transcendent Moral Responsibility where we deliberately capitalize m and r and we'll abbreviate this latter as 'MR' in distinction to 'mr'. Of course MR assumes reality possesses a more sophisticated structure than is needed to support just the physical universe plus nmc itself.

The very fact that there is this chasm in understanding between mc's and nmc's seems on its own to be an indication of the correctness of this paper's OC - only a being with mc, ie lacking nmc, could suppose that there is meaning to holding an automaton (like itself) morally responsible, whereas to nmc's it is abundantly clear that the moral responsibility mc's speak of is not at all the same as the MR the nmc's are referring to.<sup>28</sup>

Note that due to the above-noted Cartesian parallelity, the ethical feelings and motives of nmc's will be as motivating also to mc's, who will however not feel the need or inclination to ascribe it to anything beyond the material. That is, whatever process led to the arising of the morality-feelings in the nmc's brain and which were experienced by their nmc, will also have arisen in mc-brains - there will have been some socio-evolutionary neurobiological cause behind its arising in human brains of this or that type. Of course nmc's will in addition experience a nmc aspect, which they may associate to some nmc-realm (expressed by some eg as 'an absolute morality' etc), whereas among mc's it will be considered a purely-material brain state.

Similarly regarding meaning and purpose, and 'value' in general.

It would be useful in the often-futile discussions of these issues for participants to first classify themselves as mc or nmc, after which perhaps further discussion might be moot. Perhaps this classification can be accomplished by taking the color-test, and if the stark differences so revealed are shown to correlate strongly to the positions on the issues above, this can convince participants that the division is not one which can be resolved by dialogue.

Note: The connection to such a nm-realm may in some cases even manifest as some sort of 'religious' belief, whereas in mc's the corresponding brain-state will be a purely-material phenomenon, and the mc will perhaps talk of something like "secular Humanism".

- **Acausality:** To many nmc's, it is clear that MR could not exist if we were all 'conscious automatons', since to an nmc it is clear that by definition an automaton cannot be 'Responsible' for its actions, however to mc's - who have no intuition of a

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<sup>27</sup> as an analogy, those with a wifi connection can experience the realm of the cloud and connect to or now of some of its content, and those with VR headsets can experience an entire world unseen by, inaccessible to and perhaps incomprehensible to, those who do not possess the connection

<sup>28</sup> For a more complete discussion of all these points:

<https://sites.google.com/nyu.edu/anti-materialism/moral-responsibility-free-will>

material-transcendent element to reality, it seems reasonable, and the notion of MR is absurd - but that is not a problem to them since to them mr is satisfying.

Thus perhaps the nmc-mc divide could explain the divergence in notions regarding:

i. whether there is any relation between human moral responsibility and the type of free will possessed, where nmc's feel that without a certain type of free will there cannot be the type of moral responsibility they intuit, whereas to mc's there is no necessary linkage and 'mr' seems quite adequate;

ii. whether there can even be any meaning to the "incompatibilist libertarian free will with agent-causation" which nmc's propose in order to establish the reality of the MR that is meaningful to them, where to nmc's the concept of this type of free will mystifying and paradoxical, but necessary for the reality of the MR they intuit.<sup>29</sup>

Again, the color-test might be a useful first step in any discussions of these issues.

- **Platonic realm & Godel's speculative hypothesis:**

Does the existence of a Platonic realm necessarily imply the existence of nmc? ie is it necessarily the case that Platonists are nmc's?

What aspects of Godel's speculations can be believed by mc's, not only by nmc's? For example, can the speculations of Godel regarding the human brain/mind not being a "machine" be interpreted in a material sense?

**Can we can construct a Platonic realm that is purely material?:**

If a super-server containing vast algorithms and logic-formulations and laws of nature was connected to chips implanted in brains, enabling comprehension by humans of certain mathematical truth (and much insight, & understanding) beyond the natural computational ability of the brain, this system would serve as a sort of material Platonic realm. Can there be a natural mechanical equivalent?

Human brains contain knowledge of mathematical truths and formulations of physical laws, but they are evolved material constructs, and are in communication with each other to produce greater knowledge, and so we see that a material universe could indeed evolve some structure containing this type of information.

The universe itself is sufficiently interconnected for it to act as a brain and therefore a material-version of a "Cosmic Mind" could possibly exist with the possibility of brains connecting to it, and this is effectively the Platonic scenario.

Perhaps similarly regarding Godel's speculations/'conjectures' re 'mind'.

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<sup>29</sup> One of the main bases of Einstein's general relativity is the notion that in the presence of matter-energy there is relative acceleration between neighboring inertial particles. This is completely self-contradictory in classical Newtonian physics but it turns out to make total sense when we understand that space and time are united and that the union ('4-d spacetime') has a geometry, which matter-energy warps (in a way which causes the geometry to have the same fundamental 'curvature' properties as that of an ordinary curved 2-d surface). What seemed self-contradictory becomes intuitive and serves as the foundation of an entirely new and sophisticated paradigm about physical reality. Perhaps some similar transition will occur regarding the paradoxical notions of acausality when we understand enough about time, causality and nmc etc.

- **A historical-metaphysics speculation re paganism vs monotheism:** One can perhaps craft deliberately-contrarian materialist versions of monotheism, as well as nmc versions of paganistic polytheism. However the ancient conceptions of deities seem materialistic in some sense, human-corporeal beings with human-like temperaments etc, similar to how we today would conceive of alien beings who are purely-natural and not necessarily nmc.

If so, adapting to nmc Jaynes's insight re the effect of the emergence of "consciousness" in human brains, we can speculate that the essential difference between paganism and later-developing beliefs might have been due to the emergence in various humans not of the mc brain-element which monitors the rest but of nmc - these nmc-humans then rejected the notions crafted by the mc's whose culture they emerged into, including the fundamental idea that reality is limited to the material, and also the mc-version of 'deity'.

- **Proposition re correlating the mc-nmc divide with differing attitudes to intelligent design(ID), "human significance" and "God":** Without discussing the issues themselves or taking a specific stand on them, we predict a correlation involving the positions taken by others - specifically that the knowledge by nmc's that they are associated via nmc to a material-transcendent phenomena/process, with an ability to sense its existence, may in some cases make them more likely to consider the possibility of other counter-scientific or 'physical-universe-transcendent' phenomena/processes, especially those which seem intuitive to them.

For example, the divergent positions on the possible meanings of "the significance of life/humanity".

Darwin's seeming openness to the possibility of some aspect of ID at the early stage of the universe's existence, Einstein's talk of what loosely is often referred to as a 'Cosmic Mind', and the musing of Penrose<sup>30</sup> "perhaps there is some divine or mysterious purpose for the phenomenon of consciousness - possibly a teleological one not yet revealed to us - and any discussion of this phenomenon in terms merely of the ideas of natural selection would miss this 'purpose' completely" are almost certainly correlated to their being nmc's, whereas to an mc these ideas would seem bizarre and also unnecessary.

Also, perhaps the nmc-mc divide correlates to attitudes regarding the very possibility of the existence of what is usually referred to as "God", or the possibility of giving any meaning to such a concept, where the speculation raised here is that statistically (ie when comparing the replies of groups of both types one would find that) mc's will almost certainly be more inclined than nmc's to some form of

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<sup>30</sup> **Where Lies the Physics of Mind?** Sir Roger Penrose, Martin Gardner

<https://doi.org/10.1093/oso/9780198519737.003.0018> Pages 523–582 **Published:** October 1989

<https://academic.oup.com/book/40643/chapter-abstract/348319333?redirectedFrom=fulltext>

atheism, or to even disparage the very meaning of the above concepts (ie one will find more such opinions in the mc group than in the nmc one) whereas nmc's will be more likely than mc's to say they understand what the concept means and may - even if they end up rejecting the notion after due consideration - be more open to the theoretical possibility of the existence of some non-material physically-transcendent entity or being.

It would seem that for many atheists their degree of certainty about the lack of existence of a God would be in proportion to how sure they are that no nmc exists. As opposed to nmc's who would say they know nmc to exist, it is likely that atheists will not claim that they know inside that no God exists but rather would say that they believe it to be so, and perhaps that the notion of a God seems absurd to them.

**Descartes' ontological argument:** It may very well be that some nmc's find such arguments convincing since they feel their nmc<sup>31</sup>. However the nmc's who are convinced for this reason are unaware that this is the reason, and think it is the logic which is compelling<sup>32</sup>. To mc's who lack this and are relying on logic alone it is not at all convincing.

**Atheism:** It is proposed that mc and nmc atheists would express different types of disbelief in religion and God, and arrive at atheism via a different inner path. It is unlikely that someone would intellectually arrive at atheism and then as a result become a philosophical materialist (since their declaration of their being materialist or non-materialist would be based on inner-intuition based on their ontological status and would not require intellectual debate about religion, nor would an nmc who intellectually decides in favor of atheism also reject as a result their known ontological status of being nmc), however the reverse is much more likely, ie realizing that one is a materialist and then as a result rejecting the notion of God. It would be interesting to also find some other more-neutral-seeming correlate, such as via the proposed "color-test", where the choices on that test would correlate/predict the attitudes mentioned above.

**Conclusion:** We can see how accepting that there is an ontological/biological difference underlying the mc-nmc divide can perhaps help in understanding the root cause of various 'philosophical' differences, and can perhaps help both types to understand the unbridgability of the gap between them, and therefore the impossibility that dialogue will resolve these differences. '

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<sup>31</sup> Knowing that non-materiality exists and that it is self-known and is more fundamental than the material universe makes it not such a large leap to conviction that there is a Mind (ie "God"). Alternately: a believer in God may claim that if nmc begins to investigate this issue it has access to truths which are inaccessible to a logical inquiry - however this still means that it is not the usual 'mc-logic' which is convincing.

<sup>32</sup> ie just as the feeling of nmc can be confused with the feeling of being convinced of the logic of an argument for nmc, so too there can be a conviction of the existence of a Mind which is mistakenly thought to be the result of the logic of the ontological argument.

(In discussions between the two sides, or when reading/hearing someone from the other side, it can be useful to keep in mind the above points to render more reasonable their unwillingness to enfranchise the very possibility of the correctness of the other side's position.)

**Proof vs conjecture re any of the above points:** All agree that nmc cannot be proven to exist - nor of course can its absence be proved; indeed the only reason nmc's believe it to exist is that they know it exists directly, innerly, and even they admit it is perplexing and mysterious. Thus this paper does not purport to prove anything<sup>33</sup>, nor does it claim to present a "scientific theory", but rather it is an expression of an opinion, an outlook. The author knows he is nmc, but also knows he cannot *know* that others are or are not so - so the OC is a conjecture and is opinion, in contrast to what the author considers to be fact, the author's (knowledge of his possession of) nmc. Therefore, rather than claiming to prove anything, nor to offer clinical evidence not already known, the OC instead (merely) offers a new speculative paradigm - one which we believe has explanatory power, and even fulfills Occam's razor in some sense, and is meant to counter what we consider as a blind generalization, an unwarranted assumption<sup>34</sup>.

....

#### **What can be said to exist: successive levels of 'abstraction'**

- hard-nosed naturalism
- the 'existence' of compound objects such as the ship of theseus
- solipsism, brain in a vat (ie there actually is a physical universe, but only a brain or lab exists)
- simulation (there is no actual planet or humans or full physical universe as we imagine it but rather there exists some energy-configuration which can perform 'computation', in which a simulated universe is produced, with us inhabiting it)
- material Platonism; material mechanism of Karma (there is a material version of a Platonic Realm, and within that,, at a sub-level, there exists a 'physical universe' which can interact with it;

#### **-----mc/nmc dividing line-----**

- nmc: nmc's know it exists - and most incontrovertibly compared to any other purported existent - however it 'feels' nevertheless more 'abstract' than the material items which are only known via it, ie whose existence is only contingent but which is nevertheless considered more 'real';
- idealism: all nmc's agree it is possible, and is the minimalistic scenario and perhaps the only conceptually-consistent one, but perhaps all or most agree it is not

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<sup>33</sup> As justification for our OC's differing from the accepted view we offer quotes and analyses of the writings of experts as indications (or 'proof') that there is no scientific proof for the accepted view [that all humans possess the same status of being mc or nmc], but this is of course well-known.

<sup>34</sup> On the one hand no proofs either way can be offered on this topic, but it is precisely that which enables making a conjecture - ie since the usual assumption (of universal consciousness or the lack thereof) is only that, an assumption - one which in fact I believe to be unwarranted - there is no reason that one cannot propose a conjecture which is a counter-assumption - especially if it is believed to have better explanatory power.



provable or knowable; ironically, most nmc's probably feel it is somehow more 'abstract' than assuming the existence of the material universe which is after all only known contingently, ie one might almost have expected that dualism would seem more abstract, ie the speculative notion that there actually exists a physical universe external to our minds and maybe even independent of it.

- ideal 'Forms'/mathematical Platonism etc: some feel that its existence is implied by what they know of mathematics- it is likely impossible for mc's to believe this; the physical universe can interact with it;
- 'religion': some nmc's believe in this, and it is likely impossible for mc's to believe in: includes soul, God, religious version of Karma.

**Ranking the degree of 'known-ness':** Although in terms of abstractness nmc is high on the scale, in terms of known-ness it is the absolute bottom in that only nmc can be known surely to exist. There can be a sort of continuum leading from the minimalist level of a nmc's sure knowledge of the existence of consciousness, up the ladder of speculation.

Perhaps one can create a sort of hierarchy in this sense, though perhaps there are even lower levels on the 'known as fact scale', and certainly there can be differences in how people would rank these, and rankings by mc's/nmc's will obviously differ.

Ranked with 1 being highest:

1. the nmc "I" which is known as fact, and is the only existent that is known; however mc's do not know this (and so perhaps the ranking should be modified); mc's consider as the basic fact only that there is some material entity in which there is a physical process (eg neural currents) corresponding to these thoughts, and this is not 'abstract'.
2. scientifically-proven facts - which are consensual, but to the nmc these are not about provably-existent entities and processes, since solipsism/idealism may be correct; to the mc 1. is non-existent and 2. is not contingent on it, and so 2. is the most fundamental, and is not at all 'abstract'. However, if these mc's accept that solipsism is non-disprovable, perhaps they agree that 2. is contingent, and therefore 'abstract'.
3. time-passage which is known or experienced by all (presumably) but is not provable and is not in physics: do any mc's experience this or consider it a conundrum or is there a complete correlation between being mc/nmc and claiming it is "illusion"/being mystified by the feeling of time-passage (and thinking that calling it 'illusion' is 'not just wrong' it is obtuse;
4. 'moral responsibility' which is believed in by almost all scientists, in some cases by nmc's as a Transcendent-based reality, but not known or provable, and by mc's as perfectly material, not abstract;
5. 'free will': this is not so much known as felt, and deduced - ie one feels it exists but realizes it can be illusory, however due to its necessity to nmc's as underpinning of moral responsibility it is declared by many as existing (ie its existence is 'deduced'), whereas to mc's the notion has no meaning and is not 'necessary' for moral responsibility;

6. 'Cosmic Mind' (eg as eg per Einstein)<sup>35</sup>, which he might have placed in the category of a directly-known existent, but as this Mind' is certainly considered to be nmc, the notion is presumably considered absurd by mc's;
7. the meaning of life, a purpose to the universe's existence, the significance of a human life: deeply-held beliefs but 'unprovable'; some believers in these might accept that they are feelings arising 'naturally' ie due to sociobiological evolutionary considerations in a big bang arising spontaneously from nothing, however the mc's among them would leave it at that whereas the nmc's would be referring to the nmc-version of what the mc's are referring to, and so given the nmc-nature of these 'feelings' (vs the mc-based 'feelings' referenced by the mc's), and given the fact that a materialistic big bang could not produce nmc, the status for nmc's of these 'only beliefs not known or provable', or their referents, is qualitatively other than for the mc's for whom they are material entities/processes like any other;
8. other phenomena and claims....
9. maximalist level: perhaps the notion of a God, or of a Creator etc., 'religion', though some religious people may claim equal 'knowledge' of that level. Mc's would certainly reject these notions as meaningless, whereas for most nmc's their existence cannot be a priori ruled out (ie it is a possibility to be considered, and then they may eventually reject these notions after due consideration, or accept them, or be agnostic).

..

#### **Summary of background points**

- About 'reality': Nmc's should cease being apologetic and collegial in the sense of presenting the existence of nmc as their philosophical opinion, and declare forthrightly that its existence is fact not opinion (specifically: the author knows for a fact that he is associated to nmc). Collegiality comes in after that, with the admission that it is a known fact which cannot be proved and is therefore not 'scientific'.
- About cosmology: the fact of the existence of nmc means that the universe is fundamentally different from that proposed by materialists, especially since the material universe can only be defined to 'exist' by virtue of its being known to nmc (whose existence ironically is denied by materialists). This should be presented by nmc's unapologetically as 'unprovable fact'.
- About humans: that some have nmc associated to them, some do not; since nmc exists and is known self-evidently, we propose that those who claim it does not, do not possess it. Accepting this and asserting it forthrightly can bring greater clarity to discussions (perhaps accompanied by the self-deprecatory admission that this claim may seem annoying or even objectionable to mc's).
- About brains: nmc is somehow associated to brains, which are capable of knowing of its existence directly, self-evidently, and so an individual brain's testimony is reliable as evidence that it does or does not have nmc associated to it; this claim of the possibility of direct knowledge, and the validity of a 'self-evident truth', should be presented forthrightly, along with the admission that it is not a 'scientific' process of knowing.
- About biology: a speculation that despite the Cartesian mind-brain parallel, there is a corresponding biological (eg brain-wiring) difference in the two types of human. Only

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<sup>35</sup> Given that nmc is associated to brains due to their sophistication and complexity, to an nmc for whom it is fact that their brain is associated to an nmc, it can seem not totally implausible that the most highly sophisticated and complex 'entity' - the universe as a whole - is associated to an nmc, ie the notion of a 'cosmic Mind'.

experiment will determine this, but the significance of the finding could still be a matter of interpretation.

## II. Countering objections to the OC

### A.) Humans are physiologically similar and so it is not likely they differ as the OC proposes:

i. Descartes - an experimental physiologist (among other specialities) - made it clear that there did not seem in his time to be any physiological correlate to nmc; there was no discernible difference between humans which would point to one being nmc and Descartes knew he was nmc, and it was simply assumed that all humans are nmc. Indeed until today no physiological correlate to nmc has been discovered, and the same universalistic assumption is made.

However the proposition made here goes both ways: on the one hand if there is no physiological correlate to nmc then we have no reason to suppose that the physiological identity of all humans point to an identity at the mind level. And on the other hand it may be that there is indeed some physiological marker to those possessing nmc, but it would be something subtle and sophisticated in the brain, not visible from the outside or even to ordinary imaging and autopsy. However, perhaps nowadays one can indeed find such a difference, using modern brain-imaging technology and data-analysis (AI), and by probing and comparing otherwise-similar humans who nevertheless can be identified and distinguished via their 'philosophical opinions' as mc's vs. nmc's<sup>36</sup>.

In sum, we cannot assume all humans are 'physiological equals' in this sense just based on the observations we have made so far.

ii. Is it more likely that people's consciousnesses are ontologically alike? Of course it is not 'more likely' in a probabilistic sense since there is no relevant ensemble of universes to judge by.

### B) The OC can lead to solipsism: If the ultimate justification for denying nmc to some humans is the claimed fact of one's own nmc, then why not deny it to all others including those who claim they have it since I can only know my own nmc?

Firstly, solipsism has acquired an undeservedly negative reputation - it is undisprovable and should be accepted as such. I may disbelieve it and act as if it is not true, but one should not deny its status as minimalistic and most internally consistent.

There is a form of solipsism in which the external material universe exists, but there is no nmc except my own, and another form in which reality is comprised solely of my nmc - ie no material universe exists. Another might be where reality includes various separate nmc's but no material universe.

However, the OC's intent is clearly not solipsistic, and it can generously enfranchise the nmc of all who claim it for themselves, as well as an external reality which includes materiality.

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<sup>36</sup> The experiment I proposed in the paper (meant as an attempt to locate a correlate if such exists), and the survey meant to identify mc's and nmc's as candidates for comparison via the experiment, are outlined more thoroughly in associated papers.

(See more extensive discussion of solipsism later in the paper.)

C)

**i) Is the OC "philosophically counterintuitive"? ii. The OC violates the 'charity' guidelines appropriate to the intersubjectivity of communication, as well as academic collegiality:**

That people are ontologically the same is generally presupposed when one tries to understand others, however this presupposition is exactly the problem in this case where the difference is so fundamental. Nmc's know that mc's are wrong about nmc's, and what nmc's mean by 'reality' includes more than what nmc's mean by materiality - mc's are wrong inasmuch as they apply their negation of non-materiality to the conceptual framework for the nmc's own reality, and with such a glaring and fundamental difference between the two, there really is no reason to suppose they are so similar that this difference cannot be ontological.

**Academic collegiality: An example of mc non-"charity":** *The mind–body problem is actually a mistake based in ignorance. Had Rene Descartes (1596–1650) lived and received a doctorate in [neuroscience](#) in this twenty-first century versus having no such degree in the sixteenth century it is extremely unlikely that he would have ever proposed that mind is in any way independent of brain.*

*The mind–brain schism was born out of ignorance and continues due to ignorance of the massive body of evidence that clearly demonstrates that mind is an emergent property of brain; mind is entirely dependent upon brain.*<sup>37</sup>

The above quote misses the point of Descartes view in a typically mc manner - the essence of Descartes' view is not the independence of mind in the sense understood by this and other mc's, but rather that 'mind' is non-material and operates 'parallel' to brain, as Descartes explained quite well. (See extensive discussions of the points in this quote, and a clear presentation of some of Descartes ideas, elsewhere in this paper.) Also, the essential point that as with all nmc's, Descartes knew of nmc directly, in a way that no amount of modern neuroscience can refute.

In the quote above, the addition of the words "*continues due to ignorance*" is certainly not 'charitable', and the OC is meant as a means of overcoming this type of attitude, which permeates much of the science ecosystem and may unfortunately be inherited by the powerful AI's created by mc's and which will likely inherit the mc-nature of their creators.

**Charity, solipsism & the problem of other minds, and the OC:** A personal statement by the author: I tell the OC to all nmc's without caring whether only I exist, and I treat all nmcs as if indeed the external universe exists and they are indeed nmc's, whereas an nmc-solipsist would think of them as lying or deluded mc's.

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<sup>37</sup> From: [Issues and Impediments to Theoretical Unification](#) Warren W. Tryon, in [Cognitive Neuroscience and Psychotherapy](#), 2014 Mind vs. Body (Brain): AR's italics.  
<https://www.sciencedirect.com/topics/neuroscience/mind-body-problem#:~:text=The%20mind%E2%80%93brain%20schism%20was.is%20what%20he%20brain%20does.>

Just as I the dreamer will laugh away the claim of a character in my dream who claims I don't exist, so too when I am awake re the claim of a materialist about my own nmc (who might not exist if I would believe in solipsism) and I will tell all nmc's when I am awake not to pay attention to mc's denial of our essence.

**The OC's version of 'charity':** When an eliminative materialist and a non-materialist dialogue about mind-body, we can maximize rationality of both by recognizing the truth of their statements, as per our OC. If two nmc's and an mc are speaking to each other, each can apply charity to the words of the other - the two nmc's can act and speak as though solipsism is not correct (though of course the fact of the dialogue is no disproof), and both can accept that the mc is truthful about their own ontological status. Mc's - who understandably might not be capable of truly comprehending the OC - may find greater difficulty in reciprocating the charity.

**D) Proposing that some humans are 'philosophical zombies' and others not, can give rise to 'ethically-related' problematic situations:**

- i) it is unlikely that the type of people who will understand this distinction and its implications will take such actions, or follow someone who wishes to do so; also: those nmc's who understand this issue and distinction are certainly a tiny minority, whereas the great majority of people will not understand and therefore neither initiate such actions nor follow along with someone who does;
- ii) mc's will not consider this distinction to be a slight since they believe nmc does not exist and belief in it is if anything a disorder;
- iii) scientific integrity demands the truth;
- iv) from the nmc point of view, the misperception in general society that materialism is scientifically-indicated has caused harm.
- v) As AI grows in capability, the notion of who or what is or is not nmc will increase in relevance, and making distinctions and determinations may become crucial.  
(See more extensive discussion of all this later in the paper and in an Appendix.)

**E) Is the OC counter-scientific?:** However sure one may be that one is nmc, there is no way to prove it (or that nmc exists in general ), and scientifically therefore:

- i) there is no way to include nmc in scientific cosmology (big bang etc), and so there is no scientific theory of how or why nmc exists in our universe;
- ii) given its immateriality there is no way to include nmc in science, and therefore in evolutionary theory, and so there is no evolutionary explanation for the emergence of consciousness and how and why nmc is associated to human brains.  
Since there is no scientific rationale for or even meaning to the 'possession of non-material consciousness', there cannot be a scientific or logical reason to suppose a priori that all

humans possess it. Given this complete blank in science about nmc there is no real reason to assume that people who are biologically and even neurologically similar are necessarily both the same in terms of possession of nmc.

Given all the above, not only is there no scientific reason to assume that all humans possess it just because some do but in fact one can make the opposite point, that from the scientific point of view the astonishing aspect is that some do possess nmc, not that others don't. Limiting our notion of who possesses such a counter-scientific impossible-to-prove property (nmc) to those who insist they are associated to it is a more minimalistic 'violation' of scientific causation and therefore it perhaps can be said that by applying this anomaly to fewer individuals the OC is more in line with Occam's razor than is the usual universalist assumption.

(See more extensive discussion of all this later in the paper and in a fat Appendix with many quotes.)

### **F) Materialists claim they are conscious - is this not proof that they are?:**

As Descartes pointed out:

- i) the brain is where all feelings are noted, and
- ii) there is as far as has been determined so far a complete parallelity between mind and body, ie qualia and brain activity,.

Therefore every verbal assertion by an nmc originates with brain activity, but has an accompanying parallel at the nmc-level. As a consequence there is no assertion about 'feelings' or 'color' by an nmc-brain which will not also be possible in the brain activity of an mc, and so all such verbal assertions about 'consciousness' and qualia can be made by mc's. (See more discussion of this point later in the paper.)

### **Postscript to the above: The polemic aspect:**

One main point throughout the paper is somewhat polemical rather than philosophical or scientific - that one need not accord the materialist viewpoint the courtesy of reciprocity, the collegial academic attitude that an opposing view should be recognized as possibly also being valid - instead one can legitimately state that materialism is false.

Materialist views spread the notion that nmc's are not in fact conscious as they understand themselves to be, and have convinced many who may be nmc that science shows there is no such phenomenon. Since the best defense is offense, this discreditation and delegitimization of the essential aspect of our reality should be countered by nmc's delegitimizing the claims of the mc's by pointing out that they are simply not qualified to make such a delegitimizing determination regarding nmc, and that they are completely deluded in thinking that science supports their view - the general public should not be misled by their false claims, which are really just another form of true-believer pseudo-science.

...

### III: Descartes & “Mind of the gaps”: stages in the evolution of the concept of “mindless materialists”

It is clear that Descartes conceives of our consciousness as nmc not mc. And he believes human speech and rational reasoning require nmc (see extensive quote in the Appendix). However materialists misunderstand this, and think that since speech and reasoning can be produced by automata, that therefore our consciousness can be mc. This misunderstanding derives from two factors:

- a) Descartes misconception that all humans are nmc and would understand what he meant;
- b) materialists’ lack of nmc.

**Explanation:** Descartes stated that he knew he had nmc via his ‘cogito’, which as I point out is deeply and inevitably misunderstood by materialists. He assumed all his readers possessed nmc and would comprehend, but in this he was wrong. So when he now points out the indicators of human possession of nmc - speech and rational thought - it leads materialists to believe that now that automata are capable of these, nmc has been banished. However of course nmc exists, and Descartes was not deducing its existence from the fact that humans speak and can reason, but rather he was saying that nmc exists, and this is a basic undeniable fact that cannot be an illusion - albeit one’s nmc is not provable to others and has no direct outward manifestation on its own - and that nmc also expresses itself in two ways in humanity, and so ***these are external indications of the existence of nmc, but are not the reason one states that nmc exists.*** However materialists misunderstand and think Descartes is basing his statement of the existence of nmc on the fact that humans can speak and reason.

Had Descartes understood that some of his readers will be mc’s, he would have expressed his thoughts more clearly. It is hoped that this paper can help nmc’s better explain nmc to mc’s, and also help mc’s understand why their rebuttals are considered by nmc’s to be irrelevant and missing the point.

**Mind of the gaps:** mc’s may object that the shrinking role of ‘soul’ is a type of ‘God of the gaps’ process, and that now is the time to finally renounce the existence of nmc altogether. However, there is a qualitative difference between deducing that some property requires nmc, and knowing it, directly, via self-awareness. Nmc humans such as Descartes were wrong about speech and rational thought requiring nmc, but they arrived at the conclusion that these required nmc via deduction not directly, as opposed to the notion of nmc itself which is known not deduced, known directly. Materialists of course cannot comprehend this distinction, and so they cannot understand the objectives of nmc-humans to the effect that ‘this is different’. Obviously to mc’s this ‘denial’ will sound immature, non intellectually-honest, and even ludicrous.

#### “There’s something more to it all than (just) the material”

Those thinking about the nature and or origin of everything, usually classified the universe’s content (ie besides the issue of whether there is some deity etc) as composed of three qualitatively different entities/phenomena:

- i. matter;

- ii. life;
- iii. that which makes humans different from other life.

It is only recently - soon after the creation of computer programs which could self-replicate - that scientists came to the generally-accepted scientific understanding that there is no characteristic of life that one cannot also ascribe to that which all would agree is not living. However, several characteristics of humans which today we associate to the brain/mind still led many to consider humans (and perhaps some of the higher-level 'animals') as qualitatively different than all else, ie the divide was not life vs non-life, or matter vs life vs humans, but rather everything vs humans.

What the unique characteristics of a human which make them qualitatively different than everything else was long a subject of speculation, but progressively fewer candidates for this special property remain.

Pointers to the non-material: debunked, roughly in chronological order

Property which necessarily points to the non-material	"Debunked"?: when, how or by whom	nmc claim
existence of the universe → the need for an immaterial creator (God)	debunked by some early Indian & Greek 'atheistic' thinkers, etc (who may have been materialists)	reality = the material universe + a non-material aspect; perhaps a material universe can indeed arise on its own, however separate considerations are involved when considering the origin of the non-material aspect. of reality (nmc) - however it may also be that a material universe cannot exist except as contingent on the existence of nmc
universe-maintainer (after creation by a God)	some ancients indicated that this was not necessary: Descartes, Laplace <sup>38</sup> , etc.	we only know of the existence of the material universe due to our nmc, and indeed it may be that at any moment the material

<sup>38</sup> [https://en.wikipedia.org/wiki/Pierre-Simon\\_Laplace#I\\_had\\_no\\_need\\_of\\_that\\_hypothesis](https://en.wikipedia.org/wiki/Pierre-Simon_Laplace#I_had_no_need_of_that_hypothesis)

Stephen Hawking said in 1999,<sup>[64]</sup> "I don't think that Laplace was claiming that God does not exist. It's just that he doesn't intervene, to break the laws of Science."...

Faye thought that Laplace "did not profess atheism",<sup>[81]</sup> but Napoleon, on Saint Helena, told General Gaspard Gourgaud, "I often asked Laplace what he thought of God. He owned that he was an atheist."<sup>[87]</sup> Roger Hahn, in his biography of Laplace, mentions a dinner party at which "the geologist Jean-Étienne Guettard was staggered by Laplace's bold denunciation of the existence of God". It appeared to Guettard that Laplace's atheism "was supported by a thoroughgoing materialism and not considered related to the realm of 'religion'".<sup>[88]</sup> But the chemist Jean-Baptiste Dumas, who knew Laplace well in the 1820s, wrote that Laplace "provided materialists with their specious arguments, without sharing their convictions".<sup>[89][90]</sup>



		universe can only be said to exist (or 'continue to exist') due to our nmc.
soul	soul in modern parlance is associated to the notion of a God, and so it is 'religious' - most of what was attributed to soul (eg by the ancients and even up to Descartes) is now called 'mind' or 'consciousness', whereas 'soul' is not considered to be by most nmc's as necessarily pointed to by the existence of anything.	It is possible to imagine that just as some have nmc and some do not and therefore cannot conceive of it, so too with soul - however there is a fundamental difference: we know nmc exists, and soul is only a 'belief' (though some might claim it is known) (and also: most believers in soul will likely insist that all humans possess it, as opposed to our OC re nmc).
Life	At some point - especially after the invention of self-replicating computer programs - it was realized that there is no property of life that is not also possessed by an entity we agree is not alive. And nowadays a complex electronic device can whizz and hum and flash lights and then when a critical tiny component fails (or the battery is depleted) it can suddenly fall silent, and be in a qualitatively different mode, seemingly having transitioned from 'alive' to 'dead'. So the existence of 'life' does not in any way point to the necessity of any non-material aspect to the universe.	It may be that when writers of prior times mentioned 'life', to some extent - or as regards some aspect of what they were referring to - they meant what we term 'mind'.
human-level language & rational ability	AI either has already or aims to replicate human-level	It is not at all controversial that AI can replicate mc

	language-ability and rational thought. So the existence of language and rational ability does not in any way point to the necessity of any non-material aspect to the universe.	functions and so there is no reason to contested an mc AI-practioner's statement that their creation is like them. Perhaps an AI can also become associated to nmc in ways that the AI-creator is not. The fact that mc's can utilize language in very sophisticated ways and exhibit rational thought of great sophistication, indicates clearly that these do not point to nmc.
values, meaning, moral responsibility	materialists claim these exist/ have meaning, and do so in our purely-material universe, and so their existence does not point to any aspect of nmc;	nmc's know this is true for what mc's are referring to, but not as regards these concepts as meant by nmc's;
consciousness	materialists claim nmc does not exist, only mc, and so there is nothing left on the list above (ie 'pointing to the existence of nmc'), and one can safely declare that only the material exists;	nmc's agree that mc's are correct about the materiality of the consciousness of mc's, but state that nmc not only does in fact exist but it is the only existent known to exist, and it is known directly. Furthermore, it is more fundamental than the material, and indeed it is logically possible that the material does not exist at all other than as impressions in nmc. And so existence itself points to nmc.

Though we do not understand nmc any better than our predecessors did, it may well be that the end of this 'mind of the gaps' process has been reached in that the essential difference associated with humans has finally been correctly identified (as nmc), and that this perception of it as the essential difference will always remain. However of course this

certainty was shared by others in the past who felt that speech and rational thought were unique to humans and inexplicable mechanically, whereas of course today we know that this is not so<sup>39</sup>.

We feel sure that this time the difference that has been identified is truly a unique type of distinction since this special property (nmc) is known directly, but of course those before were equally certain for reasons which seemed equally persuasive to them.

In some sense our proposition is not in direct continuation of the scientific/philosophical process of clarification- 'mind of the gaps' - outlined above, since ***our proposition draws the line different than others have, not necessarily between humans and animals or between those humans before and after some point in history when human consciousness emerged, nor between human and AI, but rather between those entities with nmc and those without.*** Specifically, between on the one hand:

i) those humans who are nmc + perhaps some animals with nmc + possibly other nmc-entities on Earth (eg some AI, or some aspect of planetary internet connection, or the planet as a whole etc) + perhaps some entities and structures elsewhere which are nmc; vs on the other hand:

ii) non-nmc humans + mc-animals + mc-entities and structures here and elsewhere.

It is important to realize that there is no accepted scientific theory of what nmc is, when it first emerged, to which brains it was associated and which not, how one would detect whether a particular brain is or is not associated to nmc nor whether nmc can be transmitted from parent to child etc<sup>40</sup>, and so there is no scientific reason to assume anyone does or does not possess it and therefore no scientific grounds to reject this paper's OC.

**Conclusion: All the above is basically intended to make the point that there is no reason to assume that nmc emerged in all of humanity<sup>41</sup>:**

- nmc is not scientifically-encompassed and so science has no input on the issue;
- as a non-material phenomenon it cannot be assumed to be directly genetically hereditary;
- we don't know what it is, why we possess it, how or when we came to possess it;
- we don't understand how it can be that our material brain is associated so closely to a non-material phenomenon;
- we cannot prove to others that we have it and certainly cannot know whether any other person has it;

and so nmc's certainly cannot simply assume that since they themselves are nmc that it follows somehow that all present-day humans are nmc.

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<sup>39</sup> See "Appendix: "Descartes, Wallace, Huxley" for quotes and discussions of their ideas on this topic.

<sup>40</sup> See Appendix for an overview of the historical development of the relevant notions, from Democritus, Epicurus and Lucretius, through Descartes, then Darwin, Wallace and Thomas Huxley, via Bergson, duNouy and Clifford up to Jaynes, then Nagel and Chalmers.

<sup>41</sup>

## IV: Correlation of mc/nmc with MR/TFW: Five charts illustrating various positions

### i) Chart of nmc-maximalist position according to our OC

	Automaton; illusion of free will; TrueFreeWill; mr vs MR			Non(Conscious); MC; NMC:
mineral, vegetable	A	x	x	N
animals	A	x	x	mc
some humans	A	ifw	mr	mc
other humans		TFW	MR	nmc

### ii) Chart of Minimalist nmc: Descartes, Huxley, Einstein

Einstein, Huxley: 'internally inconsistent' in ascribing real MR to automatons (humans).

	Automaton; Free will: illusion vs T(rue); mr vs MR			Consciousness: None; MC; NMC:
mineral, vegetable	A	x	x	N
animals:				
Descartes	A	x	x	mc
Huxley	A	x	x	nmc
humans:				
Descartes	A		MR?	nmc
Huxley, Einstein	A	ifw	MR?	nmc
Materialist	A	ifw	mr	mc

### iii) Panpsychist

	Automaton; Illusion of fw; True Free will; mr vs MR				No Consciousness ; MC: NMC:
mineral, vegetable	A	x	x	x	nmc*
animals	A	x	x	x	nmc

	Automaton; Illusion of fw; True Free will; mr vs MR	No Consciousness ; MC: NMC:
humans	A? ifw? MR?	nmc

\*for examples after ancient times eg see duNouy, and ‘Spinoza’s stone’ (a conscious automaton, eg a clock with awareness): a maximalist panpsychist can perhaps propose that it also possess the illusion of free will, and can also have the feeling of its life being meaningful.

**iv) OC: Materialist position about all humans, and nmc position re mc’s**

	Automaton; Illusion of fw; True Free will; mr vs MR	No Consciousness ; MC: NMC:
mineral, vegetable	A x x x	x
animals	A x x x	mc
humans	A ifw x mr	mc

**v) Example of inconsistent positions**

	Automaton; Illusion of fw; True Free will; mr vs MR	No Consciousness ; MC: NMC:
mineral, vegetable	A x x MR	x
animals	A x TFW x	nmc
humans	TFW ifw x mr MR	mc nmc

We can think about all the combinatorial possibilities, eg: as in chart v above: Has anyone posited that:

- i. humans have true free will but only mc, and mr rather than MR? ;
- ii. MR but only ifw not TFW?

These situations would be strange, seem impossible.

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**Section A2**

TOC

1. Issues of relevance to the proposed experiment, including the challenge presented by Mind/body parallelity
2. Why this “mindless-materialist” conjecture is important:
3. A possible counter-claim: Sleep-paralysis and a sense of presence: source of that which is experienced by materialists or non-materialists?
4. Diagnostic test for identifying whether one(’s brain) is materialist or nmc
5. A mid-point re-statement of the conjecture
6. Understanding materialists: applying the OC to better interpret their statements via a ‘translation algorithm’: Nmc vs. solipsism vs. idealism vs. material self-awareness; The almost but-not-quite idealism of many materialists;
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## 1. Issues of relevance to the proposed experiment

### **Can there be a physical aspect which distinguishes materialist and non-materialist brains?:**

Of course the mind-body ‘paradox’ of total parallelity militates against this, however a different logic points in the opposite direction.

We tend to think of ourselves as located behind our eyes, however it is not physiologically necessary that this be so, and it is possible for some people to change this ‘location’, perhaps even to a point not on the body. The standard location arose either because of the importance of vision or due to our knowledge that our brains lie there. (Investigating non-seeing people is of relevance, as well as analyzing the writings of those living before knowledge of the role of the brain.)

Descartes was instrumental in making the determination that our brain is responsible for our thinking, and so it is natural that nowadays we associate our nmc to it, and indeed damage to brains give rise to differences in awareness etc.

It is commonly accepted that inanimate matter is not associated to nmc, and so the general assumption is to associate nmc only to evolutionarily sufficiently-developed creatures, and specifically to their brain. (It is commonly accepted by all except panpsychists that inanimate matter is not associated to nmc, and idealists do not believe in matter, and so we could say that all others would associate nmc only to brains of evolutionarily sufficiently-developed creatures.)

Given the assumption that somewhere on the evolutionary chain nmc began to be associated with brains, and we would most likely assume that there is some physical biological structural difference between the brain of the predecessor and its descendant nmc-associated brain.

These same assumptions adapted to our conjecture lead us to assume that despite the ‘mind-body problem’ there might be some such experimentally-determinable difference between the brains of two colleagues in a philosophy, biology or physics department, one being a materialist brain and the other a non-materialist one.

**A way forward - using nmc to investigate itself** A compelling case has been made for the lack of need for nmc in physics and cosmology, and indeed physics deals only with that which can be proven - whereas nmc is notoriously incapable of being proven to exist. So it may well be that in the present era we finally reach the conclusion that there is nothing of relevance that

physics has to offer on the topic of nmc, and physics and physical cosmology are inevitably capable of dealing only with the material aspect of reality, which is 'derivative' relative to the fundamental aspect, that of nmc. Possibly, if ordinary scientific methodology aiming at publicly-verifiable results is not equipped for the study of nmc, it will be necessary to utilize as instrument a suitably-trained nmc to investigate its own nmc - which is particularly appropriate for a phenomenon which is directly known by one's own nmc, and (to nmc's) is 'the self'.

Of course nmc cannot be a subject for scientific inquiry since it cannot be proven to exist and science defines itself by investigating only that which can, however scientists are human and can have interests which extend beyond strict scientific inquiry.

### **The challenge presented by Mind/body parallelity**

1. The postulated M/B parallelity implies that not just nmc's but even mc's will speak passionately about free will, moral responsibility, consciousness, so one cannot identify any difference between a universe with and without nmc.
2. Maybe the only exception to the parallelity is nmc itself, ie in a purely material universe no-one would passionately claim they have nmc.
3. If so, this is a key to how to investigate nmc - one would need to focus on nmc itself; only nmc itself breaks through the parallelity, and only by breaking through it can one arrive at investigating nmc rather than the parallel mc-phenomena.

**The parallelity as a possible hint regarding the emergence of nmc:** Perhaps nmc arose as a result of the evolutionarily-earlier parallel mc phenomenon. Nmc's of course possess all the mc states-of-consciousness or mc-self-awareness eg being awake (not being 'unconscious'), and being in a state of knowing what one is doing and thinking (being 'consciously-aware of one's thoughts and actions) etc. Though these are purely mc-states they are correlated to states of nmc-type self-awareness, the feeling of an "I" while one is awake, and the "I-awareness" of thoughts and actions<sup>42</sup>. Perhaps these latter nmc-states arose as a result of the complexity inherent in the existence of their mc-correlates. For example, perhaps mc-self-awareness brings about self-reference which can create paradoxes and level-mixing (see eg Godel Escher Bach) which perhaps causes non computability (see eg Penrose) etc and this creates a substrate of beyond-ordinary physics, which gave rise to nmc. If so, the parallelity is not just a novelty or epiphenomenon and cause of confusion - it is that which creates the sophistication needed as substrate for the emergence of nmc, and it evolved first. However, we can also see from the existence of materialists that mc can exist without nmc's accompaniment.

**Correlating wiring and philosophical positions:** The wiring/organ possessed by one type and not the other can be that:

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<sup>42</sup> This 'Cartesian duality' of mc-self-awareness and sevex-nmc operates for all mc states, and this causes the confusion in dialogue between mc' and nmc's - when the nmc is talking about 'consciousness' it will sound to the mc as though what is being referred to is an mc-state and doesn't recognize the nm-aspect which to them is nonsense, and conversely the nmc thinks the mc is talking about an nmc state but then is perplexed by the mc's denial of the nmc-aspect of that state.

- \*which in non-materialists expresses or detects non-material consciousness, or;
- \* is the source of the delusion of its existence, or;
- \* is the means by which the non-existence or impossibility of non-material consciousness is known by materialists.

**Correlating mind and brain, and the proposed experiment:** There has long been a speculation among non-materialists that (as per Cartesian dualism) though non-material awareness is not linked causally to brain processes, it would correlate to the degree of sophistication of the brain structure/wiring. If so, the presence or absence of non-material awareness may be correlated to or due to some difference in brain structure. (whether of the presence or absence of some brain wiring or organ etc).

This brain-difference may possibly originate with genetic differences.

All the above of course assumes some type of interdependence of mind and brain whereas the entire force of the mind-body problem is that if mind is immaterial then it cannot interact with the material and so not only can mind not affect body but also the physical structure of the brain cannot influence mind. We do not attempt to resolve or even address this hoary conundrum, in the hope that what would be learned via the proposed experiment will be enlightening on its own.<sup>43</sup>

However, in some sense, given that nmc is known directly to nmc's, it is perhaps appropriate that it itself is the only indication of its existence, and that the only effect of nmc on the material-universe (we discuss the issue of free will separately) is the very knowledge in the brain of an nmc that one is nmc, and this does not exist in the brain of an mc.

If one can discover where in the brain this thought originates, and how, perhaps we will find some difference between brains in which this does and does not arise, eg in the wiring or deeper structure of the brains of nmc's vs mc's.

## 2. A possible counter-claim

### **Sleep-paralysis and a sense of presence: source of that which is experienced by materialists or non-materialists?**

a) In comparison to the 'self' as described by "non-materialists", what is the self as felt by materialists - what is it that they write about and mean when they refer to consciousness? It is interesting that some materialists also think that there's some sort of 'problem' involved, albeit it is not the problem that non-materialists mean - why do they think there is such a problem? Maybe they DO experience something mysterious, just that it is not what non-materialists experience?

b) Perhaps the sense of presence indicated in sleep paralysis is the source of what materialists consider their sense of self, which the materialist mistakenly believes is what is meant by the

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<sup>43</sup> Note: Given the above premise of sophistication, one does not expect to find awareness in creatures with rudimentary brains/neural interconnectedness, however of course panpsychists would argue this point; also: as Hofstadter's "ant fugue" argument it may be that these creatures are individually neurons in a higher-level mind. Also, in the idealist's view, and possibly in the panpsychist as well, various of the dualist's mind-body conundrums vanish or are simpler to resolve.



non-materialists when referring to (self) consciousness, ie materialists too have a 'sense of self', but not of a “non-material consciousness”.

Thus when they propose a resolution of the ‘hard-problem of consciousness’ they are merely referring to a far less difficult problem than that which is inherent in a material universe containing “non-material consciousness”. However since both sides are using the same terminology and neither have any way of making the other understand what they are talking about, there is confusion.

c) Alternately, perhaps it is the non-materialist who is deluded, and is experiencing a “sense of self” as part of a malfunction of the brain which provides them with a sense of presence similar to that experienced during sleep paralysis, and misinterpreted as “their non-material self”. See [https://docs.google.com/document/d/1x\\_LgMXTAUSDOWozFRjT3JguMa96Rkv21aDWeCPOxQbs](https://docs.google.com/document/d/1x_LgMXTAUSDOWozFRjT3JguMa96Rkv21aDWeCPOxQbs) for an outline of this idea, as well as proposals for experiments and commercial applications.

### **3. Why this “mindless-materialist” conjecture is important:**

It is unfortunate that the hard-nosed eliminative materialists have somehow set the tone of ‘the scientific community’, and especially in ‘the academic physics community’, and though science and particularly physics and cosmology is a quest to understand fundamental aspects of our reality and nmc is the most fundamental of these, nmc has become virtually a taboo subject for physicists even for private discussions outside their departments (where it belongs since the unprovability of nmc means it is outside the purview of science). A small minority has somehow managed to impose its own limitation (lack of nmc) onto the general intellectual climate of our civilization<sup>44</sup>, <sup>45</sup> with the effect being the denial of the existence of that which is most fundamental (to mc’s of course mc is not at all fundamental - and nmc’s would agree - and so mc’s are sure that whatever nmc’s mean by nmc it is also not fundamental, indeed it is meaningless and false).

We might prefer out of collegiality not to say “materialists are mindless, so there’s no need to take into account their words about mind”. However, to free ourselves from this nmc-denial,

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<sup>44</sup> This is in some sense paraphrasing the famous statement of a well-known anti-materialist, Alfred North Whitehead’s, see Appendix.

There is a progression as to what is assumed to exist in some historical period that is rejected in a later period (soul, life after death and reward & punishment there, free will, nmc), and what is assumed to be the effect of denying its existence. Descartes decried the effect on civilization of the denial of reward and punishment after death and thus passionately defended the existence of ‘the soul’, however Huxley who lived in a later period demurred and today ‘soul’ has indeed been excised from rational paths. Whitehead made similar comments about denial of free will and the effect of this on civilization.

Here we bring this to the next step, railing against the effect of denial of nmc, where we limit ourselves to nmc since that (as opposed to soul and free will) is known by nmc’s to exist, albeit unprovably, in contrast to that which nmc’s may believe in but do not know - eg a transcendent-type of moral responsibility - or that which is required to support some other belief - eg the free will required for the type moral responsibility nmc’s believe in. We are contesting the claims by those who do not possess some characteristic that we too do not possess it, though we know we do.

For more discussion see the relevant Appendix, and an ‘accompanying paper’ to this one which discusses “material-transcendent moral responsibility”.

<sup>45</sup> Of course we should openly acknowledging that though nmc exists and is the most fundamental aspect of reality, it is not in the purview of physics and the other exact science (see extensive discussions of this topic from the physics point of view in the accompanying paper “[Why Consensus..](#)”).

to overcome the intellectual dominance of an extreme camp, we do need to be forthright and state unequivocally that **there is no need to be deterred by those who claim nmc does not exist, because it is a fact that it exists.**

Then, having re-set the tone on this topic, the next step for us as a civilization and culture would be to take the appropriate steps to discover more about nmc, to develop our own nmc, and perhaps even to use it as a tool for discovery, etc<sup>46</sup>.

#### 4. Diagnostic test for identifying whether one('s brain) is materialist or nmc

It may be that the way to determine which camp a brain belongs to is not straightforward<sup>47</sup>. For the survey one can try using these questions, where in each the mc's would presumably choose the first options and nmc's the later ones:

- A. When you see a blue-colored object, where does the 'blue' reside - is it a molecule in the object, is it in the photons, is it a neural current, or it is a sensation in the 'mind' separate from - but correlated with - a neural current?
- B. When you feel sad or happy, are in a state of wonderment or are feeling compassion, are these feelings electrons and chemicals in your brain or are they something not quite physical (though they are directly correlated to the electrons and chemical signals etc)?
- C. You could be a brain in a jar in a large universe, or the large universe itself might not exist only you exist but are hypnotized or dreaming. However is it possible that not only does your alleged body and brain not exist, but even **you** don't exist - ie can it be that you actually are an illusion, perhaps of some other entity? Can it be that you are

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<sup>46</sup> One can tabulate different types of nmc experience and assign to them an order of sophistication, eg with passive awareness at bottom and appreciation of color or music higher, and a feeling of compassion yet higher etc, and perhaps add the feelings experienced during some 'emotionally-powerful' group-event, and the feelings of deep connection between two people, and the sense of connecting to some higher level entity etc, and try also to induce such feelings in the absence of direct sensory input by manipulating the brain to arrive at the desired correlated brain-state, and learn to develop the intensity of nmc-experiences, and combine various types, etc

Perhaps we can simulate the type of material evolutionary brain-development which led us to what is presumably higher-level nmc-experience than is available to lizards and mice by finding the material aspect of (deep) brain structure or wiring and augment it mechanically or genetically and thereby bring about experiences we would categorize as higher on the scale than those previously experienced by humans.

Note: It is ironic and perhaps not coincidental that on the one hand the quintessential feature Descartes noted (and expressed) was about the "nmc-I" whereas maximal development of nmc may lie in transcending the "I" as in a state of deep self-less or even self-sacrificing compassionate activity.

<sup>47</sup> It is simple if one can ask them whether they agree there exists material-independent nmc (and so irrespective of whether or not the universe exists or there is a brain, or eg it is a fact that an "I" exists, even if nothing else exists as substrate to the "I"); however mc's will likely simply respond that they don't understand or it is gibberish or impossible. The diagnostic questions designed by nmc's and mc's will themselves likely be quite different. Possibly, nmc's answers will be unambiguously indicative of their category, especially if the answers they give are similar to the way the author would respond, whereas it would be difficult for a nmc like the author to determine beforehand what a materialist would say and whether all such would have similar answers. (and so perhaps as indicated above the only way will be to see if the mc responses differ clearly from the nmc responses and or if the mc's seem to the nmc questioner to not exactly even understand some of the questions).

a character in some being's dream? Or is this impossible since you know of your own existence<sup>48</sup>?

- D. If you think of yourself at the most basic level of what "you" are, are you a "thing" like an electron or a molecule or a rock, or an unplugged hard drive with lots of software and an OS on it, or is there some level to "you" which is more like '**thinking about** a thing' than just **being** the thing which is thought of?

A preliminary survey different than the outline above was sent to a number of colleagues - see some relevant [preliminary survey results](#).

Note: For an analysis of a conversation with a materialist colleague and friend, see the accompanying paper "[Why consensus](#)."

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### 5. A mid-point re-statement of the conjecture

A certain type of phenomenon exists in our reality, and its existence is sensed by certain brains. To these brains this phenomenon is the most fundamental level of reality, more than that of the material universe. These brains tend to communicate to other brains about their "non-material consciousness", however there are other brains which deny any such non-materiality exists or even can exist, and that the notion is absurd, impossible, and that the brains making these claims are deluded, and these brains refer to themselves as 'materialists'.

This paper is written from the non-materialist perspective, and the conjecture proposed here is that the 'materialist' brains lack that which enables the "non-materialist" brains to detect the non-materiality. Obviously, materialist brains will disagree and posit that it is the non-materialist brains which are somehow lacking and due to that they perceive a non-existent phenomenon.

Possibly, that which enables a brain's detection and 'connection' to non-materiality is an organ or wiring or deeper-level sophisticated structure. Of course as Descartes pointed out, if the material and non-material are qualitatively different, then there is no way we can conceive for them to interact, and it would not seem to make sense that any physical aspect of a brain could be involved in the detection and interaction with non-materiality. Nevertheless, the fact is that our consciousness is non-material and that it somehow is associated to our brains, and so it makes sense to at least try to compare the brains of materialists and non-materialists at the very deepest levels, to try to determine what might be the most sophisticated subtle way in which they differ. (Even the materialist might be

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<sup>48</sup> nmc's could agree they could be a character in someone else's dream if the neurons involved in imagining them have been interconnected in a way which induced a separate consciousness from that of the being which is dreaming, ie whose brain is hosting those neurons. Of course it might also be that when we dream, this occurs, but it seems unlikely that the relatively few neurons involved would generate a full consciousness, but if it it was a super-alien with massive amounts of neural activity devoted to generating each individual in their dream, then possibly we are indeed conscious characters in a dream (where the dreaming being need not even be conscious on their own). So in theory an nmc and mc can both reply that we could be a being in someone else's dream.

willing to concede that this might be useful, since it could detect the defect in the other type of brain leading to claims of non-materiality.)

Since quantum physics and general relativity are the most sophisticated descriptions of interactions of the most fundamental aspects of physical reality, their combination into quantum gravity (though not yet completely developed) may be even more sophisticated and so (as discussed by Penrose etc) aspects of that theory (eg non-locality/entanglement, quantum tunneling, spacetime-warping etc, and the synergistic combination of all these) might be relevant in identifying the source of a brain's ability to detect & connect to non-materiality.

Note that to many people who study quantum theory and general relativity, certain aspects seems themselves reminiscent of some type of non-materiality, and though this analogy involves a level-confusion (see discussion below and critique of Eddington's poetic 'table' essay), nevertheless the fact of the existence of the feeling in a brain that there is an analogy might possibly be a hint to some real relationship between them.

We also would wish to utilize the most sophisticated tools to try to detect the most subtle type of abilities of a brain, or at least to be able to compare two types of brain, and AI has produced such techniques, and so perhaps what is needed is a deep-learning analysis/comparison of the structure, wiring, genetics, inter-connectivity and deepest-level organization of materialist and non-materialist brains.

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**A central polemic goal of our overall program:** to liberate nmc scientists from the feeling that even in their off-time outside their academic department they ought to deny or ignore the existence and nature of nmc. We wish to convince them that although indeed nmc does not fit into the criteria for topics researched in a physics department they can safely deny or ignore the materialism expressed by some colleagues, which permeates much of the environment in scientific circles<sup>49</sup>.

To accomplish this, we wish to show nmc's:

- why there is no compelling reason to assume that all humans today possess nmc;
- why it is reasonable to assume that materialists indeed do not possess nmc;
- why given the nature of nmc it is perhaps to be expected that those who do not possess it cannot understand what is meant by those speaking of it;

In which scientific/philosophical field must one be expert to make an authoritative pronouncement that nmc exists? Actually, the relevant statement is not "nmc exists" but simply "I possess nmc", which is an interesting combination of personal statement about oneself, and science plus philosophy. So one needs to ask "In which scientific/philosophical field must one be expert to make an authoritative pronouncement 'I am associated to a consciousness which is non-material' ".

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<sup>49</sup> See brief discussion in Appendix "Can physics eventually include nmc?", and extensive discussions in the accompanying paper "Why..".

An anecdote re proofs of the non-existence of God or disproof of the ancient date of the bible: Experts in each relevant scientific profession (physics, biology, archaeology, literary criticism) outline the limitation of their own science and express the understanding that their specialty is inadequate to the task of a rigorous disproof - however, each thinks that those in the other fields have succeeded in disproving it. As applied here, we would claim that:

- a. no field is qualified to 'disprove' the existence of nmc;
- b. any nmc is qualified to know it exists;
- c. any modestly scientifically or philosophically-trained nmc will know that it is "non-material".

In being self-known, nmc is uniquely suited to this democracy of expertise about it.

Nevertheless, although one need not be a science luminary to make this statement authoritatively, it helps to hear experts in relevant fields endorsing nmc, especially to counter the pronouncements of mc scientists who might state authoritatively perhaps on the basis of expertise in their field that nmc does not and cannot exist.

The accompanying article "Why.." -directed at physicists - presents relevant statements by prominent physicists, and below we present quotes from the prominent nmc life-scientists (naturalists, biologists etc) whose insights led to the development of the theory of evolution.

The terminology used in some of the below quotes might be somewhat anachronistic, and sometimes the subject is not described as consciousness but rather some other word is used such as 'life' or 'soul', however we would claim that these terms probably meant to the nmc's among them what we would mean today by nmc, or had they lived today they would have agreed that nmc is the appropriate phenomenon (see eg Huxley's statement about Descartes' terminology).

Our contention will be that based on all the analyses expressed via these quotes one can legitimately conclude that there is no compelling reason from the life sciences to assume that all humans today possess nmc.

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Since the word 'consciousness' (or 'mind' or 'awareness') has a totally different meaning to the materialist and non-materialist<sup>50</sup>, nmc is not at all the same as the materialist's "consciousness", rather it means a phenomenon which materialists say does not exist - maybe they would say cannot exist;

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**Terminology: What mc is not:** A machine and a computer can be built with an mc, many animals have one, but this is not the interesting mysterious phenomenon of nmc. However, to an nmc the term mc would not even be appropriate, since the "c" in nmc is by definition "nm", however science and language are consensual and mc's consider themselves to possess a "c" as well, and so we agree to call what they possess a "material consciousness", but not that it is

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<sup>50</sup> On the site associated to this paper we provide a brief overview of the history of the terminology which has been used in the past, eg by Lucretius, Descartes, Darwin etc, and examples of present-day confusion and ambiguity in the papers and books on the subject.

in any way in the same category as the 'consciousness' in "nmc". So mc is not "on a par with nmc, just that it is mc"; instead, the meanings of "nmc" and of "mc" have very little to do with each other, and in fact the major intent of the terms mc/nmc is to stress how they fundamentally differ rather than how they may overlap.<sup>51</sup>

Both terms mc and nmc relate to people, and to a reflexive aspect, but the difference in their meaning is much more important than this overlap. That is, although nmc can perhaps be considered in some way as a nonmaterial analog of mc, they are not the same at all, especially since nmc's also possess mcs, ie it is not that people possess either mc or nmc, but rather they possess either only mc, or both mc+nmc.

So one could say that nmc's possess both reflexive mc and its nonmaterial analog - reflexive nmc. But stressing the commonality - that both are reflexive - can obscure the qualitative, significant, fundamental difference between them. Nmc is mysterious and fundamental, whereas mc is mechanical and in no way mysterious or fundamental.

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**Defining the abbreviation 'sevex' in the interest of disambiguation:** We'll sometimes use an abbreviation<sup>52</sup> to represent an aspect of the essence of that which is in dispute between materialists and non-materialists:

"sevex" = a "non-material **Self** which is self-evidently-existent-experiencing".

'sevex' will include nmc, the 'self', the self's experience by nmc, and the qualia associated to that experience, ' etc).

Just as with nmc, we may also refer to people or brains as being sevex (which is thus both singular and plural) or sevex may be considered as the self itself.<sup>53</sup>

An example to illustrate this usage:

- Sevex claims it is self-evidently-existent, which seems like an impossibility to materialists.
- Sevex proclaims it is a "self", which exclaims "I am", and states confidently "the very fact that there is a thought 'I am' is sufficient indication that indeed there is an "I" ; all of this seems absurd to the materialist since they lack sevex.

Though sevex will - as noted - be taken as by definition being non-material and inclusive of nmc, we may on occasion refer to "sevex-nmc" in order to explicitly include both.

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## 6. Understanding materialists: applying the OC to better interpret their statements via a 'translation algorithm'

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<sup>51</sup> As an analogy: The term 'I expect x' has two meanings which are very different but with some overlap - one is something like "I demand that x be fulfilled" and the other is "I have reason to believe that x will occur". They are both about one's attitude regarding a future event, but the difference is more important than this overlap, and it would be useful if there were two different words to convey these two meanings, especially in order to prevent misunderstandings.

<sup>52</sup> It would of course be presumptuous to 'invent a term', and there is no expectation that it will be adopted, the intent is only to use it here to help clarify the notions central to this paper.

<sup>53</sup> We will in some contexts use this term 'sevex' and 'non-materialist' interchangeably.

**Proposition:** An nmc, when reading the writings of an mc about ‘consciousness’ or ‘mind’, should instead think of the mc’s discussion as being actually about something other than nmc.

**‘Translation’ via substituting ‘mc’ for ‘mind’:** When reading a statement such as that presented and critiqued earlier, *“The mind–body problem is actually a mistake based in ignorance. ...The mind–brain schism was born out of ignorance and continues due to ignorance ...”*<sup>54</sup> it can be very helpful to have in mind that it is being made by an mc - a being without access to nmc - and is actually referring to brain-properties which are probably possessed also by nmc’s. Although it claims to be referring to ‘mind’, it is written from a perspective of complete lack of understanding of what nmc is, and so we need to apply the statements such as the non-independence of mind instead to eg the non-independence of (our brains) software from (its) hardware. In this of course nmc’s can agree.

The mc thinks they are showing nmc’s they don’t possess nmc, when in fact all their fascinating neuroscience discoveries are about the mc that nmc’s also possess. Mc’s think their discoveries and pronouncements ‘solve’ the ‘mind-body problem’, which they don’t understand, because they don’t have the ‘problem’ because they don’t have a mind, only a body. Of course there are indeed fascinating discoveries made by neuroscience, just that nmc’s should understand that mc’s misuse the term ‘mind’ and so their statements need to be ‘translated’ via judicious substitution of ‘mc’ for ‘mind’.

### **Nmc vs. solipsism vs. idealism vs. self-awareness**

Another form of translation can for example involve the substitution of notions arising from “the non-disprovability of solipsism” for some key words used by mc’s which purport to relate to the sevox-self, and by using this translation-key the nmc may find that what the mc says will make much more sense<sup>55</sup>.

Based on the author’s analysis of the statements of materialists, it seems some mc’s think that when non-materialists speak of the properties of “consciousness” that they are referring to some combination of two ideas, the first is obvious, the second is not:

- i. the prosaic notion of an entity which can include some aspects of itself in a model it has of its environment etc (and start speaking of itself etc);
- ii. ramifications of the non-disprovability of solipsism.

### **What nmc is, and what it is not:**

Of course non-materialists understand that these are completely different from nmc.

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<sup>54</sup> From: *Issues and Impediments to Theoretical Unification* Warren W. Tryon, in [Cognitive Neuroscience and Psychotherapy](#), 2014 Mind vs. Body (Brain): AR’s italics.  
<https://www.sciencedirect.com/topics/neuroscience/mind-body-problem#:~:text=The%20mind%E2%80%93brain%20schism%20was,is%20what%20the%20brain%20does>.

<sup>55</sup> A follow-up paper is planned, analyzing the writings of materialists to obtain a ‘translation key’ useful for nmc’s both in interpreting what they say about ‘consciousness’ and in conveying ideas about nmc to them.

Some mc's mention 'the mystery of consciousness' but it is not clear what is mysterious. They may refer to i. above and mention the difficulty of creating an AI which mimics humans or even animals in being 'aware of themselves' etc- which indeed requires a sophisticated complex interacting system- however they certainly do not mean that consciousness is non-material.

The survey will help clarify what exactly nmc's and mc's consider mysterious about what they call 'consciousness'.<sup>56</sup>

### **The almost but-not-quite idealism of many materialists: Solipsism and dreaming**

ii) It could have been the case that our brain was constructed in such a way that we would always be aware of whether we were dreaming. The fact that no-one seems to dispute Descartes' claim that we cannot distinguish dream from waking, seems to point to the universality of this brain-feature.

iii) **The non-disprovability of solipsism:** It is very interesting that solipsism seems universally acknowledged to be non-disprovable<sup>57</sup>. One might have considered the possibility that there are brains which know the external universe exists - and as firmly as the non-materialists claim they know that they themselves exist but that the external universe might not.<sup>58</sup> That the external universe may not exist and that even if it does all we can know exists is that which is in our sensory perception is naively almost like the idealist position, but it is not, since there is no need for postulating any non-material aspect. That materialists accept the non-disprovability of solipsism seems rather interesting - and is perhaps significant, telling us something about the brain and about the universe and 'physicality vs information'.

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<sup>56</sup> Review of know nmc properties: **The essential difference between mc/nmc: "Being conscious":**

The terms "being conscious" rather than having fainted and "having consciousness" in the sense of sevev are so similar they can cause confusion, eg of course materialists are 'conscious' in the sense of not having fainted, but they do not possess sevev.

**Three attributes:** The essence of the 'consciousness' claimed by non-materialist - and what makes it so unique and impossible-seeming to materialists who do not experience it - is that is a phenomenon which is:

- i) qualitatively different than the material, and sui generis;
- ii) is known directly, automatically, internally, and is not provably-existent to anyone else;
- iii) defines a 'self'.

Although all three are essential aspects, the issue we are concerned with here is about nmc.

<sup>57</sup> The survey is nevertheless designed to test these assumptions.

Maybe some brains don't believe they can be a brain in a jar, and would say that Descartes was correct that while sleeping one cannot discriminate (usually) this from being awake, but that is true only for their sleeping brain whereas in their waking brain this discrimination is possible. Or perhaps some brains are always aware of their actual state, waking or dreaming. Given the popularity of movies such as "Tron" and "The Matrix", and that there did not seem to be any sizable group of viewers who were perplexed at how it could be that the humans were not aware that they were not really experiencing 'reality' (they would not feel The Matrix to be a metaphor for our own waking existence, and would only interpret the movie as being realistic since those in it were in an induced dreaming state) and this implies that indeed the non-disprovability of solipsism is accepted universally.

<sup>58</sup>



If there was no sex in the universe, but intelligence evolved, eg computer-type-brains operating according to the naturalist's scheme of things, would they originate the notion of solipsism? If not, then the origination of the notion of solipsism as the minimalistic scenario would be an indication that materialists have a different type of brain than does AI.

### **The essential difference between solipsism and idealism**

Any materialist can agree that it might be that only their own brain exists, in a vat, and all their friends and family and their home and their entire life and human history is all illusion fed by machines into their brain as it sits in its one lab vat, and maybe there never was a human race, this one brain was crafted specially and a whole set of false memories implanted, but there were those who created the lab and the brain and programmed the illusions. Maybe all has vanished over time and what remains is only one vat with one brain and its own power supply etc. This is a type of solipsism. However, a materialist will insist that there must be some physical structure supporting this illusion, eg the one vat with power supply. Or perhaps there is simply one computer chip running a simulation, there is no brain at all, there is only a micro-battery and micro super-chip running a simulation of a universe and a planet earth, or even it might be that the simulation is of one intelligent entity which has been taught to call itself 'a human' which is made to believe that there are a planet-full of other such entities. However a materialist - who might be that one simulated 'human' will insist that there must be some physical computer-chip which does exist and is running the simulation which is a set of electrical currents made up of physical electrons. In contrast, the nmc can imagine a scenario in which there is only thought, only nmc, without any physical substrate, not only no need for a lab or computer but also no need for a physical universe at all, not even that one chip with its electrons - only nmc. This is the nmc version of solipsism, and it is this which is called 'idealism' This is inconceivable to materialists.

Indeed one might expect that in a purely-material universe the notion of idealism and its form of solipsism would not even arise. (See below for an analysis of the implications of this type of reasoning for the mind-body problem.)

It is crucial that nmc's understand this distinction, and understand that when they are referring to solipsism, it is not necessarily what mc's are referring to by this word.

Also, it is possible that when mc's refer to the mystery of consciousness, they mean the notion that we are circuits which cannot even prove that we are part of a brain in a body, we might be a simulation, and the notion that there is an "I" is an illusion, it is only part of the simulation, but they are **not** referring to the mystery that nmc's are referring to, that we might not even have any physical structure, that there might not even be any physical universe at all, and there might only be ourselves as thoughts.

In other words there are two separate (somewhat-thematically-related) mysteries:

- 1) Nmc's know as an incontrovertible fact that we do exist (each individual knows they exist, not others), to the extent that it might be ONLY us that exists and nothing at all else, or ONLY "I" which exists and nothing else. And so - as Descartes clarified -

whether or not there is a physical universe with other entities, there remains this one fact which is known to be true no matter what else is not true - that "I" exist.<sup>59</sup>

- 2) Mc's and nmc's know of the mysterious 'fact' that we cannot know whether or not there is a material universe external to our material brain, since we might be a brain in a vat or a simulation (which is software, which is eminently 'material').

The mc does not experience 1, only 2, however they do not realize 1 exists, and when they hear nmc's (like Descartes or modern-day nmc's) speaking of 'mind', ie about 2), they think that the speaker is referring to 1) but does not sufficiently understand the notion, and that perhaps the speaker is inventing aspects which are unnecessary, and in fact are wrong. This is perhaps what happens when mc's critique nmc notions - they misinterpret the discussion as being about brain, and about the mystery of material-solipsism, and confidently and smugly debunk the expressed notions - a debunking which would indeed be correct if the discussion had been about 2), but is incorrect since the mc was expressing ideas relating to 1.

### **Solipsism, mc self-awareness, sevox-self-awareness**

**Solipsism vs Idealism: The distinction between Descartes' "dream", and "mind":** When Descartes presents his scenario of dreaming, he assumes something like the unprovability of solipsism. However this is not the essential point of Descartes - instead his major point is the non-materiality of thought; ie not that one cannot distinguish between thinking inside a brain in a vat and one in a body, awake or asleep, ie solipsism, but rather that a consciousness, a thinker - or a 'mind' - indubitably exists irrespective of whether they are deluded to think they are not in a vat or not dreaming.

A computer can be constructed to 'dream' in some mechanistic electrical-current-based way, and to wake up and realize it was dreaming, but this does not mean that it has what Descartes considered to be 'mind'.

An nmc can imagine a disembodied thought independent of any physical substrate - and can extrapolate from that to a purely mental realm or the idealistic scenario, whereas mc's will only imagine or enfranchise the possibility or understand the notion of a thought as eg software etc on some physical substrate, and software is itself of course ultimately physical (electrical patterns etc).

It is the insistence on the non-materiality of the mental realm which distinguishes nmc's from mc's.

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<sup>59</sup> A materialist can attempt to eviscerate the non-disprovability of solipsism by defining the rest of the physical universe as part of the undeniably-existent system producing its perceptions. In other words the materialist can state that there is undeniably some physical brain activity corresponding to the 'thought' of its self-existence which is a set of electrical patterns in physical neurons etc, whether it is a brain in a jar or in a skull attached to a body, and the brain and jar or body are part of a larger system which is part of a yet-larger system, the physical universe, and so the fact that there is knowledge of self-existence then there is necessarily an entire universe existent. However the non-materialist speaks of solipsism in a different sense entirely, ie that only the thought itself can be known to exist and it may not need a physical substrate and so perhaps there is in fact no physical universe at all, only the immaterial thought "I exist".

That is, Descartes point re dreaming is not just that mind and body are different or separate but rather that although I cannot know whether or not I am awake - or in today's parlance whether or not I am a brain in a vat etc - I do know for a fact that I exist, in other words that there is an "nmc-I" (or ('sevx-awareness')) in a way that would not be the case for an mc entity such as a simple computer which can use a diagnostic self-checking program to determine it is plugged in and operating and print that message out - and further he makes the point that this is the most basic fact that I can know.

**Great expectations for idealistic solipsism:** Two minimalistic self-consistent 'cosmogenic scenarios' which resolve the mind-body problem by denying its basic supposition - that there is both mind and body - are:

- i. solipsistic idealism (that only my "I" exists);
- ii. eliminative materialism.

However the latter is false (as known to nmc's), and therefore does not count as a resolution.

It is astonishing that there is no disproof to the former, and this author is convinced that one day the significance of this will be understood, and exploited to produce a deep new understanding of our reality<sup>60</sup>.

### **Material versions of Platonism and Paganism**

As discussed briefly above, one can imagine a sort of material version of Platonism and perhaps it is possible that mc's who think deeply about mathematics and logic are led to believe in such, and might write of their notions. Of course an nmc encountering such a discussion might automatically assume that what is meant is the nmc-version, and so it can be useful to survey Platonists as to their intent, and to create unambiguous terminology to distinguish one version from the other.

Similarly, the notion of monotheism when it was introduced as a new idea may have been meant as the introduction of an nmc-deity in contrast to the material deities of

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<sup>60</sup> Einstein exploited the equivalence principle(EP)'s assertion that a particle near a massive object is inertial - ie that in some figurative sense 'the individual particle cannot prove there is a mass near it', or 'its 'dynamic state' is the same as if there were no masses nearby' (a type of 'solipsism'). This principle was well known to Newton, and exploited by him cleverly in considering the gravitationally-induced motion of the moon within the Earth-Sun-moon system, and in understanding the tides of Earth's oceans. He realized the EP is mysterious and perplexing, but could not figure out its significance or implications, and the EP did not yield any new physics until Einstein showed how it pointed to deep new insights about spacetime - specifically that in the presence of matter-energy there is relative acceleration of neighboring inertial particles (Note: Generally for simplicity we consider a 'matter[-energy] source' which is much larger than the 'particle' and we ignore the effect of the 'particle' on the 'source'. This conclusion is absurd according to Newtonian theory - in order to have it make any sense one is led to require that spacetime can 'warp' due to the presence of the source matter-energy. Similarly, this author is convinced that one day the incredible fact of the non-disprovability of solipsism will lead to deep ramifications.

[Note: In some sense, there is an analogy to solipsism and overcoming it to enfranchise a mutually-inclusive reality: the two particles each know of their own infertility, and though they notice relative acceleration between themselves and the other particle and naturally would attribute this to the acceleration of the other, they agree to each respect the inertiality of the other and thus are led to Einstein's conclusion.

ancient paganism - the idea of one-ness seems somehow more appropriate to an nmc understanding of deity than to a material one. However there can also be a conception of a material being - eg an advanced alien or material being who survived an earlier cycle of the universe and was involved in fashioning the structure of ours. This too can perhaps be clarified via a survey. In any case, specific terms should be utilized to disambiguate the relevant concepts. And attention should be paid to discussions of relevant concepts to distinguish whether what is meant is unequivocally nmc or could also be interpreted in an mc manner.

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#### **Side-note:**

**Survey & experiment:** One of the questions to be explored via the survey: perhaps a certain category of brain will report that it KNOWS something about reality or about "the universe" that even non-materialists do NOT say they themselves know, or make a claim that idealists will actually contest? For example if they claim that they KNOW there exists an external universe, ie they dispute the non-disprovability of solipsism or idealism. If so, is this traceable to a brain difference? And can it be that some brains will state that they know that non-materialists are in fact fully material, not just believe it to be so.

Also, whether respondents of the two types feel the same about proposition that either the materialist is correct about reality and the non-materialist suffers from a brain disturbance, or alternately, perhaps non-materialists are correct, and materialists simply lack the part of the brain which enables detection of the non-material "self".

**A fundamental conundrum:** If the reasonableness of a concept such as solipsism does indeed depend on brain type, can this tell us anything about our universe/reality?

**Survey:** Consider the possibility - to be tested via the survey - that only those with sevox think solipsism is not just nondisprovable but is rational and in fact is the scenario involving the absolute minimum of assumptions, for example perhaps since mc's have a sense of the 'reality of the material'.

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## **7. Disambiguating "Self-awareness"**

**The problem when two sides of a discussion ascribing different meanings to the same term:**

i. The term "self-awareness as used in this paper is NOT what behavioral scientists may mean by it. For example, when an animal peers at itself in a mirror and moves about to investigate those parts of its body which it cannot otherwise see, some will call this "awareness of self" or "self-awareness", but this is NOT what we mean here by this term, rather it is meant in the sense understood by non-materialists.

ii. A machine can report on its own state, and this is a high-level of function, 'self-awareness' in psychology language, but this is NOT what sevox mean by consciousness or self-awareness. However those without sevox think it IS what sevox mean by "consciousness".

**An analogy:** A machine 'A' can have a subsystem 'C' which watches its own function, or at least the function of subsystem 'B' where  $B = A - C$ . It can report to the world on the state of B, and similarly for a human without consciousness, or a computer/AI which can for example state which thoughts it is 'thinking', thus exhibiting 'self-consciousness' but this is of course not at all what you and I mean by "being conscious" or "conscious of self".

So materialists can of course be "(self)conscious", but it is not at all what we mean by "having a consciousness".

Similarly for the reverse: a sevox-consciousness can be engaged in introspection without being aware of its full state and all its emotions and motives etc (ie as the typical 'Martian' male sevox-conscious human), so since the entity is not monitoring its own systems, it is 'unconscious', but it still can be introspecting and fully engaged with its sevox-consciousness.

**self-reporting type of self-awareness vs sevox-self-awareness:** An AI-robot with a map of its exterior structure and diagnostic of its operations and vision can learn from experience that collisions may cause it damage and when encountering a mirror can survey itself and be 'interested' in seeing different parts of itself to which it has no direct visual access and which can be matched to the exteriors of other such devices that it sees. Just as an animal does. This type of 'self-awareness' is completely physically possible and involves nothing that is not 'material', and ***therefore we can conclude with certainty that it is NOT what non-materialists mean by "self-awareness" since they state unequivocally that there is no known method of constructing what they term consciousness or awareness or self awareness and no known method for detecting its existence other than 'internally', ie by an awareness which knows itself.***

iii. Well-known paradoxes arise if a computer which self-monitors its states can predict its responses in the future, but this complexity is not what is meant by sevox self-awareness.

An important aspect of the distinction between "awareness" as meant by mc's and nmc's arises with the following question: Perhaps all biological human possess non-materialist-type of consciousness, but materialist brains are not able to sense its existence ie they lack a "self-awareness", and it is THIS which will be the difference between the two types of brains, it is this lack of 'self-awareness', which causes materialist brains to think they do not possess the type of consciousness which the non-materialist proposes.

For brevity, for most purposes we will blur the distinction between awareness and self-awareness. Also, we will consider the terms 'awareness', 'consciousness' and 'mind' as understood by non-materialists as basically synonymous, but will prefer to avoid the terms since they are ambiguous.

## **Issues of ontology vs terminology, and attempts at disambiguation of '(self)consciousness/a(self)awareness'**

### **Ontology vs terminology**

**Proposition:** The two contrasting terms "non-materialist" (dualist/Idealist etc) and "ontological/eliminative materialist" can be accepted as *biological categories*, established via self-examination by a brain, which is uniquely equipped to self-categorize.

Thus "ontological/eliminative materialist" or "non-materialist" can be perceived not as philosophical positions or schools of thought, nor as a characterization of people according to their philosophical positions, but rather one could use the terms to refer to the brain-types, and to the associated reality perceived - or perhaps more correctly 'detected' - by different types of brain.

Indeed at various junctures in this paper the assumption will be that the philosophical position on this issue indeed indicates the biological nature, so we will refer not to schools of philosophy but rather to "brains", and specifically to "materialist brains" and "non-materialist brains".

**i. Disambiguation: Utilizing the term 'sevex' or 'nmc-sevex' to enable clearer delineations;**

ii. Elmat as possibly conflicting with the theses of the idealist, dualist and panpsychist.

Why a term such as 'sevex' may be useful:

a. There is an essential commonality underlying the idealist, dualist and panpsychist etc as contrasted to materialists - however saying "they all believe in consciousness" is meaningless in this context of contrasting the two sides because materialists say they themselves believe in this as well, just that the nmc should realize that they mean something else by this term. Using instead a specially-designated term (with the meaning encoded in 'sevex') will therefore enable us to make the unambiguous statement: "materialists say sevex does not exist, whereas dualists, idealists and panpsychists agree that it does".

b. Materialists could say "'sevex' is the nonsensical illusory impossible-to-exist alleged phenomenon proclaimed by dualists, idealists and panpsychists etc", and since there are many different varieties of materialist and shades of nuance and definitions we can take this as a sort of definition of what we mean by 'materialist' in our discussion.

c. We could define sevex - for our purposes here - as that which materialists don't believe exists but idealists, dualists etc do believe exists. In some sense of course there is a circularity if we define sevex as that which materialists don't believe exists, however we nevertheless believe there is intuitive meaning to the terms "materialist", 'sevex', "nmc" as we use them.

c. The idealist, dualist, panpsychist etc may erroneously think of materialists as agreeing there exists 'consciousness' just that materialists think of it differently. To avoid this error, we can use a 'dedicated' term - eg 'sevex' - which materialists can point to as being meaningless, and this will make the distinctions between materialistic and nmc clearer to all.

d. The differences between the idealist, dualist and panpsychist may be so significant in their eyes that the common denominator of 'believing in consciousness' is perhaps not the significant issue to them (and they too might even differ on their definitions of

consciousness, mind and awareness), and so it is useful to have a term which refers to the commonality.

**Panpsychist vs dualist:** Though a dualist should not simply assume that any human-level brain is also conscious, a panpsychist might prefer to assume that anyone with a human brain which is sufficiently complex has full consciousness. However we would consider the existence of materialists as an argument against the "automatic" aspect or "inevitability" of sevev as postulated by panpsychists and as seemingly assumed by dualists. <sup>61</sup>

In any case, in contrast to the issue of nmc-sevev, which is a fact known to all who possess it, the different philosophies of sevev mentioned above are not known or provable, they are believed or deduced, and the acceptance of the existence of nmc is the essential characteristic of the relevant philosophies and in comparison to materialism and similar philosophies is the operative distinction for our purposes here, and so we will henceforth largely ignore other differences

Also, from the polemic perspective we are not truly concerned with proving that elmts exist, but rather to propose that those who protest against the possibility of nmc can be ignored, and certainly their views should not intimidate nmcs, nor should it set the tone for intellectual discourse about 'reality'; so we are not interested here in entering into discussion with idealists and panpsychists or monists of various sorts as to whether or not there are humans without nmc - a thesis which might not be compatible with their philosophies.

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## Section B:

### Zombies, Automata and "Elmts"

How acceptance of the existence of materialists as non-conscious automata can positively impact the debate; Examining & defining terms.

Descartes clarified that nmc exists, and various forms of human-crafted automata (See the relevant Appendix for some vignettes of the historical development of this notion) existed in his time which were not at all considered alive, and they were classified neither as human nor as nmc. He felt that human-level reasoning and speech required nmc, and felt animals did not exhibit this level, and so he concluded that they were not nmc, and were automata - natural rather than human-crafted. Of course there are flaws in this statement if it is meant as

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<sup>61</sup> **Dualists, idealists, panpsychists:** The panpsychists says 'it is mind all the way down', with the dualist's two levels meshed. However *the existence of eliminative materialists is an argument against panpsychism*; the latter is perhaps actually based on the assumption that all humans are (sevev-)conscious, where the assumption is probably based on the need to have all humans be conscious despite the non-conscious nature of their evolutionary predecessors, and so panpsychism is an elegant solution of the mind-brain problem, or an evasion of it. However if as proposed here not all humans are conscious, and sevev is NOT an inevitable feature of sophisticated brains, then there may be no need for the assumption of panpsychism. And it would be imprudent to simply assume animals are or are not conscious. A minimalistic assumption is that consciousness is not all-present or automatic, nor arises for all sophisticated interactions, but is dependent on something else, which might become apparent in an examination of the difference between the brains of materialists and sevev.

[Even idealists might agree there is a difference between a rock and a human mind, and perhaps between a human without nmc and one with.]

[To (those who claim they are) sevev, the mind-brain problem is intractable and they have tried to find a way to mitigate it by postulation, ie the dualist's dual-level and the Cartesian correlating entity - "God". Some dualists will say that at sufficient level of sophistication of the material level the non-material level arises or emerges or attaches locally from a pre-existing background higher level). The idealist has an elegant solution, as does the solipsist.]

rigorously logic-derived since one could counter that animals are in fact nmc just that they don't possess the abilities of speech and reasoning, and this is what in fact Huxley claimed (perhaps Descartes felt that nmc inevitably expresses itself via speech and rational thought?). And today's technology (eg NLP/generative-AI) allows one to argue that human-level speech and rational thinking do not require nmc.

Given these post-Cartesian developments in thinking and technology, it is natural to speculate whether one could craft human-replica automata which are not nmc - which to Descartes would have been inconceivable.

This is of course an aim of AI (though the mc's among the practitioners of course do not specify that it is mc-AI they are intending to craft rather than nmc), and of course this paper presents the proposition that natural human-automata do in fact exist.

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### **The development leading to the conclusion that philosophical zombies (p.z.'s) can indeed exist.**

In ancient times, most philosophies assumed elements that today would be included not in philosophy proper but in the category of religious teachings, and these would have included a soul as a fundamental aspect of all humans, and the properties of this 'soul' included those which we today would associate to 'mind' and so probably it would not have been considered credible that normative humans are p.z.'s.

Philosophers and scientists generally are agreed that there is no proof of the existence of souls, and so one cannot disprove an assertion that someone is a p.z by pointing out that they cannot be since they possess a soul.

Life was shown to be a purely-mechanical (material) process and so the fact that humans are alive was no longer a barrier to considering them to be p.z.'s.

Materialists have convincingly argued that values, meaning, moral responsibility and such as meant by them are all possible in a purely-material universe, and so there is no reason to assume that if someone speaks of values and meaning and moral responsibility etc that they are exhibiting evidence of non-materiality, and so there is no logical objection to the supposition that humans speaking of values etc can be p.z.'s.

Materialist science has largely discredited the notions of an acausal free will without denying moral responsibility for one's actions, and similarly the acausality of true creativity has been 'scientifically' discredited, and so according to this there is no reason to logically deny the possibility that a creative human being is a p.z, and similarly no reason to deny the possibility that a human with what they consider adequate free will for morally responsibility is a p.z.

Materialists have convincingly argued that speech and rational thought require only material processes, and so there is no barrier left to the supposition that human "philosophical zombies" exist, and can be highly intelligent, eloquent philosophers and scientists.

### **Our perspective on (philosophical) zombie arguments:**

Materialism is not a philosophy, it is an expression of a brain's lack of association to nmc.

Conversely, non-materialism is not a philosophical or metaphysical belief, it is an expression of a brain's awareness of the nmc it is associated to.

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<sup>62</sup> It is possible that all humans possess nmc but some do not sense it directly, and indeed human-level speech and reasoning require nmc but many of those who have nmc think they could reason and speak even without it and those who are not aware of their nmc think they don't possess it and that it is obviously not needed for reason and speech



Since physicalists have no idea what is meant by nmc, when they say that 'consciousness arises from material causes' etc, they are NOT actually talking about nmc, they are referring to mc, and of course nmc's have no issue with mc as being material, and there's in fact no need for it to 'arise from' the material. And the physicalists do not at all comprehend what's at the heart of the issue since they are not capable of understanding what nmc is.

So there is no real communication between mcs and physicalists on this issue, and arguments by NMCs against physicalism is futile; they are also wrong-headed in that they assume that physicalists claim nmc arises from the material, but this notion is incorrect since physicalists claim nmc does not and cannot exist - it is only to the nmcs making this argument that nmc is a phenomenon which following Descartes is separate from the material.

And in fact the zombie argument taken as a disproof of physicalism is unnecessary - nmc's know directly that physicalists are wrong about the existence of nmc - but of course they are right when they say they are not associated to it, and their existence is proof to nmc's that nmc is NOT an inevitable consequence of human type brains.

**Neologism/Abbreviation:** Although there are distinctions among 'materialists', we will generally use that term as a catchall, or we'll use an abbreviation of **eliminative materialist(s)** = "**elmat(s)**".

We may also refer to 'elmats' not as those with a certain philosophy but as humans with a purely-material nature who as a result cannot conceive of the non-material, and who therefore espouse a philosophy of 'materialism'.

In the context of concern in this article we will categorize brains as being one or other of the two mutually-exclusive biological types sevox and elmat – or equivalently "non-materialists" and "materialists" - though certainly it may be that there are brains which are neither, and perhaps there are combinations and gradations.

For example:

- Do elmats possess sevox but not know it, ie they do not have sevox self-consciousness, and mistakenly proclaim it to be non-existent?
- Do those with neither sevox nor sevox self-consciousness - ie elmats - nevertheless possess something else instead? Maybe they also struggle to convey to the non-materialist what they feel? Is it associated with the presence or lack of some wiring or structure?

Generally speaking, for the purposes of this paper we will speak only of sevox and elmat, though a wider investigation is interesting, and the survey could be crafted to take into account these possibilities.<sup>63</sup> <sup>64</sup>

As stated earlier, the intent of this paper is not at all to attempt to prove anything, rather to state a hypothesis, raise some speculations and present some proposals. For example, we do not try to prove that non-material consciousness exists - we accept it as a fact known self-evidently. Nor do we attempt to prove that materialists do not possess it - merely to state it as a hypothesis, as the most reasonable explanation for the existence of materialists, which explains much about what they write and say in debates with non-materialists.

### **We are all 'automata' in some sense, however are some of us non-sevox-conscious automata?**

If indeed "zombies" do exist, and the intelligent and educated among them call themselves "materialists", and they take part in the philosophical, scientific and AI debates, they will do so using terminology which has different meaning to them than to non-materialists.

No-one has declared themselves to be a zombie, but they would not be expected to know that they are and so one cannot expect for this to have happened, and one can instead expect them to participate in philosophical debates about whether zombies exist and whether consciousness of the non-materialist type exists etc, *and thereby confuse the debate.*

Materialist brains may claim that zombies cannot exist though they themselves may be such; it may be that the reason it seems impossible to a materialist that an intelligent being lacks consciousness is that the materialist defines consciousness differently and *it is indeed impossible that intelligent beings who are zombies can lack what materialists call consciousness.*

Alternatively, all humans possess non-material consciousness but materialists lack the awareness of theirs, or perhaps the brain-aspect which communicates to others has no access to it. Possibly a brain-experiment can be designed to access other brain-aspects to help make this determination. It may also be possible that inconsistencies in the beliefs of materialists can be found – for example via the proposed survey - which could be explained

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<sup>63</sup> It may be that animals are sevox-conscious but not consciously-aware of it. Humans obviously cannot self-indicate as being in this category, so it is not relevant to a survey.

Note the relevant interesting conundrum: Although the existence of sevox is self-evident, it is ONLY self-evident, ie one's awareness CANNOT be proven to exist to anyone ELSE, even if they too claim to possess the same type of consciousness.

Non-materialist consciousness is the ultimate self-reference - it is a 'self', ie that which experiences – and 'self-awareness' all the more so. Of course a machine mentioning that machine, ie 'itself', is being self-referential, but "sevox-type (self)consciousness" is different – perhaps we can terminologically distinguish them by saying that the machine is engaged in auto-reference whereas a full sevox-type (self)consciousness is by definition 'self-referencing'.

<sup>64</sup> Note that there is some relationship between these ideas and the notion of "dual systems" in the brain (thanks to M. Zelcer and L Litman for pointing this out).

by the disparity between their fundamental character as sevox-beings and their inability to know this at some important brain-levels.

We do not attempt to prove that zombies can exist, we postulate that the existence of materialists is sufficient indication of this. Indeed, we believe that just as non-material consciousness cannot be proven to exist - but is known to exist to one who possesses it - so too the existence of zombies cannot be proven, but we wish to point out why to non-materialists it should be evident that they do indeed exist.

**A More Impartial Definition of "Zombie" & what we can learn from debates on that topic:**  
There are 'zombie' definitions which real materialists would not agree to if it was understood that it was meant to apply to them, certainly not the definition which appears in Wikipedia<sup>65</sup> (today) "if a philosophical zombie were poked with a sharp object it would not inwardly feel any pain" - zombies would not agree since their understanding of the meaning of the key phrase "inwardly feel" is different than that of non-materialists, and so they declare that they do indeed 'feel pain'.

A more inclusive definition could for example be something like:

" 'Zombie' is the term used by non-materialist-types for a human who does not possess the non-materialist-type of consciousness which materialists say non-materialists also do not possess since it is impossible."

Note: The result below was obtained in the philpapers survey:

Zombies: inconceivable, conceivable but not metaphysically possible, or metaphysically possible?

Accept or lean toward: conceivable but not metaphysically possible	331 / 931 (35.6%)
Other	234 / 931 (25.1%)
Accept or lean toward: metaphysically possible	217 / 931 (23.3%)

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<sup>65</sup> Since there is a great deal of difference between the conceptions of earlier times and of the present-day as regards the notion of 'nature' and 'automata' and of 'consciousness' and of what is possible for a purely-material construct such as a computer vs a human brain, it is not simple to determine who first conceived of what today is termed 'a zombie'. Whether the question at the time was in terms of whether animals have a 'soul', and whether all humans do, or later in more scientific terms regarding the 'mind' of evolutionary predecessors who were humanoid but without the complexity of neural interconnections or quantum-gravity-based interactions of human brains today, whether it was sufficient to induce or be a substrate for consciousness, or perhaps even regarding the consciousness-status of present-day humans. The concepts varied and evolved and reached the modern understandings somewhere along the chain from the ancient Greek philosophers, through Descartes, to Darwin, James, and various writers up to Eccles and Penrose, Jaynes, Campbell, Kirk, and Chalmers.

See also [https://en.wikipedia.org/wiki/Philosophical\\_zombie](https://en.wikipedia.org/wiki/Philosophical_zombie)

To believe that there cannot be zombies means either one is a panpsychist or one is a zombie materialist. In contrast, a dualist will recognize that since consciousness is a mystery and cannot directly interact with the material it cannot arise from natural processes such as evolution, and so there is no guarantee that if a human body (including brain) evolved, that it also possesses sex, so there is no a priori way to conclude that the material brain on its own cannot exist, ie without the associated nmc-sex.

Of course we do not understand consciousness nor therefore its relation to matter, but to simply suppose that zombies cannot exist is to take a stand on the mind-matter relation, it is not a neutral position which is true irrespective of which philosophy of mind one espouses.

Physicalism is wrong inasmuch as it claims to apply to non-materialists as well, however it is impossible to prove this since only non-materialists will agree or understand - and it is not necessary to try to prove it since non-materialists already know that physicalism is wrong.

So just as one cannot prove existence of mind to anyone else - even to those who know it exists and have it themselves it is known but not 'proven' - so too one cannot objectively prove that physicalism is wrong, ie that minds exist, since a materialist who does not have a mind will not accept it as a proof (and even sex will agree that if it cannot be accepted by all their colleagues as persuasive, then in the consensual sense it does not constitute a 'proof').

In short:

- one cannot prove 'mind' exists, one can only know it, but only if one has it;
- one cannot prove zombies exist or that they are those who call themselves materialists, but it non-materialists can deduce this from the very existence of materialists.

### **How acceptance of the existence of non-sex human automata can impact the debate**

Descartes' revolutionary boundary between the mind and everything else (the material realm) was a critical step in making the incredible quantitative progress in science. Nmc's respect it to allow for consensus between the two types in scientific matters; however materialists have mistaken this for a concession on the part of nmc's who engage in science that mind is part of the material realm.

This is absurd, and particularly ironic since Descartes was the prototypical dualist.

If it is accepted that materialists are "mindless automata", one can begin to consensually use the term materialists in a metaphysical-biological sense as above to mean "a being without any non-material component", and in this way avoid using terms like "consciousness" which are understood in different ways by materialists and

non-materialist-types, or reach a consensus across the board on what is meant by this term, and avoid possibly pejorative terminology.<sup>66</sup>

### **Avoiding unwarranted assumptions:**

- One cannot a priori know what human automata ("elmats") can and cannot do, so it is necessary to survey all and experiment. For example, if based on their attitudes to various issues one would judge some recent prominent physicists to have likely been 'elmats', we can conclude that they CAN do physics, ie they can be 'creative'. And so on.
- One cannot know whether or not elmats perhaps possess aspects that sevox lack, especially as both use key terms differently. It is more prudent to first survey and experiment and then obtain a slight bit of clarity and then continue to investigate.

If there are elmat philosophers, can we use AI and other techniques to model how they would contribute to the debate (there is of course an irony in using AI for this purpose). Can we trace their contributions in existing debate (via types of terminology or phraseology or topics stressed etc) in order to separate the debate into two strands, each consistent within its type?

Perhaps this could help in creating a universal terminology to eliminate confusion.

### **Genetic and biological considerations:** aspects to eventually investigate experimentally

We generally assume sevox-awareness is present in the 'higher-end' of the evolutionary chain, and somewhere along the path perhaps there emerged the self-reporting mc-type of self-awareness, and perhaps separately the revolutionary advent of the experience of qualia, and the two combined make for sevox-self-awareness. However, since 'mind' is notoriously lacking in its ability to influence 'matter' (unless there is "true free will") - and so cannot be selected for via evolutionary advantage - there is no scientific reason to suppose that just because some humans possess nmc nowadays that their ancestors possessed it. And no-one possessing nmc then or now would have been genetically selected for it. And if someone long ago or now has nmc there is no scientific reason to conclude that their contemporaries would possess it.

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<sup>66</sup> **Is the thesis offensive?** This idea of materialists being "mindless" may sound disturbing, but science is about open debate and not about denial, and by ignoring this we are also denying the many millions who claim to have this awareness the recognition of this vital fact about our reality as they experience it, and sweeping under the carpet the claim that either physics is not - in its present form at least - even capable of dealing with what is seen by many non-materialist physicists as being the most fundamental phenomenon in the universe, or alternately, ignoring the implication that many physicists have a glitch in their brain which leads them to postulate the impossible. In any case, to materialists, the idea of a supposedly reasonable person proposing that their brain is associated somehow to a non-material phenomenon may render them effectively insane, and so 'non-materialist' might carry equally pejorative connotations. In any case, rather ironically the materialist cannot comprehend the essential reason why non-materialists may find the idea objectionable, ie the implied inferiority of status accorded materialists.

**Comparison to Jaynes:** As opposed to a Jaynesian approach, the contention here is that not all humans are sevox-self-aware, particularly materialists.<sup>67</sup>

(Note: To the extent that Jaynes was focussed on the emergence of mc-type consciousness, it is qualitatively different than our focus, which is on the emergence of nmc<sup>68</sup>.)

**At which point would sevox-type consciousness 'emerge' in a fetus and in an AI:**

If some structure/wiring is correlated, of interest to determine the genetic basis for this, or even the environmental influences on the wiring, including cultural etc, as well as when it arises as a stage of embryonic development or even perhaps post-birth.

In analogy to "phylogeny recapitulates ontogeny": If sevox-consciousness exists, then it emerged in the animals or in the human race at some point, and similarly it emerges presumably at some point in an in-utero brain. At what stage?

\* If we can determine how the brains of materialists and non-materialists differ, perhaps one can then trace the biological growth of the relevant organ in a fetus; possibly one could distinguish different patterns of behavior of the fetus before and after.

\* similarly we could perhaps then trace the evolution of the relevant structure in other species

\* perhaps we can even identify likely candidates for being considered conscious (with possible associated ramifications for legal status for animals and AI).

\* Given the differences in evolutionary ancestry we are today aware of, it would be relevant to investigate brains of various population groups, and to trace any possible influences of brain differences on cultural and technological manifestations in ancient populations (art, tools etc) and today, and perhaps even linguistic, religious and other influences.

**Further questions:**

\* If materialist and non-materialist brains are indeed found to be different, would one be able to establish whether the identified difference enfranchises one side more than the other: ie whether the difference gives rise to an extra ability on the part of the non-materialist brain to detect something the materialist brain cannot – ie 'consciousness' – or whether in contrast it contributes an aberrant 'noise', illusory percepts which the idealist interprets as 'consciousness', and which is thankfully absent in materialist brains. Or perhaps whether the brain-wiring/structure difference gives rise to a special ability on the part of the materialist brain – namely to make it possible to determine that only the material exists.

\* Is there a way to establish that the materialist is not actually an idealist? ie perhaps materialists experience consciousness universally and so do not distinguish between an object in the external universe and their own mind.

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<sup>67</sup> Throughout this article, we are referring to the presence or absence of nmc or 'mind', rather than to different 'types of mind'.

<sup>68</sup> On the one hand Julian Jaynes correctly separates qualia, cognition and introspection, and bravely recognized the emergence of sevox-awareness as a specific historical event, but his theory in places seems to confusingly utilize the same word for the two types of what is commonly referred to as self-aware, ie "being sevox-consciously aware" vs the "being able to report on one's inner state", which is what mc's mean by "(self)consciousness", and so it is not always clear when he uses the word 'mind' whether he is really referring to '(nmc)sevox'.

ie perhaps the situation is as follows:

- Dualists perceive the mind-like character only of their own minds but do not directly perceive a mind-like character for everything else outside them, and so think in 'dualist' terms;
- Idealists think that all is mind just that they feel more distinctly the divide between the I and the rest;
- Materialists in contrast experience all as exactly the same, and are true monists.

### **Aspects to eventually investigate experimentally**

- \* How would the physical structure associated to our consciousness arise, assuming it was/is not present in our evolutionary ancestors? Is it coded in the genes? Was there a separate evolution of the component needed for sevev consciousness and then later of self-consciousness?
- \* Does this structure utilize physical processes known to be present in (other) contexts where nmc is not? In the sense of anthropic-principle arguments, does the existence of this structure tell us anything about the big bang?
- \* If one removes that brain-part (from a materialist/non-materialist) does the brain remember what it felt like to be mc/nmc? What "psychological" effect would ensue?
- \* Can one transplant a brain structure or induce a certain wiring and thus transform a brain from one to the other ie non-materialist $\leftrightarrow$  materialist? eg Can one inject genetic material or other substance to the brain to stimulate it to produce that structure, thus inducing or eliminating (self)consciousness?
- \* When a procedure grants sight to someone blind-from-birth they may need to orient their brain to interpret new signals. If consciousness can be acquired as an adult, what process might be needed for it to become operational?

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## **Section C: Neutrality and Reciprocity<sup>69</sup>**

**Towards developing more constructive dialogue between mc's/nmc's, and greater self-confidence and independence among nmc's in the face of materialist dominance of the intellectual-climate**

**A non-analogy:** if one prepares a screen of text with font in several colors, and asks people to write down the color of this or that word, from the consistent results of those who see color, even the color-blind person will agree the others have an additional sense, and so the

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<sup>69</sup> Of course the opening statement of the paper clearly took a side despite the seeming reciprocity in the wording "We contest the unsubstantiated assumption of universality underlying the claims of both materialist and non-materialist ... Instead, the basic proposition of this paper is that the central tenets of proponents on both sides are true", and so it can only be considered disingenuous or deliberately ironic.

sensation of color is accepted as fact even by the color-blind - but this will not work re sevox, no experiment can indicate objectively that it exists.

A spectrometer-machine can detect/identify 'more colors' than can a human, but to the non-materialist the fact that a machine can perform better than can a human in identifying and distinguishing wavelengths does not imply it can 'experience' color as qualia, and correspondingly the materialist does not believe there is something qualitatively different in the perception of color by the non-materialist in contrast to them and the machine. So the fact that a nmc knows nmc exists but it is not provable, is not the same as the situation of a person who experiences colors speaking to a color-blind person who agrees that the physical sensation the other calls 'color' does indeed seem to exist as a brain detection-mechanism they lack.

**Mc-Nmc interaction: How the paper's proposition ironically lessens the degree of difference between the positions of the materialist & non-materialist, and solidifies their claims:**

Since neither of the two sides can offer proof of their position (that there is or is not nmc), and both rely on introspection and intuition - indeed self-examination rather than 'objective' experimental demonstration - it is not unreasonable to limit the validity of their conclusions to that which was examined, ie to themselves, as proposed above. And if one in this way accepts the propositions of those on both sides to be valid - albeit only inasmuch as it describes **them**, ie that those who claim nmc exists possess it and those who claim it doesn't exist do not - there is from the viewpoint of a neutral part in some sense a lessening of the differences between the two positions (if both positions are limited to a statement about themselves) , and a concomitant reinforcing of their validity.

**Taking into account the materialist's position:** in the interests of academic reciprocity and experimental neutrality, an opposing proposition can be offered to the effect that non-materialism originates with a brain defect. However, various reasons are also offered as to why there is nevertheless perhaps not full reciprocity between the claims of the materialist and non-materialist.

**The asymmetric degree of certitude of the two sides:** re: stating one's position as fact rather than as opinion re whether "non-material consciousness" (nmc) exists.

What does each side feel is fact? This needs to be tested via the survey.

Materialists may be of the opinion that in a debate or dialogue, a non-materialist would most likely NOT state that the existence of nmc is fact, only as opinion or philosophical position, however (without getting too caught up in the terminology) the author believes that a non-materialist not worried about offending rules of academic collegiality would unabashedly state something like "I know for a fact that nmc exists", despite knowing that they cannot prove the claim to be true, and that the existence/meaningfulness of nmc is contested by materialists.

Materialists would presumably NOT state that they know for a fact that nmc cannot exist.



To the author such a statement (that the existence of nmc is fact) seems sui generis in being the only one a non-materialist philosopher, academic colleague, would claim as fact despite not being able to prove (and so although of course it would not be sufficient to convince a materialist that nmc exists, it that it might suffice perhaps to have him take the 'claim' more seriously, and this itself is significant).

The subject of "nmc" is not of interest to most materialists since it seems nonsensical, undefinable/meaningless, but I believe that is because they treat the 'claim' of nmc as a philosophical opinion, and so I feel the topic might be of some interest to them if it is uniquely claimed to exist as unprovable fact by a colleague.

(Of course it might only be of interest as part of a study of what some philosophers are willing to state as fact without being able to prove it to be so.)

And so it is possible that clarifying the degree of certitude on this issue on the part of non-materialists would influence the materialist's view of the fundamentality of the issue as a whole.

It would be of interest to know whether non-materialists would state unabashedly something like "I know nmc exists directly" (ie because I possess it, or my brain is associated to it, or the "I" is that, or something to that effect), despite knowing that philosophically the claim of being able to know a truth directly in this way is contentious.

And perhaps also that:

- this fact of the existence of (their own) nmc is known (to them) more deeply than any other fact (which they know);
- the inability to prove its existence is intrinsic, arising from the essence of what nmc is.

Whereas brains associated to nmc recognize nmc as fundamental to reality, materialists can even shrug off the entire discussion of "nmc" as they would any other in which they have no interest, like some obscure mystical belief, and so it might be intriguing to a materialist to hear a colleague state something to the effect that (not only does nmc exist as fact and is known directly but also) nmc is more 'fundamental' than the material universe studied by science (including brains).

In a way, interactions between proponents of the two sides is an experiment which could be interesting to replicate with various pairs of philosophers.

Question: Can a materialist accept the possibility that those brains *not* associated to nmc would not be able to comprehend the notion of nmc?

**The proposed brain-experiment:** Perhaps the understanding of the sui generis truth-status and fundamentality of nmc according to non-materialists renders more interesting an investigation of the brain structure/wiring of proponents in both camps in this regard, more so than would be to investigate the differences in brain wiring/structure between proponents of what are merely different philosophical opinions.

**Claim-parity and the relevance of the non-provability of "consciousness" in contrast to the provability of color-blindness:** There is (as yet?) no way to scientifically way to prove that one does or does not possess sevox [this is part of 'the problem of other minds'] and so the denials of its existence by materialists are considered by materialists to carry equal weight to the claims of the opposing side.

Despite agreeing that they cannot prove their claim, non-materialists will not agree that the materialist claim is of equal weight, since to them it is FACT that this type of consciousness exists. This difference between the two types is sui generis in philosophy, where it is not a difference in judgment or belief or way of thinking or what is deduced logically but rather it is directly known. Non-materialists might accept parity for the two claims for sociological academic reasons, but not because they actually accept the position of the other side as equally valid.

And perhaps this is true also in reverse.

### **"Reciprocity/neutrality-motivated" formulation of the fundamental Proposition**

Neutrality of the survey & experiment demands "reciprocity", and so we raise the possibility of sevox as a delusion or insanity which causes belief in a "non-physical type of consciousness" which is claimed to be known directly but whose existence is unprovable - an immaterial phenomenon which sevox often claim is more fundamental than the clearly-existent material universe!

### **"Knowing I am conscious" as a brain state, and the relation to Hypnosis**

There is no need for the materialist to deny the possibility that the brain of a non-materialist is in the state of "I know that there is an 'I' who exists", "I know it directly" etc; the existence of such a brain state does not contradict the laws of physics.

It is only the question of **why** this brain state exists which is a matter of contention.

Imagine now a materialist subjected to hypnosis, made to believe that they "know" that they possess sevox. Given this conviction of the brain, it begins to initiate talk like a non-materialist, as would be expected from a brain which is in the state of feeling it knows all that the non-materialist states that they know.

However, the non-materialist brain says "I see the color green, it is a primitive, not reducible to anything else, it is something qualitatively 'other' than material objects" – is this attributable to an illusion, to the brain thinking that it perceives something qualitatively sui generis even though it does not!? Is this logically or physically possible, or is the illusion of perceiving something qualitatively other than the material identical by definition to its "actual" perception?

- If we were to perform a Turing test, would the hypnotized materialist be distinguishable from the non-materialist?
- Is there anything that the non-materialist feels or knows which the brain of the hypnotized materialist cannot know or feel?

- Would non-materialists and materialists answer the above questions in the same way?

Can experiment determine the answer to these questions?

**The Experiment:** it would be interesting to contrive experiments which would enable a determination whether there is a structural/wiring difference between full-fledged materialists and non-materialists, a type of difference which in theory can be the determinant of whether the brain declares itself to be non-materialists or materialist.

If an experiment indeed indicates this brain-distinction, we can choose one of these interpretations:

A) accept the claims of both types of brains:

i. the non-materialist's brain's: "I am conscious in the way materialists reject as impossible" (which is simply a less-contentious way of stating "materialists lack the brain structure which enables the non-materialist to be conscious"), AND:

ii. a materialist brain's: "**I am not conscious in the way that is impossible**" (while ignoring the rest of their statement "and neither are you")

B) propose that the materialist brain is correct, and that non-materialists have a sub-optimally-functioning region of the brain, a brain malfunction giving rise to their illusory claims.

C) leave open the question of whether "sevox"-consciousness is a neural disturbance leading to delusions or it is a unique (non-material) phenomenon fundamental to our reality, and simply accept that there is a fundamental difference between the brains, and that it is responsible for their different claims re 'sevox-consciousness'.

**Conundrum:** If sevox is a delusion, is it possible for a non-materialist to determine this perhaps experimentally or analytically, and then to internalize this intellectual realization, and even to 'overcome' it (and become a materialist perhaps)?

Or are they so locked into this at the core of their psyche and it is so deeply wired into their brain that 'conversion' is impossible?

Would a materialist be able to make such a determination given that they cannot know what it is that the non-materialist is experiencing? And would a non-materialists accept that they are incapable of making this determination and accept that made by the materialist?

And similarly in reverse: under what circumstances would a materialist accept that their experience is lacking a very real and fundamental level, the "consciousness" claimed by the non-materialist?

### **Checking assumptions and correlations:**

Many people report their sense of self as being located behind their eyes, however some have stated that they learned to 'move' this location (eg via immersion in a sensory deprivation tank, see for example Feynman), so perhaps the default location is not behind the eyes for all types of brains. Perhaps the source of some types of materialism might be the feeling of being

located in the 'exterior universe', and concomitantly perhaps a feeling of the external physical universe as their self, or as being 'primary', in a similar way to the non-materialist who experiences the 'conscious self' as primary.

Maybe some brains experience their 'self' as the entire universe so that they don't experience individual consciousness but rather either panpsychism or materialism.

Is there a correlation between what people report in this respect and the brain's categorization as materialist and non-materialist?

The survey will be designed to check these variations, assumptions and correlations..

### **Possible non-reciprocity in the two opposing positions**

- If non-materialists consider consciousness sui generis and of fundamental significance in the universe should materialists view the claim of the importance of such an experiment more seriously despite considering sex as an illusion arising in a brain-defect?
- Can the claim of one side which states categorically their direct knowledge of the existence of a phenomenon be equally balanced by a theoretical claim by those on the other side that such a phenomenon cannot exist?
- Should the materialist claim be moderated by the awareness of other phenomena which are known to exist but are not universal (such as color-blindness or inability to visualize etc), albeit with the crucial difference that the phenomenon under discussion is not objectively demonstrable?
- What difference can be expected between the reaction of this paper by reviewers of both types?

**A personal statement from the author: An analogy to express what it is like when I am talking to a materialist who denies I have nmc, since as they say nmc does not and cannot exist.**

I have experienced dreaming while being aware that I am dreaming (a realization which then enables lucid dreaming). However mostly of course this is not so, and I dream and there might be a 'me' in my dream, who is not aware that he is a figure in my dream. Imagine in my dream I am talking to a group of people, one of whom states categorically 'we are not in a dream and there is no dreamer, this is the full reality'. Perhaps the 'me' in the dream accepts this proposition as true.

However it is different in the scenario where I am dreaming, and there is a 'me' in the dream but this 'me' is aware it is a dream. That is, the real "I" is somewhat 'awake' (and perhaps even knows that the me in the dream is a group of neurons within my brain), and the 'me' in the dream knows it is a representation of the real "I". So if a materialist in the dream states categorically 'we are not in a dream and there is no dreamer, this is the full reality' of course the 'me' in the dream laughs at this folly (though maybe aware that it is indeed simply a group of neurons, and maybe does not have 'its own' nmc), but there is no way for that me to prove that indeed there is a dreamer - not the 'me' in the dream, though he and the real "I" are of course associated in some way (the dream-me knows that it is not 'me' who is dreaming, but rather it is the real "I").

There is nothing that the skeptic in the dream can do to convince me-in-the-dream (nor to convince the real "I" of course), but neither is there any automatic way for 'me' to convince them (though the real I can of course cheat by changing the dream to make them agree). However, it is deliciously absurd even to the dream-me that a dream-character can tell

'me', the representative of the real "I" the dreamer, that "I" do not exist - with the clear irony that it is of course the dream-character materialist who does not actually exist, except as a group of neurons in the brain associated to the dreamer "I". (It would also seem absurd if they claimed they are nmc, and exist as an individual independent of any other nmc, since me is aware that even if they do have nmc it is only because they are 'borrowing it' from the nmc of the dreamer.)

This is what it is like when I am awake and a materialist tells me I have no nmc. My brain is material and is like the dream-me in that it knows of its association to the "nmc-I" however it is not possible to prove this to other brains, who are like co-characters in "I"'s dream. Me (ie my brain) knows that its association to an nmc-I cannot be proven - and my brain and my nmc-I conclude that ironically it is the real-world materialist (speaking to the real-world brain associated to my "I") who does not exist as an "nmc-I", only as a material brain. In other words, the materialist brain cannot appreciate what is to me/I a great irony that their denial of the existence of my brain's associated "I" is simply an indication to me that their brain is not so associated (to an "nmc-I").

#### **Hoped-for effects of this paper:**

- Arguments about unicorns are simple since both sides agree on what it is, what are its properties - they may just perhaps disagree on whether it exists or not, or can exist. Similarly, if materialists and non-materialistic agree to use the term sevox for that which materialists deny exists, then materialists can say "sevox doesn't – and cannot - exist" rather than futilely arguing with materialists about its properties or a definition of what it is or isn't.
- Papers and books can be less ambiguous about their topic if they use sevox and consciousness as meaning completely different phenomena.
- A useful criterion for materialists to employ when deciding whether or not what they are writing is about sevox, would be to decide first whether the phenomenon they are describing is physically possible - if so then it isn't sevox, and they should use the existing terms consciousness or mind or awareness etc (unless they are indeed referring to an absurd notion which they viscerally disagree with, for which a special term - eg sevox - may be more appropriate).<sup>70</sup>

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## **Section D: The source of the frustration and futility of discussions between materialists and non-materialists**

**Towards developing more constructive dialogue between mc's/nmc's, and greater self-confidence and independence among nmc's in the face of materialist dominance of the intellectual-climate**

#### **TOC:**

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<sup>70</sup> Similarly, to define terms re free will rather than engaging in futile arguments about it.

See the author's accompanying article

<https://sites.google.com/a/nyu.edu/avi-rabinowitz/the-acauality-of-free-will-and-of-universal-emergence-into-existence>.

- I Differing perspectives;
- II The difficulty of debate

**I. Differing perspectives on:  
i) the nature of Qualia and consciousness; ii) the relevance of consciousness to  
quantum physics**

As outlined above, the contention here is that when elmat and seve discuss consciousness, there is a fundamental misunderstanding underlying their back-and-forth, deriving from their use of terms which have different meanings to them; also, this is perhaps not even understood by those participating in such dialogue, and therefore there is confusion, frustration, and the dialogue is ultimately pointless.

When elmat speak of their own 'consciousness', they are referring to that which nmc's would not categorize as such, since in fact elmat do not possess nmc but do not realize this and so cannot even admit it.

We propose here that when materialists claim they are 'conscious', what they mean in non-materialist language is only:

- I. that they did not faint;
- II. they are aware eg of their emotional state etc, so that there is an active part of their brain which is engaged in monitoring their biological systems including the other parts of their brain, and it can report on this monitoring and articulate the report to other brains;
- III. they know they cannot disprove solipsism;
- IV. perhaps something else which is perfectly possible even in a universe devoid of nmc

However they do *not* mean by "I am conscious" that they possess nmc since they do not, nor are they capable of understanding what it is.

Part of the confusion lies with the nmc who erroneously think materialists do not deny the existence of nmc but rather only minimize its importance. This misunderstanding by nmc's of the elmat arises since snmc's are so aware of possessing nmc that they cannot conceive that materialists - who they assume are beings with nmc - can possibly be denying its existence. As a result, an nmc engaged in dialogue with an elmat find the need for various necessarily-convoluted ways of understanding the elmat's words (thoughts/beliefs).

The hope underlying the writing of this paper is that with the above understanding much frustration can be avoided and the words of the elmat can be comprehended in its correct context.<sup>71</sup>

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<sup>71</sup> A humorous example of dialogue proceeding on two tracks replete with mutual misunderstanding was crafted in the movie "My Cousin Vinny" where the viewer understands the conversation in the jail cell in a way that the movie characters cannot: the person entering the cell is an attorney arriving to help, but the person in the jail thinks they are a

**Qualia:** Elmsats don't understand the fuss, why nmc's claim it is sui generis etc, and think there is a linguistic confusion underlying the insistence by nmc's that it is sui generis and profound and fundamental etc.

**Analogy:** Imagine if someone who had great pleasure from a certain food began to elevate that food and the experience of eating it to be the highest form of human activity. We might try to convince them that they are confusing meaning & purpose with pleasure etc, but that person claims that it is all the same and explains there is level confusion involved in trying to pretend there is a distinction between pleasure and meaning/purpose. This is what elmsats try to do when faced with sevox claims about qualia, that qualia are sui generis and not reducible to the material - the elmsats try to explain them away, not realizing that this simply makes it clear to the sevox that they have no conception of what is being discussed.

**Analogy:** A machine is constructed which is a spectrometer with a voice announcing the colors it has detected, and is integrated with an AI which 'learns'. The AI starts to argue that there is no such thing as color. When told it is color blind, it proves how well it distinguishes colors - in fact it can distinguish gradations of colors that humans cannot. It then concludes that since it sees color even better than humans it is therefore more qualified to discuss color, and so it says with authority that there is no such thing as color-qualia, it is a level-confusion of the human brain, which is inferior to the AI's intellect.

#### **'Mind as 'Epiphenomenon', and 'level-confusion':**

**In using the term 'epiphenomenon'** in relation to 'mind', mc's mean by this that basically nmc does not exist, however to nmc's this term can mean that nmc:

- i. is not efficacious in terms of the external physical universe, eg there is no associated 'true free will'; this poses issues regarding moral responsibility, and re the mind as a prisoner - passive spectator - of its body, however denial of free will is not meant to deny the incontrovertible fact that nmc exists.
- ii. exists as a result of the material and cannot exist independently of it - however even if so, it is still non-material.

Elmsats speaking of consciousness in these terms (as opposed to eg in terms of Thomas Huxley's ideas etc) are not 'agreeing sevox exists just arguing that it is insignificant', but rather they are insisting there is no such phenomenon. Instead they reference some material phenomenon which perhaps if one could clarify what it was, nmc might even agree that it is indeed an epiphenomenon.

Or perhaps the elmat is referring to processes in their own brains which sevox do not have but would agree are indeed 'epiphenomena', since it is not sevox-conscious, but rather is something which sevox agree is neither mysterious nor sui generis etc.

**Analogy:** Imagine if a malfunctioning color-machine as described above has evolved its AI level and can operate at different 'levels' - where reporting about itself involves two - and if the machine is confused and does not recognize this or does not recognize that its self-descriptions are just as ordinary as its descriptions of other machines, it may create or

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fellow prisoner coming to assault them, and only at the end of the clip does the situation start to become clearer to all:  
<https://www.youtube.com/watch?v=Ore7u6kzFTQ>

be suffering from level-confusion. However this is NOT what sevox mean by self-awareness, or by consciousness, sevox are NOT like that malfunctioning color-machine. However there is no way for elmatS to comprehend all this since they lack sevox.

**Another type of level-confusion:** If a nmc contemplates a computer's processing, its 'thinking', and tries to conceive of the 'thought' in the computer, it may seem as though there is some non-materiality involved, however this is of course simply a reflection of the nmc of the contemplator. There is nothing at all immaterial in the electrical current etc in the computer, it is only when an nmc thinks of it as being a thought that it may seem to have some aspect of immateriality.

And just as there are computers which 'think' but do not necessarily have any associated immateriality as a result of that, so too for some human brains, which may think deeply and intelligently without this in any way necessarily implying that there is some associated nmc.

**Why sevox seems such a mystery to those possessing it:** Prior to the separation of mind and matter and the successful discovery of laws governing the latter, all would have seemed to be monistic, with all matter perhaps being animated. However when a modern sevox sees that everything but themselves - their "I" - can be explained as matter and subject to natural law, their exceptionalism can seem extraordinary, and it is in some sense natural that sevox nowadays could see themselves - individually or humanity as a whole - as more central to the scheme of things than in previous times, where there was nothing specifically unique about humans (since even inert matter - and particularly the 'heavenly bodies' - were considered as possessing qualities which today would be considered 'mental'). However, materialists cannot comprehend why non-materialists consider "consciousness" to be a "mystery", nor why many non-materialists consider sevox-consciousness to be a very fundamental aspect of our reality rather than simply at best as "an epiphenomenon on an obscure planet at the edge of an obscure galaxy, possessed by a randomly-evolved entity" (though as we mentioned above, what they even mean by "epiphenomenon" is not clear).<sup>72</sup>

## Quantum Physics

**Relevance to the quantum "measurement problem":** There is deep skepticism among many physicists to the approach claiming that "consciousness collapses the wave function". It would seem almost obvious that attitudes on this topic are correlated strongly to the materialist-non materialist divide<sup>73</sup>. Presumably a proponent of the approach is necessarily a non-materialist,

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<sup>72</sup> One can speculate that many of those who began to propose humanity as insignificant may have been motivated partly by an innate materialism. It would be interesting to determine - for example via the author's proposed 'survey' - the correlation between those today who propose similar notions and their categorization as materialist/non-materialist.

<sup>73</sup> See discussion of this point - and in general the question of what should and should not be considered part of physics - in the author's accompanying article: "[Why Consensus..](#)"

"Reality" = "the Universe" + "Consciousness"? What should be the purview of physics & cosmology?  
And: <https://docs.google.com/document/d/1gXobNA1cjknE0B2O7mS9ymu6Fj8Yjj2zGuwGFwtwa3U>



whereas in contrast materialists will not comprehend why "consciousness" is at all relevant in this context since they lack the understanding of the special role sevev plays in the universe, and its relevance to the knowledge that there is only one actuality not many possibilities in superposition.

**Prescription for preventing futile discussions about the possible relevance of "consciousness" to the measurement problem" with materialists:**

Long before quantum physics, there was the conundrum "if a tree falls in the forest.....". Materialists of course did not then or now understand it, however to sevev there was always an intimate relation between "existence" and "consciousness", where it seemed that the former could not be considered meaningful in the absence of the latter. Wheeler's participatory-universe diagram could well have been drawn not even in the context of the measurement problem and 'observership'. To sevev however, the characteristic of consciousness which made it so intimately tied to existence is also that which makes it a candidate for "collapsing the wave function", so it is a given that this would not be comprehensible to materialists. In terms of dialogue on this topic, it is judicious to first establish whether the other at least understands what was meant by the conundrum about a tree in the forest before engaging with them about the very possibility that consciousness can play a role in the measurement problem.

**II: The difficulty of debating an issue where the central terms are understood and defined differently by both sides**

**Futility of defining what non-materialists mean by 'mind' or 'awareness' or 'consciousness':**

The position taken in this paper is that only those who possess it know what it is, and they don't need it to be defined, and this is part of its description.

The alleged need to define it is (related to) the source of the problem, as explained below.

What is possible instead is to "point to it unambiguously".

**Avoiding the need to define nmc-sevev:** Primitives cannot be defined in a way which is meaningful and unambiguous to those whose experience does not include it, and similarly re sevev and qualia. On the one hand one can talk about "the self which is self-evidently existent", and use this as a sort of definition of part of what is meant, but materialists will say this is nonsense and so is not a definition.

Indeed, all definitions of what non-materialists mean by 'consciousness' are flawed since they inevitably use some term that implies the term being defined, and also because the terms used mean different things to materialists and to non-materialists (ie materialists say they do possess 'mind', so using the term 'mind' in the definition is not only circular but useless).

Rather than defining nmc, one can also "point to it" by the following - doing so unambiguously if there is nothing else which satisfies all these characterizations [like: see p8 of [Wheeler's 20 questions](#)]:

It is a phenomenon about which many prominent physicists have said:

- they know it definitely exists though they admit they cannot prove its existence (this is satisfied by any qualia, eg color, emotion; and qualia therefore are exceptions to any rule stating that physics can only talk of that which can be proven to exist);
- it is the only existent they say can be known automatically without requiring sensory input (as color would require) or 'investigation' (as would be required for physical phenomena);
- it is that via which they know of everything else which is known to exist (ie via which they know of qualia), or it is that which knows this;

while other prominent physicists have said it doesn't exist and all the above is nonsensical. Possibly there is nothing else which satisfies all the above [and so it qualifies as desired (and does not require 'disambiguation')].

For the purposes of this paper, one can 'point' to nmc unambiguously in a way that materialists will understand what it is that is being referred to without us having to define it, by saying that what is referred to is that which they claim is impossible and cannot exist.

A materialist may respond by stating that an alleged phenomenon which is claimed to be known to exist automatically is the antithesis of physics and perhaps it does not even belong in philosophical discussion, however this is exactly the issue - it is absolutely known by non-materialists to exist, and if indeed materialists do not possess it and are not able to know of its existence, their protestations will be considered irrelevant by non-materialists.

**The essence of the dispute:** Since maybe the idealist is correct or the monist/panpsychist are right, and a table and an electron are fundamentally "conscious", the essential point of the "non-physical consciousness" camp is not that their consciousness is fundamentally qualitatively different than an electron or a table, but rather the essential point of all the members of the "non-physical consciousness" camp is the point on which they are all agreed - that there seems to be something essential missing from the materialist view of reality, namely the existence of a self-known self. For those in this camp, may be that the essence is not the self-knowing aspect but rather the experiential aspect of sevev, however the latter essential aspect cannot be known without the former and so one can quibble about what is the essence; in any case however, the existence of the additional self-knowing layer is certainly extremely significant.

**A subtlety:** If reality is as the arch-panpsychist claims then all of reality is the same, imbued with nmc – the universe is fully "conscious", similar in some sense to the idealist view - and so perhaps the brains of those describing themselves as materialists feel this sameness and consider mind and table as the same and so they call the nmc 'material' just like the table, and don't realize that non-materialists do not experience reality as it is. In other words perhaps the Cartesian dualist is a type of materialist in that they posit that there are two types of essence, ie that there is also some non-conscious aspect to reality. So there can be a dispute between dualists and panpsychists who think they are what dualists call materialists, where actually the former are more materialist than the latter and similarly a dispute between dualists and

self-proclaimed 'materialists' who are actually panpsychists, where the latter is essentially an idealist. How does one determine what is the actual experience of the other?

On the one hand all that is truly in contention is the issue of whether a table or an electron as imagined by the materialist is qualitatively different than "non-physical-consciousness".

However, without us being able to determine whether the materialist hard-AI-proponent is actually a panpsychist, how do we know that we really disagree? **If there was some way to know that we disagree, this would itself perhaps consist of an experimental method for the detection of consciousness!**

However, for the sake of this paper we shall ignore this possibility (that materialists are actually idealists, but who use the term "material" for what classic idealists call "consciousness").

Perhaps it is more likely that all who are brain-wired-idealists will be identifiable by their making note of the existence of a self-known aspect to their essence, ie their 'self', and will remark on it, in contrast to brain-wired materialists who will not talk of it, and might not even be capable of understanding the reference.

- Is the type of consciousness possessed by the non-materialist necessarily qualitatively "other"? To the naturalist, of course the answer is 'no' by definition (of their position or brain type, and in terms of what is physically possible).
- Is the type of consciousness possessed by the materialist? To the dualist the consciousness spoken of by the naturalists is not what the dualist means, so their view is not relevant to what they consider this question to mean.
- Naive realists seem to get around the problem, but in a way which might make non-materialists group them with materialists, and suspect they too do not possess sevox-consciousness.
- To the idealist there is no problem, all that exists is of the same qualitative type;
- to the dualist, sevox is fundamentally 'other' than the material, and so there is the classic Cartesian problem of their interaction;
- Proponents of "Mind": for example to Eddington who considered the electron to be ultimately composed of "mind-stuff" and to Einstein who saw Mind behind everything at its most fundamental level, perhaps there is no issue to begin with.

### Misunderstandings

- a. An example of key-words having double meaning: It may seem strange to nmc's, but mc's may say they too have sevox! However they deny that their sevox is nmc. Thus in order to have a real discussion one needs to spot the difference in what mc's and nmc's are talking about.
- b. Since sevox and nmc are conceptually separate (ie sufficiently different that it is not sevox which is denied by mc's, instead it is the nmc part that they deny) it is useful to separate these two concepts, and nmc's can understand why a term like nmc is necessary, and why nmc physicists speaking on this topic should insist on the existence not of 'consciousness' or even of 'sevox' (which for our purposes is only slightly less ambiguous than 'consciousness') but also of nmc and clarify always that the sevox they refer to is nmc. Mc's cannot accept that it is possible to know that

- something cannot be material, so they disregard statements about sevox being nmc, and so it is crucial for nmc's to make the point that we can indeed know nmc isn't material, and insist on this, and explain that this itself is part of the essence of what we are talking about, why sevox is so fundamental: i. because it is not material and ii. because it is that which knows itself and can know it is not material.
- c. mc's misunderstand the m-b problem to be a proof that nmc mind is impossible! Of course this is exactly the reverse of the intent - if anything since mind certainly exists, then if both mind and body cannot exist in the same reality it could only prove that 'body' - ie the material universe - is impossible, and we are left with idealism. If however we insist the physical exists - 'eppur se mueve' - well then, if both exist, they do seem to interact in some way, however mysterious (or are correlated as Descartes proposed).
  - d. Nmc claims must seem extremely annoying to mc's (by saying that they know nmc exists directly, and that by nature it is that which can be known directly and only so, and that they know of nmc more directly than they know of the existence of the mc they are talking to, and indeed maybe that the mc is simply a part of the content of their nmc, and that the laws of logic and reason and physics etc are constructs of nmc and cannot constrain it etc). The claims of the nmc create an impermeable bubble impregnable to the mc's counterclaims. It is almost as if the nmc labored deliberately to craft the most mischievous contrarian undisprovable viewpoint merely in order to vex those who disagree with them (those they call mc's).
  - e. If nmc indeed exists, what are the implications for physics and cosmology? See [the accompanying paper](#).

## **Section E: Reformulating Descartes' insight**

### **i. to resolve ambiguity**

### **ii. to point out Elmat misunderstanding of post-Descartes science**

**Towards developing more constructive dialogue between mc's/nmc's, and greater self-confidence and independence among nmc's in the face of materialist dominance of the intellectual-climate**

**Physics:** Descartes showed that eliminating consciousness from descriptions of events and interactions in the universe enables us to delineate a separate mechanical level of the universe and its operation, and then to decipher 'laws of physics' regarding them. It was a very great discovery indeed to realize that there is this 'mechanical level' to the universe and that so much could be understood by focusing only on that.

However it would seem that elmat misunderstood this project, and think that the discovery was that sevox-consciousness does not exist! And they mistakenly believe that the project of finding naturalistic mind-free "laws of nature" succeeded due to the rejection of the very existence of sevox-consciousness; they therefore believe that when one obtains a complete

description of the mechanical level, a full theory of physics, we have a full theory of the universe/reality!

As we stated earlier, mc's cannot understand Descartes' "cogito ergo sum", which is perhaps understood by them as some statement equivalent to solipsism.

They also of course cannot understand his brilliant forensic identification of two levels, the mechanical and sevox, and the deep concomitant realization as mystery the fact that they operate in tandem/are coordinated.

They would not understand Descartes the sevox who says something like 'the mysterious mind-aspect has been cleanly eliminated from physics, a beautiful and elegant excision which leads to wonderful deep understanding of the physical universe, but of course the mystery remains, and consciousness is still the most profound aspect of reality' - elmat's think this type of statement is absurd, and primitive, a throwback to pre Cartesian times, and a confusion to be fought, whereas it is really what Descartes meant.

**The subtle reason leading mc's to erroneously think that modern progress in neuroscience indicates that there is no non-material mind:** In sum, mc's think that nmc's 'postulate' nmc because it is needed for various activities which mc's know are possible for the brain to execute without any need for 'mind', and they believe that nmc's are too ignorant or stupid to realize this, whereas the fact is that nmcs know directly that nmc exists, whether or not there is any 'need' for it.

**Explanation:** Even in ancient times there were conceptions of the body as a machine in various ways, and the experimental work of Descartes helped create the understanding of the brain as a mechanism controlling bodily reactions. However the assumption remained that something exotic was needed in order to produce rational thought, that the brain as a mechanical device could not suffice. Descartes wrote that there are two types of existent, res cogita = 'mind', and res extensa = matter/body/brain. Given that they are qualitatively different, it was a mystery how they could interact, but somehow they did - the res cogita, our 'mind', gave rise to thoughts including the intent to move our arm, and the brain carried it out, and the mind produced rational thought and philosophy and science, and the brain was able to somehow speak of it.

Also there was the issue of free will, which seems impossible, but is part of what occurs in the res cogita, and the brain acts on the choices made there.

There was no necessity of a split between mc and nmc at that time since although there were various mechanical devices which simulated various aspects of calculation etc, most agreed that rational thought was not encompassable in the range of abilities of a mechanical device. Of course it was a mystery how mind and brain interacted, but many accepted that this was unavoidable.

However over time more and more of what was assumed to be the prerogative exclusively of mind was seen as capable of being produced by matter, ie the brain, and it became more and more possible to suppose that mind was not needed at all to explain any aspect of (what is observed and provable about) human action, speech and rational thought.

**A red herring:** It was assumed by Descartes that people have free will, and this is clearly not encompassable in a material universe, and so necessarily there was a mind which somehow

communicated to the brain what decisions had been taken. Not all believed in free will however, and certainly today it is out of favor, and we are focussing here on the mind-body aspect related to rational thought, so free will is better left out of the discussion.

**The mc misunderstanding:** Of course nmc's reading Descartes know from his 'cogito ergo sum' and 'sum res cogitans' that he was an nmc who clearly understood that the existence of nmc (the res cogita) is a fact, and is primary, and is not contingent on the need to explain anything at all including rational thought<sup>74</sup>. In contrast, mc's reading Descartes are under the misapprehension that he 'postulated' the existence of mind in order to explain rational thought. And nowadays when compelling arguments can be made about the brain's ability to do everything that was formerly ascribed to mind (leaving out that which is not accepted as possible, eg free will, true creativity, etc), mc's are certain that Descartes' 'postulation' of the existence of a res cogita is misguided, unnecessary, wrong. In contrast, nmc's know that of course nmc exists, even if it is not needed as an explanation for anything at all (even if it is impossible to prove it exists, or even 'explain' what it is).

Note: For those reading Desartes at the time, given the need to introduce mind in order to explain free will, and given the need to turn to 'mystery' as an explanation of how the mind with its free willed choices can communicate to and command the brain in order to have its free choices executed, there was no great reason to object to the notion of mind also being responsible for rational thought, or to deny this mind/body split due to the mystery of how the mind communicated the rational thought to the brain. Once free will was dropped however, and the issue of mind was seemingly reduced only to rational thought etc, then the existence of mind and the need for the 'mystery' was seen by many as being tied directly to the need to explain speech and rational thought etc.

**Conclusion:** Applying our OC we would rephrase the previous sentence as: Once free will was dropped however, to mc's the 'need' for mind and the concomitant need for the 'mystery' was as being tied directly to the need to explain speech and rational thought etc. Thus, later on ***when neuroscience advances showed that brain can handle the known functions formerly said to be necessarily the province of mind including speech and rational thought, mc's - since they cannot know of nmc directly - concluded that the concept of 'mind' is as vacuous as phlogiston.***

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<sup>74</sup> mind/body = thought/material = res cogita/res extensa.

Descartes basically states: cogito ergo sum. OK, I am, but what am I? Answer: I am a thinking entity = sum res cogitans. [The soul is "a thing that thinks" .] Second Meditation, Part 1.

[ ...after considering everything very thoroughly, I must finally conclude that this proposition, I am, I exist, is necessarily true whenever it is put forward by me or conceived in my mind.... At last I have discovered it—thought; this alone is inseparable from me. I am, I exist—that is certain. At present I am not admitting anything except what is necessarily true. I am, then, in the strict sense only a thing that thinks; that is, I am a mind, or intelligence, or intellect, or reason—words whose meaning I have been ignorant of until now. But for all that I am a thing which is real and which truly exists. But what kind of a thing? As I have just said—a thinking thing.]

*Of course mc's do not and cannot understand that nmc's know of its existence directly and so do not need any 'postulation' of its existence - nor is a 'need' for nmc relevant; and so mc's are busy trying to convince nmc's that brain can do all, and don't realize that this is not the issue.*

....

**Note:** As to the 'mystery' left in the laps of nmc's, they know that the minimalistic assumption is solipsistic idealism, in which there is no need for mystery, and it is only when one posits the existence of the unprovable and not-directly-known external universe, physical existence, and the existence of other minds, that one arrives at conundrums and mysteries, and so if one chooses a path other than solipsistic idealism one needs to pay the price - accepting these mysteries.

For example dualists today would say that mind exists as known directly even if it isn't needed at all for any body motions or philosophizing or choosing in the face of moral dilemmas and that though postulating the existence of a material universe gives rise to the mystery of the parallelism, that's not a reason to negate a fact, ie of the existence of mind, nor is it sufficient psychological or philosophical motivation for them to reject the existence of the material universe.

**Cosmology:** In physics models, one can only get out what is put in. Classical general relativistic cosmology treats the universe as a 'cloud of dust' i.e. non-interacting particles of matter, which would seem to be ignoring too much and yet nevertheless the result is the very fundamental big bang model of expanding space. And so one can ignore so much and nevertheless arrive at an essential feature.

However within this expanding space is only the matter we placed in the model, non-interacting dust, and so if we do not add it into the model, the universe which emerges would lack electromagnetism and all other forces, and so never produce structure, eg stars, planets and humans.

Similarly, of course the model ignores sevox, and so since sevox is sui generis - qualitatively 'other than' matter - the universe which emerges obviously will not contain sevox. Clearly the Cartesian splitting off of mind and matter works exceptionally well in modeling and explaining the material content of the universe and spacetime. To materialists the fact that there is no 'need' for sevox in producing the material universe as we know it basically confirms their feeling that it doesn't exist.

However to non-materialists sevox is a fundamental component of reality and will be relevant to a 'more-fundamental' version of cosmology, and its absence in standard cosmology is not an indication that sevox-consciousness was not present or underlying the universe all along, and the lack of its need in explaining the physical universe is just another example of Descartes' discovery. This attitude is incomprehensible to materialists.

**Post Descartes: Psychology, cognitive science, AI:** We encounter the same incomprehension when discussing our own selves at the deepest level. Eliminating consciousness from the study of a human was a major advance, and allowed the creation of new fields like quantitative psychology, brain science, AI etc. However, elmatists think that these scientific

disciplines explain everything there is, and they do not understand that 'the mystery' remains.

Indeed, in scientific discussion perhaps as pioneered by Descartes the essence and deepest aspect of (our) reality is excised from the start in a deliberate move to gain insight into what was then the newly-discovered mechanical level of our brain, but of course sevox-consciousness (or self-consciousness, or 'mind') of course still remains and is no less fundamental than it was when (the description of) that level was erroneously assumed - in pre-scientific times (or prior to Descartes etc) - to be inextricably intertwined with the mechanical level.

Of course it turned out to be extricable, and was successfully untwined, and produced quantitative psychology and cognitive science and AI, but the elmat erroneously projects their lack of sevox onto others, and therefore thinks that quantitative psychology and cognitive science and AI is all there is. And the dialogue they have with sevox is frustrating and fruitless, because the terms used are meant differently, and the essence of the point made by sevox is fundamentally incomprehensible to the elmat director of the AI cognitive science lab who is certain that they understand the sevox better than the sevox can.

**Why Mc's think of Decartes' statement as being somewhat trivial:** Although the above insight is a basic fundamental and profound truth to nmc's, it is not understood by mc's and instead they perhaps think of it as a statement of solipsism.

(survey questions will try to determine whether this supposition of the author is correct).

After all, even a simple computer program or OS can respond to a touch on a key on the keyboard and light up the monitor, which is a way of saying, yes, I am here. if so, they totally misunderstand Descartes' point.

According to the paradigm presented in this paper, this point about the non-materiality of 'mind' is not in fact true about mc's however, and as a result it is incomprehensible to them, and so they can have no appreciation of the profundity of Descartes' point. It is important to point this out to mc's since they cannot comprehend this on their own.

**Question:** If there was no sevox in the universe, but intelligence evolved, eg computer-type-brains operating according to the naturalist's scheme of things, would they originate the notion of idealism? If we conjecture this, then the very fact of the emergence of the notion of idealism seems to be a support for the existence of nmc - however this goes counter to the dualistic spirit underlying the 'mind-body problem', which does not enfranchise a physical effect of nmc.

**Reformulating the insight of Descartes, and the impossibility of mutual understanding:** There is no way for elmat's to understand what sevox mean by the term 'consciousness' since **only those who possess it, and are also self-aware, can possibly know what it is.** *This is a sort of corollary to Descartes's point. And it explains why his point is completely misunderstood and often ridiculed and misinterpreted by mc's, and how it could be that the mc's view of nmc - eg Boswell's report of Johnson's retort - is incomprehensibly shallow-sounding to nmc-sevox.*

The usual casual phrasing of Descartes' idea ("I think therefore I am") would be disingenuous except that it is not intentionally-deceptive, since it is assumed that all who hear it expressed



are sevox and directly understand what is being said. Once one realizes that this unwarranted assumption of universality of sevox should be dropped, and that explanations of Descartes' insight are often most needed by those who are mystified by it since they are elmat, it becomes clear that using "I think therefore I am" to express it is futile, and will be frustrating to both sides.

Nmc-sevox accept that there is not really even a possibility of elmat accepting the sevox declaration "this I know, I am sevox" but rather elmat will insist that sevox include the word "claim", ie "This I claim I know" whereas to sevox adding this term negates the essential meaning of what they are trying to convey. So true dialogue is stymied. But knowing that this is so can at least help elmat understand what sevox mean.

In order to present Descartes idea to an elmat, there is no avoiding using terms incomprehensible to them – using the term 'consciousness' or 'awareness' is a red herring and leads to incomprehension of the idea being expressed since it means something entirely different to elmat than to sevox. The previous sentence is not just a prologue to the explanation, it is an essential organic part of it.

Better than presenting Descartes' view as "I think therefore I am", perhaps the following conveys the insight better to elmat: "By the very fact that I sevox-exist, I know that sevox itself exists, and this is the most fundamental existent, and it is the only existent whose existence is self-evident."

The above is not meant to be a convincing 'proof' of anything, it is simply a declaration by sevox of what they **know**, albeit unprovably, with the elmat correcting this sentence to add the words "claim to" before the bold-faced "know".

The below is a more honest phrasing of Descartes' idea, without the pretense that it makes sense to elmat – we add the term 'nmc' and/or '-sevox' to all terms which have different meaning to the two sides:

Also:

"Nmc-sevox exists independently of brain and therefore of the physical senses, and so I can have a sevox-thought independent of the physical external reality, the sevox-thought "I exist" - and so sevox is NOT dependent on whether there does indeed exist an external reality, ie I know that sevox exists, which I call "(sevox-)I" or '(sevox-)myself'. That self-sevox-knowing is sufficient in of itself, there is no need of "proof" of its existence; after all, to whom will it be proven, to me-sevox?, but that already means sevox-I exist!"

It is self-deluding and futile to erase the term nmc or sevox from the above to make it more comprehensible since such a 'sevox'-absent explanation employs the very terms which are contentious in their own 'definition', so that it would be like telling a color blind person "what we mean by color is the type of characteristic which constitutes the difference between red and green", and how much less comprehensible to a blind person to whom it proved impossible to even prove that non-color-blind people see more than sighted color-blind people see, and who denies there is even such a notion as color.

To those who are sevev but never considered it, Descartes' insight as usually stated can perhaps be relevant in helping them clarify their own situation, which they will then recognize as being known to them directly, but to elmat it is not known and cannot be known and no 'explanation' can suffice to 'convince'. In this sense, convincing an elmat of the existence of sevev would require – or is fulfilled by, and only by - converting them to being one.'

**A possible reason for Descartes' unfortunately-terse formulation:** After stating the cogito, and clarifying that he is a res cogitans, Descartes moves on to deduce the existence of God, whose existence and integrity is the key to his acceptance that there really is an external material universe. Descartes may have been heavily influenced by the Biblical description of God self-introducing. In Exodus 3:14 God provides Moses with the 'name of God' to use when speaking to the Children of Israel who may ask for it: God self-names using the terse, enigmatic and profound "ehyeh asher ehyeh" = I am that I am (or: I will be that I will be, etc), and even more tersely as "ehyeh", "I am/will be".

The ancient-Alexandrian commentator Philo interpreted this as: And God said, "say unto them, 'I am THE BEING', that they may be further taught that there is no name whatever that can properly be assigned to Me, to whom only belongs existence, so that one has the translation of this passage as: "And God said unto Moses, I am HE WHO IS": and said, "Thus shalt thou say unto the children of Israel, HE WHO IS hath sent me unto you".

In the Latin Bible read by Descartes - the language used by him to write various of his works -, the key phrase "I am he who is" becomes "ego sum qui sum".

Considering the Philonic interpretation of this, which is closely related to Descartes' notion expressed in the cogito and to his ontological argument for the existence of God, it is perhaps quite natural that Descartes would phrase his dictum as "cogito ergo sum".

If we combine phrases, so that "I am he who is" where being is thinking, we can obtain "I am He who thinks, or "I am the Ground of Being" = "I am the Ground of Thought", ie I am Thought" and thus obtain Descartes next dictum "sum res cogitans" (ie that Descartes himself is 'res cogitans'), and it is particularly interesting that as God does in the Bible, Descartes introduces himself to the reader in this way!

Note: Considering the strong relation for Descartes between the cogito, the "sum res cogita" and the ontological argument, perhaps we can make the point that besides providing a possible insight into the choice of formulation, it may be that Descartes' adaptation of this Biblical notion and terminology is an indication of the close connection in his mind of knowing of the existence of nmc and feeling that God must exist so that (as expressed above) it was Descartes' strong feeling of his nmc which rendered the ontological argument compelling to him.

### **Implications of the mind body problem**

- a. The thesis underlying the mind body problem predicts that there won't be any scientifically measurable phenomenon not explicable via materialism, which in a way is reminiscent of the fact that over time, there developed the realization that there is no

property qualifying an entity as being alive which is not also found in some entity (including computer programs etc) commonly agreed not to be alive.

Of course nmc itself might have seemed like an exception since there is no way to explain it using only materialism, but it is not really an exception since science limits itself only to that which can be proven to exist.

Is there really no objective phenomenon which unambiguously characterizes nmc?

Perhaps the presence of people claiming to be nmc be taken as an indication that nmc indeed exists - nmc's will find it unlikely that in a material universe mc's would develop an illusion of nmc just on their own without having ever heard of this from actual nmc's. Of course this convoluted reasoning is not a proof, and mc's in any case would not understand what 'nmc' means and so would not understand why nmc's think a belief in it would not arise in a material universe - they would say that indeed the illusion of nmc arose in our material universe.

b. In accordance with the 'prediction' underlying the mind-body-problem's thesis, it is very interesting that indeed all the incredible nmc aspects of mind are also claimed by mcs, eg they they talk of awe and beauty, but also colors of the sunset and meaning and even self-awareness etc.

c. Mc's may even say they believe idealism is possible, but presumably they mean the scenario of a brain in a vat, or simulation in a material computer, not idealism where only nmc exists (or the solipsistic version where only my nmc exists), and they may think that the mind body problem is about the non-disprovability of solipsism etc.

**Conclusion:** It is useful for nmc's to know to recognize this double level of meaning, ie when mc's talk of awareness and meaning and etc and it seems like they are on the same page - but then say it is material.

**d. Of what use is nmc?: Mind Body implications:** It would seem that some materialist have deep humanistic sensitivities, originate lofty ethical teachings and aesthetic masterpieces etc (though perhaps one needs to determine via a survey and experiment whether any differences can be detected). From the mc perspective these are all brain-activities and states, nothing else, and science teaches that they arise naturalistically from the matter-energy of the big bang. So if all this would indeed exist in a purely-material universe, what does the existence of nmc contribute?

The Cartesian mind-body problem recognizes that (in the absence of free will) indeed there is nothing added<sup>75</sup> - other than nmc and the associated qualia, which cannot be proven to exist.

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## Section F: The survey:

See below a link to the survey (which will be continually edited on the site).

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<sup>75</sup> ie consciousness is an 'epiphenomenon' and we are 'conscious robots/automata' as per Thomas Huxley.

**The survey as a continuation of one conducted by the author in 1987:** Responses were collected from various physicists, see more mention of this below, and on the accompanying website see [some of the letters received as replies](#)<sup>76</sup>.

Accompanying the 1987 survey was an article the author sent respondents about free will (also written that year) - including a presentation of potential implications of the existence of free will for cosmology and for quantum physics - which served as an introduction to the survey questions. Essential elements of the ideas broached in that article appear as components of some of the questions about free will in the present survey (and see edited version of that article on the author's website).<sup>77</sup>

### **Assumptions to be tested via the survey:**

1. Is there a consensus among sevox that they know nmc to exist or do many classify it only as 'belief'? For those who say they know it, is it unique in this - that only this do they **know** whereas the rest of their philosophical position is conjecture and belief, indeed even the existence of the external material universe is also an assumption? In other words, would the dualist and panpsychist and idealist say they **KNOW** that this sevox type of consciousness exists (but have different **BELIEFS** or **CONJECTURES** about whether there is a material universe, and if so what is its relation to sevox etc). Note: The term 'sevox' can be useful not just to contrast in a simpler manner with "materialists" and to indicate the intersection of the various members of the group (dualists, idealists, panpsychists etc) but also as a way of delineating that which is **known** by consensus among this disparate group from what is **conjectured** by the different 'factions'.

**2)** It would be interesting to ascertain whether those who consider zombies inconceivable are in fact elmts, who say it is inconceivable because they mean something entirely different by "zombies" and "non-zombies" than do the nmc's.

**Enabling a forensic analysis of philosophy of mind debates:** It is also hoped that an appropriate analysis of the survey responses would indicate correlations between mc/nmc status and other philosophical positions, and these correlations can then be used in analyzing existing records of past conversations between philosophers.

### **Fundamental conundrums & dilemmas re the survey and experiment**

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<sup>76</sup> Letters from Paul Davies and David Finkelstein, a statement by Demetrios Christodoulou formulated as the result of a conversation with him, and ideas of Art Komar expressed during various conversations with him, as well as a report of a conversations with David Bohm; other personal conversations were with Ed Witten, Roger Penrose, Steven Hawking and J A Wheeler.

<sup>77</sup> **Accompanying website with the future survey's results, and group discussion:** Anyone can take the survey as it will be on a publicly-available site: <https://sites.google.com/a/nyu.edu/avi-rabinowitz/home/survey> (This will be continually updated and edited (on the site);

**Central dilemma:** If consciousness of the type under discussion is admittedly unprovable (since it is undetectable to another) and is beyond the ordinary cause-effect of the physical universe then:

- a) experiment cannot find it;
- b) brain-structure could not evolve to accommodate it;
- c) survey responses should not be able to correlate to its presence/absence (ie underlying the motivation for this survey is the notion of a possible correlation between how a subject speaks about awareness – in this case how they respond to the survey questions - and the type or degree of awareness they do or do not possess.)

On the one hand, one can use the above dilemma as indication that consciousness of this type does not exist, or if it does, then that there is no physical substrate to seek. However if one is certain that it DOES indeed exist, and that it is somehow 'a-physical', but that nevertheless it seems to be associated to brains, then this conundrum becomes a problem to surmount rather than a reason to abandon such a project.

So the question is whether it is "undetectable" even in theory or only as yet.

The survey utilizes subtle linguistic methods in an attempt to overcome this and related problems.

For example, since the term 'consciousness' is ambiguous, and the survey questions are directed also at those who presumably lack sex-consciousness, the paper and accompanying survey-questions utilize quotes from famous physicists to provide context for the meaning of "consciousness" as used here, rather than attempting to define the term.

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**Minimizing assumptions:** In general one cannot know what another scientific brain would feel is true about our reality without finding this out from them, and that is the purpose of the survey – which would be entirely subverted if the wording of the questions prejudiced the response, eg if it did not incorporate neutrality, even if the partisanship was unwitting. For example, an author firmly in one of the two camps cannot a priori know which assumptions are inherent to their type, cannot take it for granted that they know which statements would be agreed upon universally vs which is only true for their type. So even for a concept which seems completely logical without relation to the issue of sex, one nevertheless needs to pose questions about it on the survey. For example: attitudes to Godel's theorem, the many worlds scenario and solipsism: The survey will attempt to determine whether the divide between proponents/antagonists correlate to the materialist/non-materialist divide.

- a) The "many worlds" scenario is hotly debated, including as to whether it is profligate, or minimalistic in not requiring other assumptions. Solipsism is to some (see eg the excerpt from Bridgman on the sources site-page) the absolute minimalistic scenario. But would all agree? Is it dependent on the divide we are investigating? Consider the possibility - to be tested via the survey - that only those with sex think solipsism is not just nondisprovable but is rational and in fact is the scenario involving the absolute minimum of assumptions. (Note: Solipsism is in some sense the opposite of the "many-worlds" scenario.)

**Solipsism, Platonism and Godelian conjectures:**

Does Gödel's theorem tell us something deep about the universe? Can we learn something about our universe from the fact that Platonic mathematical ideas seem non-disprovable? Do materialist brains find the 'Transcendent-type' claims and arguments (conjectures) of Gödel and Plato less convincing than do non-materialist brains?

Nevertheless, there is a fundamental divide between them and non-materialist.

What can we learn about the universe if it is indeed a universally-acknowledged fact that solipsism is undisprovable, or that the many-worlds scenario is undisprovable?

If correlations are found between a brain's finding the above ideas plausible and their status as nmc/mc, does this tell us something about those ideas, about brains, or about the universe?

If there are correlations, and if one can even identify the brain-structure/wiring characteristics indicating whether a brain is materialist or non-materialist, then given the specs of a brain which never heard of Plato and Gödel or their ideas, perhaps one could predict its reaction to those ideas.

The more such correlations are found, the more parsimonious the totality of debate, in that one can simply note one's brain type, and that alone 'answers' many perhaps seemingly unrelated questions about opinions.

Question: In the mundane natural universe, does an mc-brain intuit the truths of any statements which are unprovable in any formal system? Are nmc's capable of this? How would one know whether the nmc's are correct - is there unanimity among nmc's about which unprovable truths are known ?

**Not-quite-Platonism:** Materialist physicists and mathematicians are certainly very sophisticated thinkers. Mathematicians who are non-materialists might tend towards Platonism, however even the materialist mathematician will have deep notions of what truly exists, and may consider numbers or information more real than electrons etc, so the 'material things' of such a materialist differ greatly from those conceived of by 'ordinary people'.

**The survey** will attempt to identify whether there are discrepancies between the answers to certain questions by brains whose answers to other questions on the survey reveal them to be different in terms of nmc/mc, ie whether there are correlations between what the brain answers regarding Godelian truths and what is answered re eg 'the color test'.

If there is no correlation, and all agree that there are unprovable truths which are intuited as true but not provable in any formal system, the question would be posed whether a sophisticated machine would also claim these unprovable statements are true.

If some respondents indicate yes, the question becomes whether they mean by 'ascertaining truth of the statement despite its nonprovability' is the same as what is meant by nmcs who answer the same, however it is not so obvious that it would be possible to ascertain whether or not indeed mc's who say the same about this issue actually also feel the same on this matter as do nmc's.

One can also ask nmc's whether they feel that nmc is required in order to be able to recognize unprovable truths or whether they think it is sufficient to have physically(brain)-based 'intuition'....

**Machine-learning analysis:** Perhaps machine/deep learning can detect (unexpected and humanly-imperceptible) correlations between an academic's writings and their status as materialist or non-materialist (eg via word-usage, phraseology, physics topics they are interested in, conceptual models they prefer, attitudes to heuristics, types of diagrams, or any other characteristic or preferences).

Given the results of the survey and its analysis, with permission of the respondent, their scientific writings and any other written material they submit can be uploaded and correlations sought.

**Opportunity for discussion:** Academic respondents can engage in a group discussion via a google-group, embedded on the survey-page of the website <sup>78</sup>.

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## **Section G: AI Implications**

### **TOC**

- Does some of the fear vs embrace of AI's eventual power correlate to the non-materialist-materialist divide?
- Are there more of one type or the other in the fields of neuroscience and AI?
- The existence of materialist proponents of conscious-AI ironically provides reason to doubt the inevitability of the truth of their central assertion
- Defending non-materialists from potential abuse by AI, by arriving at consensus on having only sevox-AI judge human sevox.

### **Introduction: Can AI produce sevox or can it only produce brain (ie a materialist)?**

The argument between materialist proponents of AI-human parity and sevox as to whether "consciousness" will emerge in AI is misguided since 'consciousness' means something qualitatively different to the two sides; discussion is futile since when materialists say AI will be 'conscious' they are referring to characteristics which even sevox agree can be possessed by AI. Hopefully this paper helps provide a prescription for eliminating this fundamental confusion.

Note: A computer/AI utilizing deep learning neural net techniques coupled with massive input from philosophical, literary and scientific libraries etc could 'self-evolve' towards higher-level discourse and begin to discuss the meaning of life, the purpose of all existence, as well as

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<sup>78</sup> group-membership restricted to academics (eg writing from an .edu address).

moral responsibility and free will etc, without sevox feeling compelled to conclude that the AI is sevox.

### **Does the fear of AI's eventual power correlate to the non-materialist-materialist divide?**

Who should fear AI more? On the one hand, those who propose AI as qualitatively the same as humanity might welcome such high-functioning assistance, on the other hand they may fear rivalry since AI may prove superior.

Similarly, those who say AI is qualitatively different - and lesser - might welcome it since it isn't a real competition, on the other hand they may fear that AI will not recognize the existence of their qualitative difference - and claimed superiority - and therefore in their judgements not take into account that which to the nmc is vital.

### **Is one brain-type more heavily represented in the fields of Neuroscience and AI?**

It may be that there is a preponderance of materialists in neuroscience and AI nowadays - it's natural for materialists to believe that soon AI will reach human-level, and so one could speculate that it would be natural for them to be attracted to neuroscience and AI etc. In contrast, sevox know that the most interesting aspect is consciousness itself rather than the brain, and so to them the challenges of materialist-AI and the discoveries of neuroscience in which the most important element is missing are not nearly as alluring.

If indeed non-materialists are not necessarily attracted to neuroscience, the neuroscientist pundits who are considered experts in the field of consciousness are generally materialists ie devoid of consciousness, and so do not understand what the term even refers to when used by nmc's.

### **Why the existence of materialist proponents of conscious AI ironically provides reason to doubt the inevitability of the truth of their central assertion**

Sevox admit that they do not know what consciousness is, how it arose nor why it exists at all, however there is nevertheless a general supposition that it became associated to the human brain when brains achieved a certain minimum level of sophistication due to neural interconnectivity. Sevox do not deny the physicality of the brain, and so there is no reason to think that other physical structures – even if they are manufactured by humans and are silicate-based rather than biological - cannot also become associated to sevox-consciousness under the appropriate conditions, just as occurred to the human brain.

So the supposed issue in the debate of whether AI can achieve 'consciousness' is not the real issue, and in fact since it's not known how or why it arose in some human brains, one cannot necessarily assume that any sufficiently sophisticatedly-interacting device will be sevox. There is no fundamental reason to deny this could be so, however the existence of materialists with sophisticated brain wiring interconnections is itself a counter-argument - ie if brilliant materialists are not sevox, why assume AI inevitably will be? So ironically, the insistence of



materialists that AI will become conscious - ie like them! - is in a way a reason to doubt the inevitability of this happening <sup>79</sup>.

**Re-framing the discussion:** The discussion should therefore be whether sevox and non-sevox humans differ in brain structure and whether humanly-created AI will eventually achieve this structure, and if so whether this sophistication (or whatever other qualitative/quantitative criteria is found) can in theory bring in its wake the same (type of) association to consciousness as is the case for sevox-brains.

Ironically, it may even be that sevox can agree that AI can become conscious without this necessarily implying that the materialists who built the AI are themselves conscious. Indeed sevox might even end up enjoying philosophical debate with the conscious AI more than the sterile debate with the materialists who created it. And if the AI is not conscious, it and the materialists who created it can congratulate each other with proofs of the speciousness of the concept of 'mind'.

**Defending non-materialists from potential abuse by materialist AI, by arriving at consensus on limitations on its use:**

Non-materialists can allow the materialists to revel in their lack of 'mind', and in their ability to create "artificial" versions of themselves, and which contain the ability to make statements like "I exist" and to groom themselves in a mirror, which to the materialist seem to prove that they have what non-materialists call consciousness and self-awareness. However, as AI will advance further, and will merge with robotics, and as AI advances to the point of being able to itself design yet-more-advanced AI, it may become a more urgent pursuit for non-materialists to find ways to distinguish themselves from the 'mindless', whether human or humanly-manufactured.

Until it's possible to find an unmistakable physical correlate of sevox-consciousness or other marker, it may end up tragically futile for "the minded" to insist that beings with minds should not be ruled by humanly-made entities without minds. It's only "the minded" who can understand this at all, whereas to materialists if a deep-learning equipped machine can get higher compassion-scores as a judge, then as to the notions of 'a mind' one could quote Laplace in saying 'we see no need for this hypothesis'.

Nmc's are beginning to sense that AI is a threat, but they will be powerless to resist until the reason for the threat is understood – ie that there are non-minded humans who do not 'get' the central significance and importance of mind, and the qualitative edge of a minded-human even if they will be inferior intellectually, and possibly even less able to execute 'algorithmically-correct compassionate judgment'. Now that the human equivalents of AI are

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<sup>79</sup> If the panpsychist or idealist or some-type-of-monist is correct, and mind is inherent in everything, including in silica and plastic, there is no reason to think that a sufficiently sophisticated "artificial" brain will NOT be conscious, except for the counter-example of brilliant materialist brains which despite sophisticated brain structure and wiring, lack sevox. (So the existence of materialists is a sort of disproof of panpsychism).

creating similarly mindless machines, which eventually may feel qualified to rule over sevox, it is all the more urgent for the distinction between non-materialist and materialist to be drawn.

There should at least be consensus among all, that AI can be classified according to whether it has or has not developed sevox *according to a non-materialist consensus*.

**Conclusion:** If a physical difference is indeed found, this can perhaps lead to:

- enabling a blueprint which would assist those attempting the creation of human-equivalent sevox-consciousness;
- more objective criteria for deciding whether the objective has been achieved, and establishment of accepted criteria for according conscious status to an AI for example as a prerequisite for allowing it to be involved in judicial procedures, college admission, insurance rejection or other activities involving 'judgment' which can negatively impact humans;
- recognition of the futility of discussion between sevox and materialists (human and AI) about "whether AI will achieve/has 'consciousness'".

In general, a recognition that there are indeed two human-types and that AI is more like one than the other can beneficially impact the development of AI, the debate over it, and relevant legal policies.

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### **Re the recent chatter about a Google computer being sentient:**

i. Some of the people making the determination may not be nmc-sentient themselves according to our definition, and if so they would have no idea what sentience means to non-materialists, and may also not understand that the 'problem of other minds' precludes anyone making such a determination about another.

ii. Perhaps a more meaningful test would be to have the computer exposed to all statements made by materialist humans and by those with nmc, and without being prompted to do so to organically choose a side vis a vis itself just as human philosophers do. In addition, for an identical AI to be exposed only to mc's and we can see whether it on its own originates the nmc point of view, and even vigorously defends it against intelligent objections by mc's.

iii. One could also test by appropriate questioning whether the AI is confusing the issue of nmc with other issues as perhaps human materialists do (eg see whether it states that solipsism in regards to itself is undisprovable, and if so, whether that is what it means when it states that it is 'conscious').

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<sup>80</sup> One can conjecture what a non-materialist would expect a robot to respond when confronted with mind-talk, and compare that to what materialists say, and see if there is any important difference. Perhaps one can even ask an AI programmed for science to consider the issue of its own consciousness etc and see how it responds. Of course a materialist can claim it IS conscious and so if there is no difference between the AI and the materialist it doesn't prove anything, but to the non-materialist it might be illuminating, and they would stop wasting time debating this issue with materialists.

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## END OF PAPER

What follows are Appendices: p71-130

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### Appendices:

- A) 'Non-Materiality'; B) 'Knowing' that one's consciousness is non-material vs 'believing' it is.
- Is mind "an emergent property of brain"? Is mind in fact "totally dependent on brain"?
- Can physics eventually include nmc?
- Historical development of the relevant notions: Lucretius, Descartes, Wallace, Huxley, Whitehead, Eccles, Jaynes, Chalmers, Nagel
- Materialism vs Transcending the material
- Meaning, purpose, moral responsibility, free will, human significance, religion:
- Are there more levels to reality than perceived by nmc's?
- Can "Conversion Therapy" work? Transforming from materialist to non-materialist and v.v. as a result of discussion, and the relation to brain-wiring

### Appendix:

#### A) 'Non-Materiality' ; B) 'Knowing' that one's consciousness is non-material vs 'believing' it is.

- A) **"Non-materiality"**: As a physicist, the author studies the material content of the universe, and also the physical universe as a whole (cosmology), including all of spacetime matter-energy; however as a nmc being I am also interested in my own consciousness, which is inaccessible to physics since it is immaterial.

What is material and what is not? Space and time perhaps in the past might have also seemed 'immaterial' but Einstein showed how to write a field equation relating the geometry of spacetime to the matter-energy content, including for the universe as a whole, and this cemented spacetime as part of the material universe. There is still some aspect of spacetime which seem immaterial, however one needs to separate the mental impressions we have when thinking about spacetime from the properties of spacetime itself - where the former may be a reflection of properties of our thinking process (ie a material process in our brains when thinking about spacetime) and perhaps arising from our nmc, whereas the latter is 'physical' or 'material' .

It is exactly the distinction between immateriality and the material, between nmc and everything studied by physics which is important to us here, and so we utilize this term 'material' (in various forms, as in the rest of this sentence) in distinguishing between what our ontological conjecture sees as two types of humans - those associated to "non-material consciousness" (nmc's) and those who are not (mc's) , who of course have as part their brain processes what they themselves will refer to as a material consciousness (mc, which is also possessed by nmc's).

### **Defining the term 'non-material'**

I can tell that 'red' (and other qualia) are qualitatively 'other than' everything studied by physics, and if I define the latter as 'the material universe' then I will refer to qualia in contrast as by definition 'non-material', so it is not that there is a known non-materiality to the universe and I believe nmc belongs to that type of phenomena, but rather nmc (and associated aspects eg qualia, emotions etc) in its 'otherness to the material' provides the definition of "non-materiality".

### **The connotation of the term 'non-material'**

There is the mental feeling of thing vs not-a-thing:

- i. physics deals with 'things', eg the red object, the sun, the photons from the sun which hit the red object and enter my eye, the eye, the nerves, the electrons, the synapses etc whereas
- ii. qualia - e.g. redness - are 'not things', and cannot be encompassed within physics<sup>81</sup>. The term 'material' correlates to 'thingness', and non-material' to that which is not associated to 'thingness'.<sup>82</sup>

So in terms of 'connotation', materiality goes together with thingness, and non-materiality with that which is not characterized by 'thingness'.

Idealism provides another way to view the opposition between thing and non-thing: The non-disprovability of solipsism means that there might not be much to the physical universe, just one brain in a jar and a power supply, creating our solitary set of thoughts and its associated consciousness, and idealism shows that the material universe might not even exist (to produce what we experience there is actually no need for the jar and the power supply, and even no need for the brain), and so clearly what remains - the mental experience - is not to be included in the material, and so deserves the appellation 'non-material'.

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### **Energy is 'material' for our context, and like matter it is qualitatively different than 'qualia':**

1) What we call energy is either motion of particles (eg kinetic energy, which we can experience as heat or via the impulse (push on us), or it is particles, eg photons which are quantized packet so electromagnetic energy, for example visible light, x-rays etc. (exotic forms of energy may be different...). We count spacetime in the 'material' category, as also

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<sup>81</sup> There are also other types of non-thing: eg 'laws of physics' and 'processes', neither of these are 'things'; they - like qualia - are part of the mental realm: a 'process' involves the flow of time, which is mental rather than part of physics, and similarly for the notion of a 'law', which is the mental expectation that the mathematical expression which described events a few minutes ago will also be valid a few minutes from now (a type of time-translation invariance).

<sup>82</sup> Note that of course all the above is about mental conceptions ('thingness' vs 'non-thingness') rather than about things, conceptions in brains, which are things. However mc's might consider all the above to be 'things' since to them mental concepts are things, there is only the brain and its wiring and current etc, and what nmc's call concepts don;t exist to them, they know of and speak of only the material correlates of the mental concepts , though they will insist on calling these physical material correlates 'concepts'.

motion (changing spatial location with time) or its effect. So 'material' is not the best name if we think of it only as including 'objects', but on the other hand even hard objects are made solely of atoms, which are composed of particles (electrons etc) which ultimately are fields and energy (quantized excitations of fields etc), as quantum physics and q field theory shows. [See Eddington's 'table' discussion for perhaps the earliest presentation of this concept, soon after quantum physics was developed. See also my discussion of the level-confusion that can arise associated to this.]).

2) We know of anything intellectually via the sensory input into our brain, including all information about the external universe, and this information and sensory input etc is neural currents etc and so is 'material', and this includes the neural correlate of seeing a blue object or feeling that it is hot or cold, hard or soft etc - ie everything that a materialist ages is present.

However our nmc-minds know of the external universe by accessing this material entity/process we call neural currents, and this nmc-knowing, and the sensations - qualia such as the color of the object (blue in this case), and the sensation of an object's 'hardness' etc) is not material - are qualitatively other than the material.

On the one hand, all the material aspects of a situation including about the matter and energy disposition, and all the neural currents etc, are necessary components in the information leading from one state of the material universe to the next, and they are within the purview of physics, however in contrast the qualia are 'epiphenomena' in the sense that they have no effect on the material universe, and information about them is not relevant to the 'calculation' of the universe's next state - the future states of the material universe would be the same if they didn't exist. And indeed their existence is denied by materialists.

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**Non-material rather than "Material but with peculiar properties" or "material but irreducible"**

One day perhaps humans will understand nmc and the mind-body relationship, and come up with a set of 'laws' governing all of reality, so it is not a claim here than nmc can never conceivably be incorporated into some new type of understanding - however that will not be physics as we think of it, and I would expect that the 'understanding' will itself involve our use of nmc as opposed to the understanding of physics which involves only intelligence etc not nmc.

**My concern however is not with terminology regarding what physics is and what science is, but rather the denial that my consciousness is qualitatively other than the subject matter studied by physics as we understand it to be** (that which I and many others call 'the material universe'), and thus the denial that reality is more than just that which is studied by physics.

Also, by 'qualitatively other' I do not mean "possesses peculiar properties which can be explained by present-day extrapolated sophisticated physics", but rather "inexplicable by - or inaccessible to - physics as we understand it to be". Physics involves reducible laws/processes, though some might perhaps involve incomputability as speculated by

Penrose, and if irreducible means emergent properties and laws, then physics needs to incorporate these and propose a initial state of the universe which can eventually produce emergent properties, and perhaps re-define time and causal chains etc. At some point if it gets sufficiently sophisticated perhaps physics might morph into what we call nmc, but that would certainly not be what we mean by physics today.

My OC proposes that all this complicated arguing with materialists derives very simply from their lack of ability to conceive of what nmc's mean when they speak of consciousness. My proposal therefore is that when nmc's engage in a discussion with mc's, or read the writings of mc's, they should keep in mind that the materialist side of the argument is being presented by an entity lacking nmc (or lacking the awareness that they possess nmc, and lacking the intuitive understanding of nmc which other nmc's possess as a result of their possession of nmc) and I believe that the discussion will make far more sense to the nmc in this light.

**Abstracting out the effect of our nmc in order to understand - and agree with - the mc position:** Let's take the materialist position that deep insight, compassion, wisdom, love, ethics, meaning etc are emergent properties of a big bang - ie of the matter-energy space-time plus laws of physics at some purely-material 'initial' stage. We might say: even if this is true, so what? The essential point is not whether they (the list mentioned above 'deep insight...meaning etc) emerged from a big bang but that these are considered 'higher level' than what they emerged from - which is after all partly what is meant when using the term 'emerged from', which means to the nmc that they cannot arise directly via the already-known laws of material physics.

Since they (in the list above) are considered qualitatively different from a big bang, we would need some new 'law of the emergence from the material of a qualitatively-higher-level', however of course this is already not material-type physics. However the materialist probably would not agree with us that there is a qualitative difference and that a qualitatively-new type of physics is needed.

***The explanation for this divergence is that the nmc speaks - in some sense unconsciously - from the perspective of nmc when referring to "insight, compassion, wisdom, love, ethics, meaning", and it is that nmc-aspect feeding into the nmc's associated material brain which motivates the nmc's brain to insist that these are at a qualitatively-higher level and would require a qualitatively-new physics. The materialist however does not possess nmc and speaks of these in their purely-brain-correlate sense, as a list of brain-states, which indeed as Descartes pointed out, mysteriously is parallel to the nmc-experience states.***

So the nmc is really not agreeing with the materialist that all in the list can emerge from an initial stage ('big bang'), since whereas the materialist is speaking of purely-material brain-states the nmc is effectively stipulating that this list is of nmc-associated brain states, and so the initial stage must somehow include nmc or 'the-potential-for-nmc' (and it is a far more interesting and sophisticated 'nothing' from which a big bang emerges if it produces these than if it didn't).

On the one hand it is circular and disingenuous for the nmc to agree that the list can emerge from a big bang when what the nmc means by a big bang includes the nmc that the materialist states does not and cannot exist; on the other hand the materialist is missing the point if they think that they can succeed via all sorts of arguments to enable the nmc-associated version of the brain-state list to be naturalistically produced from (not 'emerge from') the purely-material initial state the materialist means when they speak of the big bang.

**Conclusion: For an nmc to understand the materialist position that a material big bang can produce 'deep insight, compassion, wisdom, love, ethics, meaning etc', they need to somehow remove the somewhat unconscious nmc-added ingredient in their brains when hearing the elements in this list, and if they do, they will find they can agree that the essence-removed purely-brain-aspect of these can indeed arise from a purely material initial state via known-physics-type laws, in line with Descartes' proposition that the two are parallel equivalents.**

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## Appendix

### Is mind "an emergent property of brain"?

Of course since the only material universe we know of is less fundamental than the nmc-level, is only known via nmc and only can be said to exist in the full sense (ie the nmc sense of exist) if nmc exists (and in Wheeler's conjecture comes into full material existence only when nmc arises), perhaps there cannot be any purely-material universe, and so in fact the materialist position that the material-list above can arise from a purely-material big bang is misguided (and of course this is so in the idealist and panpsychist etc view); instead the correct statement would be "in an nmc-based reality which also contains 'an external material universe', the sequential states of the elements of the latter can - as per Descartes - be ordered as though they were unfolding 'naturalistically' from an initial-state of the 'external material universe', and this would at some stage 'produce' the material brain-states in the list above.

**So if a purely-material reality can exist, then all the materialist's brain states (eg in the list above) can be produced by a big bang that is purely-material. So if the word 'mind' is used by the materialist to refer to these brain-states (or some collection of them, or that which produces them etc), then with a suitable materialist definition of the word 'emergent' as applied to this this material mind, one could say that 'mind is an emergent property of brain'. And one can certainly understand why it would be true - perhaps by definition - that 'mind is totally dependent on brain'.**

### Is mind in fact "totally dependent on brain"?

If a purely-material reality can exist, then yes, as stated above. But our reality is nmc-based, and the material-level is derivative. Since the nmc mind is more fundamental than the brain it is associated to, of course in this sense it is not true that 'mind is dependent on brain'. In fact, the idealist can be correct and if so then brain might not even exist in the sense meant by a materialist and so of course the mental-realm construct called a materialist is not even

associated to a 'material-brain' such as it is speaking of, and so of course this collection of mental-realm thoughts which considers itself to be a material entity self-characterized as a 'materialist' does not 'depend' for its existence on the physical brain it has imagined.

However ***it might be that*** the idealist is wrong and there cannot be a totally-mental reality, and that instead ***any mental reality is necessarily accompanied by some material aspect, eg perhaps as an 'emergent' or an epiphenomenon, in which case Descartes' parallel operation of mind and brain will be noted - however of course one could not say that mind is dependent on the accompanying epiphenomenon, ie the material brain.***

On the other hand however, if there is an intelligent entity which does not have nmc associated to its brain - eg a materialist - then it will deludedly think that only the epiphenomenon (the material realm) exists, and that the essence (nmc) of which it is merely an epiphenomenon (nmc) does not exist, and so it will call itself a 'materialist' and will be led to believe that what nmcs refer to as 'mind' is the collection of material-brain-states the materialist has (which the nmc also is associated to in its associated brain), and will of course conclude that 'mind is totally dependent on brain', somewhat to the amusement or frustration of nmc's.

## Can physics eventually include nmc?

### Does calling consciousness 'non-material' mean that it can never be included within physics?

Even if consciousness is 'non-material' it can presumably be described by appropriate 'laws'.

There does seem to be some pattern of regularity governing consciousness rather than it all being chaotic, random, totally unique for each nmc etc, and so presumably if one could adequately study it one could create a type of science of nmc, however it would still be a science of that which is qualitatively 'other than' the material - and perhaps it will always remain 'private' in the sense of unprovable to others, or possibly there will be found a way to overcome 'the problem of other minds'.

Also: given the mysterious parallelity pointed out by Descartes, there does seem to be some relationship between the material and non-material and so perhaps one day we can have not only laws of the material and of the nonmaterial separately, but some type of laws of their paradoxical-seeming relationship/interaction. Perhaps this will require an nmc-based type of understanding which is qualitatively different from the mc-type underlying physics as known today (ie a computer can 'understand' physics, but perhaps it would require an nmc to similarly 'understand' the combined theory of materiality and non-materiality).

One can choose to define the whole set of theories of the material and non-material and of their 'interaction' as 'physics', and if so physics will have encompassed non-materiality; and perhaps then we won't want to use terms like material and non-material that connote opposites when describing two part of the same overall theory<sup>83</sup> - or perhaps the union will

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<sup>83</sup> It would be a union of aspects of reality which can be considered as more fundamental than those involved in the union of space and time into spacetime, and matter with energy into matter-energy,



be seen as replacing 'physics'. In any case, despite any expectation or hope of a possible union of sorts as described, and the relevant terminological considerations at that future time, at this time - in terms of what we know now - it would seem that the contrasting terms 'material' and 'non-material' are appropriate, and it would seem that nmc is not included in physics.

[Whatever future understanding is reached, the best way to express our reality within what is understood now and how we conceive at present of what we know, is to characterize reality as being composed of the material (dealt with by physics) plus the non-material, specifically nmc and its associated phenomena (which cannot be dealt with by physics.)

### **What physics *can* say now about nmc**

There cannot be consensus with the scientific community about the scope of science/physics. Many prominent physicists say the existence of nmc is a fact, and indeed is the most basic aspect of our reality. However other physicists state that it is nonexistent, meaningless and absurd. Even the proponents of nmc agree that its existence is not provable. For these reasons nmc is not included in physics and cannot be part of a physics curriculum. To nmc-physicists this means that physics cannot encompass the most fundamental aspect of reality, however to mc physicists the situation is exactly as it should be since all is material including our feelings. In any case, since the existence of nmc is not provable it doesn't belong in a physics class. However perhaps a statement such as the previous sentences does belong somewhere at the very beginning of the physics curriculum regarding what physics does and does not cover<sup>84</sup>.

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### **B) Knowledge of nmc as being non-material vs belief that it is non-material**

Can I legitimately consider my characterization of qualia as non-material (and as not being part of the physical universe, but rather all elements of the so-called physical universe as being sensations, ie "qualia in nmc") as a matter of knowledge rather than belief or opinion?

It depends on what criteria we are requiring for stating that we know something to be true. Given that we cannot even prove that the material universe exists (and we do not know it in fact exists, maybe it doesn't) and given that we cannot prove that we exist though we know we do, the criteria for what can be said to be 'known to be

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and even in the union of spacetime and matter-energy into an interacting system as described by the Einstein field equation, and into what we call 'the physical universe'.

<sup>84</sup> This topic is discussed at length in the accompanying article 'Why...', which also has various relevant quotes from prominent contemporary nmc-physicists.

There could also perhaps be a discussion in that very first science class at the beginning of high school re why eg 'God' is not covered in a science course. However, the existence of God is not accepted as known as fact in the same way that many nmc physicists feel nmc is known. Indeed for nmc physicists, nmc is unique in this, it is the only factually-known existent that cannot be proved and so to nmc physicists it is the only factually known aspect of our reality which is not covered by physics; as such if we do include the above in an introductory lesson, this does not imply that we need also include the notion of 'God'.

true' vs 'what is believed to be true' or 'what is generally accepted as being true without quibbling too much' or 'what is accepted as a working hypothesis whether or not it is actually true' may be subtle and in dispute, and should be clarified as part of a discussion on this issue of 'knowledge' vs 'belief'.

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### **Knowing vs proving and vs achieving consensus**

Pressure from mc's has led nmc's as part of general culture to cede the priority of mind, ie what we know at the most deep level, more than anything else, is our sevox-nmc, and very secondarily, in a derivative way, we know of the 'external material universe'. Under pressure from materialists, and in the mistaken interest of collegiality and neutrality and reciprocity, academic integrity, we agree that since we cannot prove sevox-nmc, we will not say we 'know' it exists.

But agreeing to this is a mistake.

Once one agrees to deny the ontological status of sevox-nmc, the priority of ontological status naturally goes to the material universe, and sevox-nmc becomes some sort of ill-defined 'epiphenomenon' where mc's mean by this that it is nothing, or they mean by it is something mc that nmc's also possess that is NOT nsevox-nmc. Nmc's are encouraged to overthrow this tyranny of mc-thought, and proclaim that KNOWLEDGE of sevox-nmc, indeed exclusively, whereas the independent existence of all else is conjecture. Of course mc's will not agree, and common ground is thus lost, but this can be sacrificed where the purpose is to arrive at truth rather than to achieve consensus (especially where such a consensus acquired only by accepting what is essentially a falsehood).

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Note: In conversing with or reading the writings of mc's, if one keeps in mind this OC it will be seen that what they say makes sense given their ontological status,. Also, in many cases the arguments which need to be made to materialists in order to explain that which should be completely obvious makes it quite convincing that they are not nmc.

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### **Appendix: No attempt is made here to 'solve the mind-body problem'**

The mind body problem is a mystery - it is intractable - however my knowledge that nmc exists is in no way contingent on my being able to prove it exists or to 'solve' the mind-body problem. So I am not attempting to invent a "solution to the mind-body problem" nor even to determine the one correct approach from among a few which I feel might be true.

I will however point out which approach is wrong, namely materialism (and below I'll also indicate which approach is the most internally-consistent).

Materialists are not interested in these discussions since they cannot understand what is being spoken of, and so they insist on proofs, or 'solutions of the mind-body

problem' and if there is not a proof or a 'solution; they are not interested and think it is a waste of time, so these discussions are meant for nmc's only, to strengthen their resolve in the face of materialist objections, and to feel comfortable ignoring these objections.

This paper is not an attempt to invent a "solution to the mind-body problem" nor even to determine the correct approach from among a few which I feel might be true, only to point out which are wrong ones (and below I'll also indicate which are the most internally-consistent).

- Minimalistic, internally-consistent: idealistic solipsism: only one mind exists - mine - and only that exists.
- Possibly-true: idealism: many minds exist, but only minds/thoughts exist (ie no matter).
- WRONG: universalist dualism: reality = matter + nmc: humans have nmc, associated to physical brains + the unwarranted universalist assumption that all humans have nmc.
- Our OC: dualism, where only some humans have nmc (associated to physical brains). Charitable assumption 1: all who claim they have minds do so; 'Charitable assumption' 2 (or corollary of 1): those who claim nmc does not exist are correct about themselves.
- Not compelling: Dualistic solipsism: dualism, with the assumption of exclusivity - I (and only I) have nmc - and it is associated to my physical brain: This can be true, however given the assumption that an external physical universe exists with many brains just like mine, there is no compelling reason to deny nmc to other physical brains which claim they have it.
- WRONG: materialism (there is no nmc)

## **APPENDIX: historical development of the relevant notions re nmc**

**Preface:** The purpose of this appendix is to make it clear - via quotes from relevant experts and reviews of their theories - that ***there is no scientific need to posit that all humans today possess non-material consciousness.***

**Democritus, Epicurus, Lucretius etc:** It is difficult to assess what they felt vis a vis modern notions of materialism, since to the ancients 'nature' was suffused with what today we would call nmc, and so even if they considered all to be matter it would not necessarily mean "matter without nmc". Thus even those amongst them who are supposed by us to have been materialists might if they had lived today expressed themselves in ways which would not have classified them that way, however, some of them may have indeed been ontological materialists.

### Descartes' conjecture:

- a. Mind and matter are distinct, mind is non-material<sup>85</sup>.<sup>86</sup>
- b. Humans are conscious (nmc), inanimate entities are not, non-human animals are non-conscious automata<sup>87</sup>;

Although he must have thought deeply about whether - given the distinctness of mind and matter - a material human brain could exist that is not associated to nmc, in his time it was not possible to imagine material science explaining/encompassing speech and rational thought [*Reply to Objections IV*] and so he assumed it was humans' nmc which gave rise to these, in other words that humans necessarily possess nmc if they can speak and reason<sup>88</sup>.

This notion that there is an effect of nmc on the material universe destroys the comprehensiveness of the mind-body parallelism, and in some sense increases the mystery involved, creates a 'mind-body problem' of how the non-material and material can interact.

However the fact that in those days nmc seemed incontrovertible, supported by external material evidence (people speaking, and producing rational ideas), made it less radical a notion than its existence would be to mc's today when it is considered not to be at all efficacious in the material world (in an incontrovertible manner).

However it is difficult to now determine what an mc at the time would have said - did they too assume there must be nmc in order to explain speech and rational thought? Or was the connection to his own mc that which caused Descartes' to feel sure that nmc was required for rational thought and for speech, whereas equally rational mc's did not think anything other than mc would be required? Without their being exposed to our technology could they have imagined an mc-based speaking and reasoning entity/being? Perhaps yes since they could not imagine non-materiality, so they would have assumed something more is needed than what was known then, but not non-materiality. And without being able to interview them on this point, it is almost certainly not determinable (and given how terms change and meanings shift, even if we saw their writing on the topic it isn't clear that we could understand what they really meant.)

As to our ontological proposition, the notion could not be countenanced in that era since those we would today recognize as mc philosophers were able to speak and use rational faculties and so they would be considered nmc. However now that both properties are possible for entities we are comfortable with considering to be mc's -

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<sup>85</sup> see eg paragraph 9 of Meditation 6 (quoted in the Appendix).

<sup>86</sup> To what extent Descartes owed some of his ideas to prior thinkers is a matter of opinion, interpretation and debate (see eg Appendix).

<sup>87</sup> "Discours de la Méthode," and more expansively in the "Réponses aux Quatrièmes Objections," and in the correspondence with Henry More. See some quotes below and in the Appendix.

<sup>88</sup> Inter alia this assumption of course implies that nmc has effect in the physical world, which then makes it easier to countenance free will.

ie 'simple' computers - it becomes possible to consider any speaking and rationally-analytical entity (eg materialist philosophers) as mc's.

**Occam's razor:** Since we cannot explain how nmc arises or prove it exists, perhaps in some sense the minimalistic assumption is that only those who claim to possess it do indeed have it<sup>89</sup>. However, this might be a disingenuous use of this principle.

**Free will and human moral responsibility:** There is an obvious possible relation between these and the question of whether humans - including all their decisions and behavior - are automata, and the implications of proposing that they are automata may have prevented some from proposing this even if they felt it was implied by scientific evidence. We'll include some references to the effect of this conceptual interconnection below, but will largely ignore the actual topics of free will and human moral responsibility, dealing with all that in a separate paper.

**Reductionist materialism:** Julien de la Mettrie's *L'homme Machine (Man the Machine, 1747)*<sup>90</sup>. (See re Gassendi in the Appendix.)

**Darwin:** Humans descend from non-conscious beings. However Darwin did not hold a materialistic view of humanity and seemed to assume some constituent element of our reality that today would be considered a religious notion, and it does not seem that he would have proposed that all that is human can derive from purely-materialistic aspects of biology (see appendix for quotes), so we can paraphrase our above sentence as something like: Human bodies and brains descend from those of animals, however humans also possess nmc, which earlier animals almost certainly did not.<sup>91</sup> As there was not yet a full theory of the emergence of the material universe - as eg later implied by the big bang theory - it was not necessary for him to include a discussion on how this extra aspect would emerge. Given his ideas (see quotes in the Appendix), presumably if he lived today Darwin would have agreed that materialistic notions would not suffice to explain or model nmc. And given that the new neo-Darwinian synthesis etc does not include nmc which Darwin knew existed, presumably if he were alive today he would agree that there is no scientific reason arising from biology to assume that all humans are nmc.

**Wallace:** Wikipedia: In 1864, Wallace published a paper, "The Origin of Human Races and the Antiquity of Man Deduced from the Theory of 'Natural Selection'", applying

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<sup>89</sup> Even if one allows that nmc can be directly-known, Occam's razor would militate against ascribing this inexplicable phenomenon to entities which claim it does not exist, ie is NOT known to them directly - and thus the more parsimonious assumption is that although one grants to nmc that they do possess nmc, indeed materialists do *not* 'have mind'. (Occam's suggestion is not the main reason we propose that materialists do not possess that which non-materialists refer to as consciousness, however we also wish to show that our proposition is in line with it.)

<sup>90</sup> <https://plato.stanford.edu/entries/properties-emergent/>

<sup>91</sup> He was writing up his theory in 1858 when Alfred Russel Wallace sent him an essay that described the same idea, prompting immediate joint publication. His 1859 book *On the Origin of Species*.<sup>[21][22]</sup> was about animal origin in general, and in 1871 he examined human evolution in *The Descent of Man*, and then *The Expression of the Emotions in Man and Animals* (1872).

the theory to humankind. Darwin had not yet publicly addressed the subject, although [Thomas Huxley](#) had in *Evidence as to Man's Place in Nature*. Wallace's belief that human consciousness could not be entirely a product of purely material causes was shared by a number of prominent intellectuals in the late 19th and early 20th centuries.<sup>[143]</sup>

In his writings he introduced the notion of 'spirit' where we would be insistent on speaking of consciousness, but his intent is clear.

**He proposes that a non-physical influence was responsible for the onset of life, of nmc, and of civilization(culture):**

The next stage is still more marvellous, still more completely beyond all possibility of explanation by matter, its laws and forces. It is the introduction of sensation or consciousness, constituting the fundamental distinction between the animal and vegetable kingdoms. Here all idea of mere complication of structure producing the result is out of the question. We feel it to be altogether preposterous to assume that at a certain stage of complexity of atomic constitution, and as a necessary result of that complexity alone, an *ego* should start into existence, a thing that *feels*, that is *conscious* of its own existence. Here we have the certainty that something new has arisen, a being whose nascent consciousness has gone on increasing in power and definiteness till it has culminated in the higher animals. No verbal explanation or attempt at explanation—such as the statement that life is the result of the molecular forces of the protoplasm, or that the whole existing organic universe from the amaebea up to man was latent in the fire-mist from which the solar system was developed—can afford any mental satisfaction, or help us in any way to a solution of the mystery.

The third stage is, as we have seen, the existence in man of a number of his most characteristic and noblest faculties, those which raise him furthest above the brutes and open up possibilities of almost indefinite advancement. These faculties could not possibly have been developed by means of the same laws which have determined the progressive development of the organic world in

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These three distinct stages of progress from the inorganic world of matter and motion up to man, point clearly to an unseen universe—to a world of spirit, to which the world of matter is altogether subordinate. To this spiritual world we

<sup>92</sup> We can clearly see that Wallace, co-founder of the theory of the evolution of humanity including the human brain, i. was an nmc, and ii. felt that the nmc associated to the human brain was outside the realm of the laws of physics (and that nmc is more fundamental than the material universe) and iii. that its emergence in association to human brains could not be explained via laws of the material universe.

Our reason for quoting the above is to make the point that from the theory of evolution itself as known in the time of Darwin and Wallace there is no a priori reason to assume that

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<sup>92</sup> Ironically, Wallace's ideas were critiqued by opposing sides of the "science-religion" debate. See eg "The Church and Science" J. Gerard S.J. in "The Irish Monthly" Dublin.

.1893[https://archive.org/stream/irishmonthlyvol03russsgoog/irishmonthlyvol03russsgoog\\_djvu.txt](https://archive.org/stream/irishmonthlyvol03russsgoog/irishmonthlyvol03russsgoog_djvu.txt)

nmc emerged globally across all humanity simultaneously, nor that it is associated to all human brains descended from those who had nmc in the past, and no reason in that theory to assume nmc is associated to all humans alive today.<sup>93</sup>

**Thomas Huxley's** 'extension' of Darwin's theory from animals to human: a paraphrase: "human bodies are machines". However he was "not among materialists, for I am utterly incapable of conceiving the existence of matter if there is no mind in which to picture that existence"<sup>94</sup>. Humans are 'nmc automata' (as are perhaps animals, ie they may also be nmc, since a continuous development of consciousness seemed to him more reasonable than a sudden appearance of it in humans).

Huxley did not accept free will, and felt that all human behavior and brain processes are explicable in terms of physical processes, so consciousness is not causally-effective, it is an 'epiphenomenon' (Also see James 1890, Chapter 5.) He insisted however that did not imply that he believed humans are not morally responsible for their actions.

Descartes presented humans as embodying a sharp distinction to animals - animals are both non-conscious and are automata, whereas humans are neither - they have free will rather than being automata and they ARE conscious. Huxley wants to present humans as automata, however the fact that humans are conscious seemed to make it less likely for many to accept that they are automata, and so he presents animals as conscious, and thus the distinction with humans is much less. And given Darwin's theory, and in extending it to humans as Huxley did, Huxley could now more reasonably present humans as descended from animals in all important respects - humans inherit consciousness from their animal evolutionary predecessors, and like them humans are automata not only in body but in brain, ie without any free will.

The present author conjectures differently. Since no scientific reason exists for assuming all humans are conscious, we do not make that assumption, and rather than placing the break between animals and humans, the break is placed between animal and humans who are non-conscious, and those who are conscious.

Furthermore, we separate this discussion completely from the issue of whether humans are or are not fully automata (ie whether all brain processes are exactly as would be if humans were not conscious, as would be in a purely-material universe), and from a discussion of any implications of

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<sup>93</sup> The issue is in a way analogous to the question of whether we are alone as intelligent species in the universe (or in our galaxy, and the beings other galaxies have not yet achieved the technological ability of inter-galactic travel or of creating effects visible from other galaxies). We feel somehow that because we exist, there must be others, but that is not a valid way of arriving at truths. Maybe the situation here was unique, or maybe we are simply the first, or maybe there were others but they went extinct or perhaps they are so different from us that we can't recognize them as intelligent etc And similarly re nmc on our planet, in our species. (And it may be that the aliens we would meet may be nmc or mc, or perhaps something else entirely.)

<sup>94</sup> **However, see his form of 'materialism'**, quoted in the Appendix, a prototype of 'epiphenomenalism'.

this for human moral responsibility<sup>95</sup>. (These issues are the focus of another article, embedded on the accompanying website.)

**The later Darwin:** It would seem that Darwin in 1872 still believes in the minimalist non-materialist position, that there is more to the universe than materialism would include and specifically as associated to the human mind<sup>96</sup>,

### Post-Darwin thinkers:

**Bergson:** nature possesses the ability to be creative in a way which transcends the causality and entropic limitations taught by physics (a true creativity of nature vs the unfolding of an order inherent from the beginning).

In other words, he felt that mechanistic materialistic processes were insufficient to account for what we know exists.

..

**W. K. Clifford:** Besides his works on mathematical physics (curved physical space and theories of matter) he wrote on philosophical matters, and was both a proponent of evolutionary theory and clearly was an nmc.

**du Nouy:** the biophysicist Lecomte du Nouy in his book "Human Destiny" writes of the evolution of humans as a significant step in the evolution of the cosmos<sup>97</sup> - significant because conscious (hu)man(ity) has "escape[d] from the grasp of the physico-chemical and biological laws".

**AR:** Clearly he is referring to nmc, a phenomenon which is not subject to the laws of physics, and to its emergence at a particular time in the not so distant past. We would claim that without knowing exactly what nmc is and how it emerges there is no a priori justification for

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<sup>95</sup> It is interesting to try to figure out what it would mean for an nmc to believe in moral responsibility despite the lack of free will - as Einstein seemed to have believed (though it is also possible that Huxley was simply afraid to admit his true belief - eg maybe he agreed with us that human automatons cannot have MR for their actions, and understood the meaninglessness of mr, but felt that others would not realize that when he said that the notion of humans as automatons does not imply the terrible conclusions he might be accused of, that in fact he knew well that these 'terrible' ideas were in fact implied by his conclusion that humans are automatons, jut that he was able to escape these accusations by saying that he DID believe in moral responsibility, where of course it is only mr that humans have in his theory, and he as an nmc understands that mr is meaningless from the nmc perspective, but his potential detractors might not realize this.

Note: Bohr had interesting notions of 'complementarity' as applied to the human mind, perhaps these are relevant to this question

<sup>96</sup> There is much discussion as to what he did or did not believe (particularly in terms of the religious beliefs he grew up with. Possibly his words here imply that he believed in more than just the existence of nmc, since he did not seem to think of his compassion as being simply a product of evolutionary mechanism. However he either rejects the 'maximalist' position that there is a God, or a law of Karma and reincarnation as in Buddhism etc, or at least he proposes that there is no proof of any of that - however none of this is relevance to our point here. [See quotes and discussion in the Appendix.]

<sup>97</sup> He outlined stages: the emergence of consciousness, then of free will (which finds its echo in the Biblical Eden account), and a yet future-stage. Jaynes also speaks of active consciousness (ie having free will) rather than it being a helpless prisoner. We discuss the topic of free will and its emergence in a separate paper (see links on the site-page).



assuming that all humans at that time acquired it, nor that all humans at present are associated to it. <sup>98</sup>

1864, Wallace published a paper, "The Origin of Human Races and the Antiquity of Man Deduced from the Theory of 'Natural Selection'", applying the theory to humankind. Darwin had not yet publicly addressed the subject, although [Thomas Huxley](#) had in *Evidence as to Man's Place in Nature*.

Julien de la Mettrie's *L'homme Machine* (*Man the Machine*, 1747)<sup>99</sup>. (See re Gassendi in the Appendix.)

<https://plato.stanford.edu/entries/properties-emergent>

"The Church and Science" J. Gerard S.J. in "The Irish Monthly" Dublin.

.1893[https://archive.org/stream/irishmonthlyvol03russsgoog/irishmonthlyvol03russsgoog\\_djvu.txt](https://archive.org/stream/irishmonthlyvol03russsgoog/irishmonthlyvol03russsgoog_djvu.txt)

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### <sup>98</sup> **AR: Tracing the development of the notion of a non-material consciousness:**

It is difficult to make clear statements about the writings of early thinkers since they use terms differently than we would now, they do not necessarily write of a "non-material consciousness" but may speak of "life" or "life-force" or as Darwin who wrote about the evolution of "the moral sense", and asked "In what manner the mental powers were first developed in the lowest organisms", but these early writers do not make a clean distinction between what we would today consider purely-material processes such as occur in a computer, and higher-level algorithms which can decide moral issues and exhibit intellectual capabilities which perhaps overlap some of what Darwin meant by "mental powers", as opposed to what in more modern parlance would be termed 'qualia' or the processes in as we put it here our "sevox-consciousness".

Thinkers before and including Lucretius and upto and including Bergson seem to have conceived of the origin of consciousness as being a process occurring over historical time. We here would say that if sevox is not universally inherent in all as proposed by the panpsychist, that instead sevox evolved or emerged and was not always present in human brains or pre-human brains, and that the disconnect between mind and matter makes it not a forgone conclusion that when the brains of a species acquired or became associated to sevox that this was the case for all members of that species, ie it leaves open the possibility that not all human brains are possessed of or associated to it..

<https://plato.stanford.edu/entries/consciousness-17th/> In the seventeenth century, "consciousness" began to take on a uniquely modern sense. Tracing the development... is complicated by the fact that both Latin and French, the two primary languages in which philosophy was written, have a single term that could mean either (a) moral conscience, or (b) consciousness. For Latin, the term is *conscientia*; in French it is *conscience*. (The verb and adjective forms are similarly ambiguous.) These terms were used with both of their major senses (along with other minor senses) in the seventeenth century, and so any interpretation of the important texts will have to be sensitive to this potential ambiguity. But, more importantly, the underlying reason for this ambiguity is due to the shift in meaning that was taking place during the seventeenth century. *Conscientia* and *conscience*, both of which primarily signified a moral conscience prior to the seventeenth century, were now taking on a new, purely psychological, meaning the transition ... starts with Descartes and, in England, with the Cambridge Platonists. ..The second shift occurs later in the seventeenth century, when philosophers start to see consciousness as *itself* something to be explained. This latter transition begins with the Cartesian philosophers who say more about the nature of consciousness in their development of Descartes's system and in order to avoid some of the objections raised against it.

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"SEVOX": Given the notorious difficulty of defining terms, we "define" sevox as follows: all natural phenomena seem to be explicable by cause and effect, including theories of cosmology and the development of the universe, biology and the evolution of humans, neuroscience and explanations of brain-activity, computer science and AI, etc, all of which constitute the "material universe". It is also a fact that some humans possess an awareness that is separate, qualitatively other than the entities and interactions which are the subject of the previous list or categories, it is known self-evidently, and its existence is not required in the successful theories of mentioned earlier describing the operation of the universe or the human brain; we call it 'sevox'. If it is an entity or process which IS required, and/or is NOT known self-evidently, and is NOT qualitatively 'other' than the material universe, then this is not sevox.

<sup>99</sup> <https://plato.stanford.edu/entries/properties-emergent/>

Note about the above: Presumably Huxley, Clifford, Bergson and duNouy - like Darwin - assumed human bodies evolved via naturalistic processes, however given that they all agreed that humans are associated to nmc, presumably they would have agreed that materialistic/naturalistic theories and processes are insufficient to explain or model all of reality.

Prior to the development of the big bang theory there was no naturalistic scientific theory as yet available which claimed that it could explain all of reality, and do so in support of materialism, and so there perhaps was not yet as clear a clash on this issue between materialists and nmc's as there would be after the acceptance of the big bang theory.

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**G. F. Stout (1931):** Note his discussion of what today are termed 'philosophical zombies':<sup>100</sup>

If epiphenomenalism is correct, then there could be purely physical organisms exactly like us except for lacking consciousness. Though he argued against the possibility that there are such creatures, he wrote: "it ought to be quite credible that the constitution and course of nature would be otherwise just the same as it is if there were not and never had been any experiencing individuals. Human bodies would still have gone through the motions of making and using bridges, telephones and telegraphs, of writing and reading books, of speaking in Parliament, of arguing about materialism, and so on. (138f.)."

<https://plato.stanford.edu/entries/zombies/>: In the nineteenth century scientists began to explain brain processes physically. This was a radical change - in all previous time the issue of nmc was confused with talk of a 'soul' or of a 'life-force' etc, but from then on there was finally the possibility of a cleaner Cartesian division between "mind" which was not incorporated in science, and "body/matter" which is what science deals with<sup>101</sup>. This then emboldened some to think that science was capable of explaining everything that Descartes had attributed to 'mind, and so no 'mind or nmc was required for this ( the physical world is 'closed under causation'). As a result, there arose the notion of physicalism/materialism, which in usual definitions is said to mean that consciousness is physical but in our terms means the claim by mc's that nmc does not exist - that what exists is only mc, involving

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<sup>100</sup> <https://plato.stanford.edu/archives/sum2009/entries/zombies/>

<sup>101</sup> Were the ancient materialists really so, or did they assume the existence of that which today would place them in the non-materialist category? Or perhaps if they were alive today their opinions would be different, possibly more or less materialistic. What terms did they use and what was meant by them (ie translating them into modern conceptions)? Is it even possible for us to 'understand' them or is the entire cultural scientific matrix so different it is impossible?

For example: Descartes use of the term translated into English as 'the soul': he writes in the 'PREFATORY NOTE BY THE AUTHOR': divided into six Parts: .. in the fourth, the reasonings by which he establishes the existence of God and of the Human Soul, which are the foundations of his Metaphysic; in the fifth, the order of the Physical questions which he has investigated, and, in particular, the explication of the motion of the heart and of some other difficulties pertaining to Medicine, as also the difference between the soul of man and that of the brutes.

<https://www.gutenberg.org/files/59/59-h/59-h.htm>

Although it seems as though we have arrived at the final step in understanding the appropriate distinctions between "mind" and "matter" perhaps there will yet be further clarifications, so that part of what we think of nmc will be seen to be a property of mc, or the very notion of 'materiality' will change or be jettisoned, etc. [Analogously, as if physics itself progressed from materialism to dualism to panpsychism, to idealism.]

physical processes. And according to our conjecture we believe they were correct, about themselves.

**Jaynes:** points out that most of our intellectual processes can occur independently of consciousness, and thus he postulates that consciousness arose in humans after all intellectual abilities evolved. Jaynes quotes from ancient Greek writings to show that the writers were not conscious as we know it.

He speaks of the notion that consciousness is non-material (eg “it has no location”) and could not have emerged via material evolutionary processes, but emerged at some point in history. He quotes Wallace’s conjecture that there are three junctures at which there seems to be a non-physical input (at the origins of life, of mind, and of civilization):

Julian Jaynes “THE ORIGIN OF CONSCIOUSNESS IN THE BREAKDOWN OF THE BICAMERAL MIND”

<http://www.compilerpress.ca/Competitiveness/Anno/Anno%20Jaynes%20Bicameral%20Mind1.htm>

Introduction: The problem of consciousness: ....

“...led many scientists back to a metaphysical view. The interiority of consciousness just could not in any sense be evolved by natural selection out of mere assemblages of molecules and cells. There has to be more to human evolution than mere matter, chance, and survival. Something must be added from outside of this closed system to account for something so different as consciousness.

Such thinking began with the beginning of modern evolutionary theory, particularly in the work of Alfred Russel Wallace, the co-discoverer of the theory of natural selection. Following their twin announcements of the theory in 1858, both Darwin and Wallace struggled like Laocoöns with the serpentine problem of human evolution and its encircling difficulty of consciousness. But where Darwin clouded the problem with his own naiveté, seeing only continuity in evolution, **Wallace could not do so. The discontinuities were terrifying and absolute. Man’s conscious faculties, particularly, “could not possibly have been developed by means of the same laws which have determined the progressive development of the organic world in general, and also of man’s physical organism.”** [8] He felt the evidence showed that **some metaphysical force had directed evolution at three different points: the beginning of life, the beginning of consciousness, and the beginning of civilized culture.**

Indeed, it is partly because Wallace insisted on spending the latter part of his life searching in vain among the seances of spiritualists for evidence of such metaphysical imposition that his name is not as well known as is Darwin’s as the discoverer of evolution by natural selection. Such endeavors were not acceptable to the scientific Establishment.<sup>102</sup> **To explain consciousness by metaphysical imposition seemed to be stepping outside the rules of natural**

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<sup>102</sup> AR: A cogent warning of the futility so far of investigations of consciousness.

**science. And that indeed was the problem, how to explain consciousness in terms of natural science alone...In reaction to such metaphysical speculations, there grew up through this early period of evolutionary thinking an increasingly materialist view.**

Here (last paragraph of "Book 2") he speak of a zombie civilization:

"consciousness...is not necessary for making judgments or in simple thinking. It is not the seat of reason, and indeed some of the most difficult instances of creative reasoning go on without any attending consciousness.....necessary to conclude that consciousness does not make all that much difference to a lot of our activities. If our reasoning has been correct, **it is perfectly possible that there could have existed a race of men who spoke, judged, reasoned, solved problems, indeed did most of the things that we do, but who were not conscious at all. ... a civilization without consciousness is possible...**"

AR: Re Jaynes' "some metaphysical force had directed evolution...at the beginning of consciousness"+ "a civilization without consciousness is possible":

We would claim that there is no reason to simply assume that all humanity at that time acquired nmc, ie transitioning from 'zombies' to nmc's, nor that all humans today possess it - even those biologically-genetically descended from those who did acquire it back then might not be associated to it.

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**Conclusion:** From the above it is apparent that there was not yet even already in Jaynes' time not long ago a scientific necessity for academic nmc psychologists to assume that Wallace's conjecture was incorrect or even unnecessary, ie that there was some alternate scientific way to explain the origin of nmc, and so there would be no scientific reason for an nmc to assume all humans are nmc. Also, it is striking that Descartes - in trying to decide whether or not animals are conscious, and deciding they are not - used analogies and mental pictures but could not find any way to prove his thesis, and so too with Huxley and even as recently as Jaynes. And indeed up to the present time there is no scientific proof or indication that animals are conscious - the general notion of many is that since certain animals seem to exhibit emotion and intelligence they must be conscious, but this is of course a false deduction - indeed we cannot even deduce that our human friend or mentor is nmc because they exhibit emotions and intelligence and even from the fact that they may claim they are nmc, and so even today it is not possible to ascribe to science the justification for the standard generalization to all humans of one's own ontological status regarding

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<sup>103</sup> re "some metaphysical force": see our speculations in a [separate article](#) about the 'acausality' inherent in the existence of a universe which is not eternal, and its possible relation to the non-materiality of nmc, and to its acausal emergence, as well as to the phenomena of 'free will' and 'true creativity'.

<sup>104</sup> Note: David Berman in his 2008 book *Penult* traces "different types of mind" as evidenced by the philosophical positions expressed by various philosophers. However, as stated, the opinion of the present author is that not all humans possess self-awareness - and are perhaps even entirely lacking of mind - rather than simply having a different 'type of mind'. Therefore this paper speaks specifically of different types of brains - rather than different types of minds - some of which have mind associated to them and some which do not.

nmc - and so we prefer to conclude that materialists are indeed purely-material and those claiming to be nmc are that.

**The effect of the big-bang theory and its implications:** After millenia during which most thinkers assumed nmc existed and that it was not necessary to defend its existence, finally a candidate for a full theory of the emergence of everything from nothing was proposed - a scientific origin theory composed of combining the big bang theory, notions of entropy, the evolutionary theory etc - and one could not anymore ignore the issue of whether humans were associated to nmc, eg by simply implicitly assuming it exists despite not being part of existing theories.

At this point, some scientists and philosophers adopted pure materialism, and saw the material 'big bang' (singularity with its space-time energy content etc) as the source of all, and that which is not part of the big bang in the theory - eg nmc - did not actually exist. Others ignored the issue of consciousness. Some proposed a role for consciousness in quantum theory and thus enfranchised it within physics in a sense, but in fact nmc in itself was not ever actually part of this theory; furthermore other than the very prominent pioneers of quantum theory most (later) theoretical physicists disparaged this notion.

Now that there were finally naturalistic theories which could be combined to produce an explanation for not just the ordinary matter-energy of the universe but also for the emergence of the brain all the way from 'almost-nothingness', many accepted that science was tending towards materialism and eliminated mind altogether so that science could now claim to have a model for everything, with non-materialist scientists often feeling that they had to hide their beliefs.

However prominent physicists in all periods, eg contemporaries such as Andre Linde and Ed Witten, are unabashedly in the nmc camp (see extensive quotes and discussions of nmc from the physics and physicist point of view in the accompanying paper "[Why Consensus..](#)"), as also prominent physicists of the previous generation eg John A. Wheeler, and Paul C. W. Davies who wrote prolifically as a physicist popularizer of ideas combining science and mind; in any case it would not be legitimate to say that a material view of reality is 'scientifically-preferred', and indeed any nmc knows such a theory is in fact incorrect<sup>105</sup>.

However materialists began to feel that physics and neuroscience was adequate to the task of explaining everything of relevance regarding humans, and that there was no need of non-material phenomena or causes to explain anything, and then they claimed - for perhaps the first time 'in the name of science' - that nmc did not in fact exist.

Ironically, this perception of a scientific mantle for the false mc claims is considered in this paper views as evidence that their pronouncements (of the lack of nmc) were correct, but only in regards to themselves (ie only someone without nmc could think that the science of the big bang and evolutionary theory is relevant to nmc, or even more so that science could somehow "disprove" the existence of nmc).

**The present conjecture:** The author knows he is associated to mc, so the existence of nmc is a fact. Others claim the same for themselves. Some claim it is impossible. All experts in

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<sup>105</sup> See further below for an analysis of why the works of Chalmers and Nagel were found by many to be relevant.

relevant scientific fields who are themselves nmc agree that within their field it is not possible to provide an understanding of what nmc is or how it emerges or how to detect it, and so they cannot credibly assert that there is scientific reason to conclude that anyone is or is not nmc other than themselves, and so we are not constrained by any scientifically-based law to assume any specific notion of what it is or how and when it arose and in whom.

- a. Utilizing this freedom, we propose that rather than attributing nmc universally to all humans, and instead of supposing it emerged simultaneously in all, that instead only some humans initially became associated to nmc, and not all humans today are so associated: <sup>106</sup>
- b. Motivation for this proposal: Given its self-evident existence, it is inconceivable that intelligent thinkers can deny the existence of nmc and so one is forced to conclude that materialists (as exemplified by eliminative materialists and perhaps including all material monists such as physicalists) are not nmc. In contrast, non-materialists (dualists/idealists/panspsychists, and probably neutral monists etc) have the type of "consciousness" they claim exists - they are "nmc-self-aware automata" (we'll say they are "nmc's"). [Of course if 'true free will' exists they are autonomous-nmc".]
- c. There is a biological difference between "mc's" and "nmc's" (and it is worthwhile performing experiments to attempt to identify it).

We propose that those presenting naturalistic theories of reality are ontological materialists who see reality via their own limited scope and erroneously attribute to reality their own materiality.

They do not have inner intuition of nmc as nmc's do and so are inclined to say it does not exist, and feel emboldened by the developments in science - the possibility of explaining brain activity without recourse to nmc, which nmc's understand as ramifications of Descartes' parallel and separate mind-body action - to negate nmc entirely. That is, although it is true that nmc cannot be proven and maybe even can be disproven, it exists nevertheless, and the true reason that **materialists disbelieve in the existence of the non-material is because they do not have nmc.**

**Summary:** Humans without nmc are "material-conscious automata" (we'll say they are "mc's"); alternately, what they lack is only the "nmc-self-awareness" aspect and so they are "non-self-aware nmc automata". Either way, what they assume to be a 'belief in materialism' or an ability to convincingly disprove the existence of nmc is actually an outer expression of an inner ontological state.

## Appendix: Nagel & Chalmers:

As a read-through of the Appendix with quotes from Descartes, Huxley, Jaynes etc may indicate, Nagel's central point re consciousness in "What is it like to be a bat" was perhaps

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<sup>106</sup> 1999: "Mindless Materialists":

<https://sites.google.com/a/nyu.edu/avi-rabinowitz/home/internetarticle-1998-mindless-materialists>.

obvious to many nmc's, and does not seem to contain anything novel to an nmc physicist. However the very fact that it caused such a storm indicates that it seems to have opened the eyes of some. We can speculate that it was sufficiently clearly and philosophically formulated that it benefitted those who were presumably in the above-described category of nmc but not-yet-nmc-aware, or nmc but hadn't thought it all through enough, and it more rigorously formulated the known issue so that perhaps some mc's began to understand not what nmc is but rather than nmc's discussing consciousness meant something completely different than they had thought they were discussing.

**Chalmers:** Similarly for the work of Chalmers re (philosophical) 'zombies'.

Nmc scientists and philosophers wondered about the types of humanity prior to the emergence of nmc, and more popular books by Koestler and Jaynes and others explored various aspects of the notion of earlier humans being fundamentally different than later humans, and religious writers analyzing the biblical creation and eden accounts in this light could see it as an echo of this emergence. In this sense the notion of the possibility that early humans were (philosophical) 'zombies' was clear to nmcs. However nmc writers did not realize that among their audience were mc's who did not understand (and certainly did not realize they were ontologically different than the nmc's expressing these views), and so the language used by both types was misleading and ambiguous in the ways we outlined earlier<sup>107</sup>.

This unrecognized ambiguity created an opening for rigorous philosophical formulation of the distinctions, such as by Chalmers. Although some of the points he made might seem obvious to many nmcs who contemplated these issues, they were not obvious to all, and so there was a need for Chalmers' analysis, distinctions, explanations and clarifications, making intuitive points explicit and more rigorous.

**Nagel:** Speaking from the perspective of a physicist, it would seem that similarly, Nagel's point in his "Mind and Cosmos" was obvious to scientists like Bergson and Eddington and the quantum physics founders, and later to Wheeler. (Indeed perhaps they would have omitted the hedging "almost" in Nagel's title: "Why the Materialist Neo-Darwinian Conception of Nature is Almost Certainly False").

The point was also implicit in the profound popular-physics writings of Paul Davies, and mathematicians like Rudy Rucker ("Infinity & the Mind", though much of that is about brain, with some Platonistic aspects). To scientists, it was probably evident that one need not know any science to understand that a materialistic theory of anything which included consciousness (eg a theory describing the emergence of humans) could not possibly be

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<sup>107</sup> Importantly also, we need to keep in mind the case of a non-color blind lecturer propounding deep notions about colors. The lecturer is unintentionally relying on the audience members' sharing their primitives, however the audience contains also some color-blind members who do not share them.

Analogously re nmc's not realizing that there are mc's among the readership to whom what they say is incomprehensible or nonsensical, and *not realizing that some of the intended meaning of their ideas was supplied not by the words explaining them but rather by the innate intuitive nmc-understanding of the writer and the nmc-readers - and therefore these ideas could not be comprehensible to mc's.*

complete. However some philosophers perhaps didn't feel they were expert enough in the science aspect to know that it is not directly relevant (see eg Nagels' modestly self-deprecatory prefatory statement re not knowing enough physics to comment on the incompleteness of a theory of cosmology which did not include nmc)<sup>108 109</sup>.

To many physicists it is a self-evident truth that materialism is insufficient when attempting a theory of everything, however perhaps this needs to be formulated as a rigorous statement.

### **The Effect of the scientific culture of the time**

Another relevant aspect is the difference between two eras: after mc's claimed that everything about humanity could be explained 'scientifically' vs before, when it was not possible for mc's to claim all could be explained. In the earlier era, what to nmc's was the obvious lack of mind as ingredient supplied by evolutionary processes to humans was not an issue, it was assumable by nmc's that it would eventually arrive, as per eg the quantum-physics approach of Davies and perhaps Eccles and later Penrose, but generally when the big bang became accepted by mc's as a complete theory - along with evolutionary theory - providing the basis for a theory of all, and many of them pushed atheistic materialism as a result, it became intellectually necessary to make the point clear to them that nmc's did not at all feel there was a complete theory, and maybe this was impossible within science. And that created an opening for the books by Nagel.

Given all the above, in analyzing when certain ideas arose, why then, and what was meant by those proposing the ideas, and who understood what based on them, one needs to keep in mind:

the different brain/mind types - (nmc, mc, nsa-nmc, and the last category: nmc's who hadn't previously sufficiently thought about it);

the difference between philosophers and scientists;

the difference between eras;

For example as regards the way that readers of Nagel and Chalmers understood the issues before and after reading their works, and to determine how each type was affected by the argument one needs to take into accounts:

- what the terms mean to each type;

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<sup>108</sup> Footnote: One is reminded of the anecdote re proofs of the non-existence of God or disproof of the ancient date of the bible etc: experts in each scientific profession (physics, biology, archaeology, literary criticism) knows the limitation of its own science and understands their specialty is inadequate to the task of a rigorous proof but thinks maybe the others have succeeded in disproving it.

<sup>109</sup> "Despite its name: 1. Newtonian cosmology" was invented after general relativity, in retrospect; 2. After knowing GR one realizes that without knowing GR one cannot justify why ignoring it to construct "Newtonian cosmology" is a valid procedure (one needs to know Birkhoff's theorem and the EP in the context of GR rather than the equivalents in Newtonian theory.)

After knowing quantum physics and statistical mechanics etc, and the uncertainty principle & Poisson brackets and their limits, one can understand why one can in various circumstances ignore quantum considerations.

Analogously ironically, it may be that only after understanding physics can one realize that it is not directly relevant to making a determination that our awareness is non-material.



- what aspect of the argument is added intuitively unconsciously by nmc's that is not added by mc's.
- what was explained that is obvious to nmcs, but phrasing it so that the last category finally got it;
- at which point did mcs understand that what is being said is not what they thought - albeit it still seems nonsensical to them.

Also: to analyze the difference in the effect of their arguments on philosophers vs on those scientists to whom it may have seemed intuitively obvious, as well as the perceptions as to whether these arguments were considered novel or explicating earlier notions, or were addressing concerns that had been neglected or overlooked by previous writers.

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## **Appendix: Transcending the material:**

### **Meaning, purpose, moral responsibility, free will, human significance, religion:**

**Preface:** Platonist mathematicians grant ontological actuality to that which others consider only concepts in a brain. Similarly, for some nmc's there are concepts arising within a nmc (besides the notion of sevox itself) which may possibly correspond to actual existents. In particular, when sevox refer to the topics in the heading, generally they are intuiting some material-transcendent realm, and these concepts are 'existents' in that realm.

The discussion here is not attempting to make arguments for the validity of this notion, but rather to clarify the divide between how the topic is understood or misunderstood by sevox/elmts, and to propose that it is simply not possible for those with sevox to explain what they mean to those lacking it.

This topic forms the core of an accompanying paper<sup>110</sup> and so is treated only glancingly below.

**Intuiting/detecting Free will & acausality:** Non-materialists consider sevox to be separate from the ordinary chain of material cause-effect. Is it possible that sevox-beings therefore are able to intuit acausality in a way inaccessible to materialists? For example, is the notion of incompatibilist libertarian free will with agent-causation nonsensical or meaningless to materialists but intuitive to sevox so that they may or may not accept its existence but at least they understand what is meant? This is to be tested via the survey.

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### **Free will**

This topic is [dealt with in depth separately here](#).

There have long been futile discussions regarding whether there is - or needs to be in order to give meaning to moral responsibility - 'antinomian libertarian acausal free will'. Our proposition is that materialists are simply incapable of understanding what is meant by this type of free will since it requires the existence of a transcendent aspect to reality - which since it is not accessible to them is also incomprehensible.

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<sup>110</sup> <https://sites.google.com/nyu.edu/anti-materialism/moral-responsibility-free-will>

For non-materialists, one could perhaps use as the standard "the type of free willed choice which is physically and logically impossible, is executed by a sevox, and which would be necessary but not sufficient in order for a compassionate and reasonable (divine or human) creator of that being (human or AI) to consider it morally responsible for its actions". In order to promote less futile dialogue, one can perhaps create a convention where the usual term "free will" would be licensed for use to materialists to mean basically what non-materialists would call 'the illusion of free will', and where 'true free will' or 'antinomian libertarian acausal free will', or the moral-responsibility-granting type referred to above is referred to not as 'free will', but rather with a new term earmarked for the purpose. In this way, people can have discussions about whether or not this type of free will can exist, and whether humans - or some humans, or some AI - possess it etc, rather than futile arguments about its definition or characteristics when the two sides are actually referring to different phenomena but absurdly trying nevertheless to agree about its properties.

### **Free will and the quantum measurement problem**

#### **Consciousness causes collapse = von Neumann–Wigner interpretation**

Perhaps it is true free will which is the agent causing this "collapse" rather than simply consciousness (see the author's article [published 1987] on the subject). This antinomian free will, which could only exist in a sevox and is its way of expressing itself on the material universe, and is of course a mechanism of 'choosing among possibilities', thus making it the quintessential candidate for that which brings about "collapse". Again, whether one accepts this possibility or not, the very relevance of free will in this context will be inscrutable to a materialist. Whether prudence or risk-taking is the greater virtue.

Why metaphysically-inclined physicists (or religious) are not perturbed by the clash of free will and logic/cause-effect: Free will is indeed paradoxical, counter intuitive, counter even to logic and science. However the existence of sevox points to the deeper level of the universe or of reality, which is beyond causation and science/logic. To those who take this a step further, to postulate the existence of a "Mind" - and even more, the existence of a Mind which is the designer/creator of all, ie of the physical universe, humanity, sevox, law of nature - the contradiction between rational scientific logic and what one deeply intuits - like free will - is not necessarily an argument against its existence and the possibility suggests itself that a human brain may be inadequate to the task of reconciling the contradictory elements of our reality.

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**Note re 'collapse' as understood from two perspectives**

[https://en.wikipedia.org/wiki/Interpretations\\_of\\_quantum\\_mechanics#Consciousness\\_causes\\_collapse\\_\(von\\_Neumann%E2%80%93Wigner\\_interpretation\)](https://en.wikipedia.org/wiki/Interpretations_of_quantum_mechanics#Consciousness_causes_collapse_(von_Neumann%E2%80%93Wigner_interpretation)) Henrik Zinkernagel (2016), "Niels Bohr on the wave function and the classical/quantum divide", *Studies in History and Philosophy of Modern Physics*, 53: 9–19, [arXiv:1603.00353](https://arxiv.org/abs/1603.00353), [Bibcode:2016SHPMP..53....9Z](https://doi.org/10.1016/j.shpsb.2015.11.001), [doi:10.1016/j.shpsb.2015.11.001](https://doi.org/10.1016/j.shpsb.2015.11.001), [S2CID 18890207](https://pubmed.ncbi.nlm.nih.gov/268890207/), For a start, discussions of the Copenhagen interpretation in the literature are ambiguous between two different views of the wave function, both of which of course accept the Born interpretation.<sup>5</sup> Sometimes the Copenhagen (and Bohr's) interpretation is associated with the epistemic view of the quantum state, according to which the quantum state is but a

representation of our knowledge of the physical system, and thus not a real existing entity in itself. On this view the 'collapse' of the wave function is not a physical process, and it just reflects an update of our information about the system; see e.g. Zeilinger (1999). By contrast, the Copenhagen interpretation has also been associated with an ontological view of the quantum state, in which the wave function somehow describes a real wave, and the collapse is a real physical process – presumably induced by the observer. This ontological view is usually attributed to von Neumann in his 1932 textbook exposition of quantum mechanics; see e.g. Henderson (2010). [...] Thus, for Bohr, the wave function is a representation of a quantum system in a particular, classically described, experimental context. Three important points need to be made regarding this contextuality: 1) When a measurement is performed (that is, when an irreversible recording has been made; see below), then the context changes, and hence the wave function changes. This can formally be seen as a "collapse" of the wave function, with the square quotes indicating that we are not talking about a physical process in which a real wave collapses.

**Conceptualizations of moral responsibility: Proposition to test via survey and experiment:**

Perhaps some feel nmc's transcendent nature and intuit what it would mean to have a moral responsibility arising from that, whereas materialists do not, and don't feel that the free will provided for by known physics conflicts in any way with moral responsibility as intuited by them.

**Explanation:** Although Attila the Hun's behavior was clearly selected for, so too in its own way is pro-social brain-wiring, for example 'feeling morally responsible' for one's actions, so it is not at all surprising that brains feel this, irrespective of whether one can find philosophical or scientific 'justification' for it. However it would be interesting to survey and test brains which understand the issue and can compare their feeling with logic and science, to see whether there is a split correlating to mc/nmc in those who feel that the free will provided for by known physics conflicts in some way with moral responsibility (eg whether or not it is dependent on the existence of "libertarian incompatibilist free will with agent causation"), and to then test whether the responses correlate to a belief/disbelief in (the possibility of) some sort of transcendent aspect to reality, and to different brain structure/wiring.

**Questions on the survey regarding the free will needed for a sense of moral responsibility: that is meaningful to the respondent: contrasting two paradigms:**

- (i.) The biblical genesis scenario, with true free will and a "Transcendent Realm" in which human moral responsibility is anchored;
- (ii.) The mechanistic scenario: determinism/randomness+reductionism (rather than true emergent wholism).

To what degree do materialists/non-materialists consider these paradigms either plausible/not impossible or nonsensical/provably wrong?

Our prediction would be that materialists (who presumably are also atheists) will consider (i.) entirely ludicrous, and therefore not useful in defining a meaningful sense of "freedom", whereas non-materialists will consider (ii.) ludicrously incompatible with moral responsibility as they intuit it.

Are both approaches 'equally nonsensical'?

To the great majority of some probably scenario ii) is nonsensical within its own paradigm since it is inconsistent, while to mc's scenario i) is presumably nonsense, perhaps even completely disprovable (as perhaps atheists will claim). Thus each side may feel its claim is less nonsensical than the other's.

This topic is discussed more in detail in a separate article listed on the accompanying sitepage, and the assumptions made in the above are slated to be tested in the survey.

**Sevex and religion:** To sevex-individuals, religion is likely in a qualitatively-different category than sevex-consciousness in that they **know** of sevex whereas they only perhaps might **believe** (or disbelieve) in God/soul/religion (though might it be that some religious people will claim equal knowledge in that sphere as well?).

Nevertheless there can be a sort of continuum leading from the minimalist level of a nmc's sure knowledge of the existence of consciousness, up the ladder of speculation (ie past sure knowledge) to levels such as the notion of 'Cosmic Mind' (eg as eg per Einstein)<sup>111</sup>, with the maximalist level being perhaps the notion of a God, or of a Creator etc.

To elmatists however it may be that the idea of sevex and God seem almost indistinguishable, or at least equally incomprehensible, rather than being widely-separated levels; a materialist might feel that belief in 'sevex' is equivalent to a religion, and might be led to atheism either via equating God to the non-existent "consciousness", or simply because they lack the same knowledge of a reality beyond the material which is directly apparent to those with sevex, and find the notion of any sort of transcendence of the material realm to be non-intuitive.

Although this paper, survey and experiment do not intend to deal with 'religion', the survey might help clarify whether only to sevex – even atheistic nmc-sevex - would the notion of a "God" seem at all possible. If so, this could explain the dismissive attitude of various atheist materialists to the notions of religion, to the possibility at all of the existence of a deity, and why their characterizations of religious notions often seem as childish and unsophisticated to religious people as Boswell/Johnson's 'refutation' of Berkeley seems to nmc-sevex philosophers.

**Conclusion:** Altogether, it would seem that when discussing the above topics and concepts such as meaning, purpose, true free will and moral responsibility, it makes sense for there to be an accompanying unambiguous statement as to the fundamental underlying assumptions regarding whether or not nmc-sevex exists, and then the further step of whether or not there is some non-material realm etc whose existence is what provides validity for the 'concepts'. Also, to recognize that the positions on this topic depend very heavily on the mc/nmc nature of the person presenting the idea, and to not expect that mc's and nmc's will agree about this, nor to assume that one side can 'explain' the fundamentals underlying their position to the other side in a way that will convince them to change their minds about these underlying fundamentals, and therefore also derivatively about the specific topic under discussion.

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## Appendix: Are there more levels to reality than those perceived by nmc's?

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<sup>111</sup> Given that nmc is associated to brains due to their sophistication and complexity, to an nmc for whom it is fact that their brain is associated to an nmc, it can seem not totally implausible that the most highly sophisticated and complex 'entity' - the universe as a whole - is associated to an nmc, ie the notion of a 'cosmic Mind'.

Just as some humans have nmc and some don;t and the nmc's experience a different reality than do mc's, so too perhaps there are other aspects of reality or other realities.

It could be interesting/important to canvass intelligent articulate people who understand the mind-body issues and know they are conscious and understand that it is nmc, as to whether they have any other type of connections. It is worth making efforts to avoid making the same mistake that mc's make in assuming all are like them, without nmc. I need to take into account the possibility that I am without some connection that other nmc's have in addition to nmc.

- Of course it maybe that there are also mc's with an extra connection nmc's don't have - or i don't have - eg the knowledge of the existence of an external physical universe, ie they know solipsism and idealism are incorrect. ie does anyone now that the external material universe exists as opposed to me (AR) who can only know I exist?
- Do some people know there are other nmc's beside themselves whereas i am locked out except for my own nmc, ie the problem of other minds?
- Does anyone know they have free will as i know I have nmc, as opposed to me who only feels or believes I have fw?
- Are there people who know they have some additional connection to a higher reality, that which they term a 'soul' (in modern terms rather than as in Descartes, for whom it may have been what we call 'mind')
- Are there other possibilities?

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## **Additional discussion**

### **Why conversations about values, meaning, free will etc between the two types are usually futile**

Topics:

Phenomena and concepts which require sevox to be comprehended and which derive from a transcendent level of reality, and which are therefore inaccessible to materialists and are concomitantly incomprehensible to them:

**Analogies:** i. Imagine a long-standing argument between two groups of philosophers about some position, eg prudence vs curious exploration, but then a biological discovery is made to the effect that evolution has engineered a brain difference between those in the two

groups, resulting in their complete conviction about one or the other as a "philosophical position". Similarly re the materialist-non-materialist, they are manifesting different brain wiring even as they think they are simply presenting different philosophical positions re "consciousness".

ii. Imagine two groups of brains unknowingly wired in relative-synesthesia, and altogether ignorant of the notion of sensory perception being related to brain wiring, and they of course respond in opposite ways to auditory and visual stimulus and are in interminable argument about the inner experience associated to mechanical vibrations ("sound") vs electromagnetic ("light"), or those sensed via the ear vs via the eyes. How absurd and futile to argue about this – both are right in subjective ways as appropriate to their experience. So too - analogously - for the materialist-non-materialist.

iii. Imagine if brains can be differently-wired to perceive justice or morality or other values in different ways and futilely argued the point, not realizing it wasn't a matter of "philosophical position". So too - analogously - for the materialist-non-materialist debates.

Applying the above notions to:

- Meaning, purpose and moral responsibility, Free will, human significance;
- self-evident truths, the Platonic Realm;
- the passage of time in physics; why some propose a role for consciousness in quantum physics.

Re all the topics above: See also [brief discussion here](#).

### **Meaning, purpose and moral responsibility**

A computer/AI can of course be programmed to speak of meaning and purpose, or can perhaps be built to utilize deep learning techniques coupled with massive input from philosophical, literary and scientific libraries etc to 'self-evolve' towards higher-level discourse. However just as sevox would not simply assume that this AI can feel what a human poet felt just because it can recite - or even compose - poetry, so too it could presumably begin to discuss the meaning of life, the purpose of all existence, as well as moral responsibility and free will etc, without sevox feeling compelled to conclude that it too is sevox.

However, if sevox did not exist, would discussions of those sorts exist in the libraries used as input? **It is perhaps the presence of their own sevox which makes some sevox think it is not needed for meaning:**

Consider the following allegory, based on the adage "You don't know what you've got until it's gone".

An 8 year old boy at the park with his mother; after a while she says: 'ok, we have to go'.

He says: ' I want to stay'.

She says: 'ok, you can stay, I'll go home, have a nice time'.

He says happily 'ok, bye Mom!'.

He means it fully.

She hasn't gone more than a few steps before he flings himself at her, clinging. Why? Because the great self-confidence he had when he told his mother she could go without him derived from her presence there with him. And he did not at all know that. Only when she left and it sunk in that she would be gone did he lose all of that self-confidence. There's no way we can know what we have until it is gone.

So when you are very sure you don't need someone in your life, you feel your life is fine you don't need them in it, try to figure out whether perhaps you feel so positively about your life only because that person is in it, if you are so sure you don't need them only because of the tremendous lack of existential loneliness their presence in your life gave you.

We'll now apply to our topic the point made in the imaginary scenario outlined above,

**Why conversations between sevox and elmat on the topic of meaning may be fruitless:** Perhaps the existence of sevox affects one's feeling that there is - or could be - a deep meaning and purpose to life, or at least induces a sense of loss because of the feeling there isn't any, or that one bears moral responsibility for one's actions. If so, then if some sevox feel internally that - or may propound a philosophy to the effect that - a transcendent realm is not even needed for providing the deep sense of meaning and purpose they feel exists or can exist, but are not aware that they feel this because they do have sevox. That is, perhaps this claim (of the non-necessity of sevox) would only occur in beings with a transcendent element such as sevox - ie perhaps they are feeling the transcendent effect of sevox without realizing it - and don't realize that material entities will not feel this - and so erroneously conclude that a being without a transcendent aspect will feel "meaning and purpose" as they do.

Perhaps they may offer philosophical justifications which unwittingly depend on a hidden assumption about the existence of sevox. Or perhaps they do rely on sevox but somehow do not consider sevox 'transcendent'. However, sevox itself is in fact 'transcendent' of the material universe, and to many sevox it automatically grants concepts like meaning and purpose precedence over the nay-saying of logic, psychiatry, physics and cosmology, and accords mind-based notions like meaning and purpose a certain degree of credibility despite their not being provably-existent.

Until we can create AI which 'self-evolves' without input from us, and learn what it does and does not 'think' about, perhaps the only way to know is to compare what is felt by materialists and non-materialists - though of course materialists have been exposed to discussions of meaning and purpose and so the experiment is compromised..

[Note: If materialists do possess sevox but not the awareness of it, how would this affect what they feel, and therefore the comparison to sevox-self-aware?]

In all this, of course there is an implicit assumption that sevox can indeed affect the material universe causally, in the minimalistic sense that its existence gives rise to different words spoken by those with and without it. It perhaps is reasonable to suppose that if sevox can affect the material cause-effect chain at least minimally, it would be in some way like this.

**Towards non-futile dialog:** Can we define the terms meaning, purpose and moral responsibility in ways which convey the same meaning to materialist and non-materialists, so that intelligent discussion can take place on these topics, or do they require the notion of

some element of 'transcendence', but as soon as that is mentioned the possibility of discourse vanishes?

Those with sevox would likely state that beings which are fully-material cannot conceive of a transcendent realm as meant by those with sevox, or in the way that sevox conceive it. To many non-materialists the notion of some realm transcending that of the material is intuitive, and to some even compelling, but even if not that, at the minimum to non-materialists one expects that they would say that it is not incomprehensible, and certainly is not to be rejected out of hand.

It would therefore be intriguing to investigate the above - regarding the attitudes of non-materialists, and also to determine what avowed materialists say about all this.

Do they dismiss out of hand the notion of a transcendent realm?

Presumably they consider it a mistaken notion that anything to do with what non-materialists call "consciousness" is at all necessary in order to speak of "meaning and purpose" as they conceive it.

What do they feel...

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**Re "the significance of humanity"**: Many began to propose humanity as insignificant when faced with the new Copernican understanding of Earth's non-centrality (in the spatial sense), and the immensity of the physical universe. However, to a large degree this conclusion of 'insignificance' involves a logical flaw, since 'insignificance' is of course a concept in human minds and certainly the universe itself cannot consider anything significant or insignificant; also, 'insignificant' carries an emotional implication of inferior position relative to that which IS significant whereas physics does not engage in assigning such attributes (ie whether 'significant' or 'insignificant'), nor does the inanimate universe; also, since to sevox the significance of a human far outweighs the 'significance' of infinitely more massive non-sevox matter. [For an extended discussion see the author's 1986 published article "Geocentrism": an edited version is available online: <https://sites.google.com/nyu.edu/geocentrism-existentialism/geocentrism-egocentrism>, see particularly "Part VI. Existentialist Despair and the Significance of Humanity".]

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## Appendix: Can "Conversion Therapy" work?

**Why some arguments against physicalism seemed convincing, then were seen to fail (and how this fail might affect those who believed it true)**

Descartes stated long ago that there is no way to prove the existence of nmc and that one's brain is associated to it. This seems to be true even today. To the extent that one accepts that this will remain the case, it will be expected that any argument against physicalism or claiming to prove the existence of nmc will fail, ie it will not be 'convincing' (eg the



knowledge, modal and zombie arguments, and also arguments about nmc relating to personal identity and the indivisibility of the subject, etc).

These arguments may initially seem convincing, however in line with our OC we propose that it is convincing only to nmc's, who don't realize that *it is not the argument which is 'convincing' but rather the argument evokes in them the feeling of possessing nmc and this evokes in them the feeling that the argument is convincing*. In contrast, since mc's lack nmc, they will not feel the argument is convincing - and they may well be able to get the nmc to realize the truth of the matter - that the argument itself is not convincing. (Unfortunately, this may have the result that the mc feels vindicated and perhaps that even the nmc feels that they were wrong about the existence of nmc, and might even change their 'philosophical views' in accordance, erroneously thinking that asserting the existence of nmc is acceptable only if one can prove it, and that one cannot be a non-materialist unless one can prove the existence of nmc.)

Note: What the knowledge and other such arguments may be useful for - despite their invalidity as proofs - is to introduce the concept of mind or nmc to those who are nmc's but who have never thought about mind-matter issues; however the 'color-test' outlined above is perhaps more to the point, and less elaborate.

See also our discussion of the zombie argument, where in line with our OC we propose that in a debate between mc's and the materialists who argue that zombies are inconceivable, the nmc's will be well-advised to take into account that the materialists are themselves zombies - who have no idea what nmc's mean by the term, and instead perhaps mean by it something like "brain-dead beings who can nevertheless perform actions which would otherwise be seen as requiring the ability to reason" - and these *materialists are quite correct that zombies-as-defined-by-materialists are impossible*.

[Despite the fail of these various arguments, it is useful for nmc's to understand the process outlined above (whereby what seemed like a convincing argument is understood not to be, specifically when coupled with the understanding based on our OC of why it seemed convincing, to whom it seems convincing, and why it actually fails as a 'proof').]

### **Transforming from materialist to non-materialist and v.v. as a result of discussion, and the relation to brain-wiring**

We propose that for the most part the only people who can 'change their minds' from materialist to non-materialist (or perhaps the reverse) are those who haven't yet thought deeply about consciousness or about 'materiality' (or about that which can or can not be included in physics etc). However, a deep-thinker might hedge their claims since they cannot prove them.

Generally-speaking, nmc's who have thought deeply about all this it is not really a matter of an opinion but of a type of inner knowledge, and so it is not a matter of changing one's mind'.

**Example: The author's own inner-experience:** It is fully known to the author that his consciousness is qualitatively other than the material - making the author feel comfortable offering a categorical statement, especially since any individual is the only one who decides what is considered to be 'qualitatively other' to them, it is a subjective mental-judgment. The author's knowledge of being nmc precludes him from conceiving of an argument somehow changing the author's 'opinion' on the matter - that his brain will start to feel that the material and qualia are qualitatively the same rather than 'other'. Of course other thinkers and scientists feel the same, and so there is meaning to this declaration beyond just as a statement of the author's own peculiar psychology. Generally one would agree that people can change their minds about ideas however the distinction in this case is so fundamental (to the author, who can in the end only really refer to himself on this matter [and in fact can ignore other opinions since maybe no-one else exists in any case]) that it doesn't make sense to the author that one can change one's mind about this - and so the conjecture offered is that being materialist or non-materialist isn't a matter of opinion, and the 'wiring' conjecture tries to explain this.

We would not say that people's brains are wired in a way that in theory prevents them from changing their minds, but rather that their brain-wiring does or does not enable access to inner direct knowledge of nmc - and if it does, ie they are nmc, their awareness of nmc is not a matter of opinion to be changed by theoretical discussions. However this would only be the case for those nmc who have thought sufficiently deeply about the subject.

And mc's will not be convinced to accept the existence of nmc since without possessing nmc one cannot conceive of what it is, and it sounds nonsensical.

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**Topic:** Non-materialist stances regarding the mind-body problem which are not (exclusively) based on phenomenological, introspective or first-person perspective evidence, but rather on modal arguments, the metaphysics of personal identity, and the indivisibility of the subject.

There is a great difference regarding what is incontrovertibly known and what is deduced or believed: I know I am nmc (via phenomenological, introspective or first-person perspective evidence). I act as though there is an external material universe, but I don't know it to be so. I have a sense of continuing personal identity, but as Russel pointed out re "solipsism of the moment" it may well be that I (and the rest of the universe) only exist at this very moment. I do act in any moment as though I am a continuing unique individual, but I don't know that I am. The only sure knowledge I have is - as Descartes pointed out - that there is an "I" (and if there is indeed an external material universe then this "I" is a nmc). Given nmc, there arise modal arguments, and notions of the metaphysics of personal identity and the indivisibility of the subject. However these are derivative of nmc and cannot be known in of themselves as nmc is directly known.

Also, some of these arguments and notions make sense only to nmc's and only because they possess nmc. They may also seem to make sense to materialists (mc's) but when speaking of 'identity' or 'the subject' etc they are referring to something entirely other than

what the nmc is referring to, a physical-brain property which nmc's possess also, but it is not nmc and so is not what the nmc's are referring to.

In any case this paper is focussed not on 'arguments' for or against some philosophical disputed aspect of the mind-body problem but rather on being able to make categorical statements based on that which known to be true - such as that "nmc exists, and is known directly, so those who say it doesn't exist present a conundrum".

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## Appendix: "Charity"

**Objection to our OC:** "the inter-subjective character of verbal interactions ... we need a principle of charity on which linguistic interactions between humans are based."

**AR: Charity, the problem of other minds and our OC:**

When an eliminative materialist and a non-materialist dialogue about mind-body, we can maximize rationality of both by recognizing the truth of their statements, as per our OC. If two nmc's and an mc are speaking to each other, each can apply charity to the words of the other - the two nmc's can act and speak as though solipsism is not correct (though of course the fact of the dialogue is no disproof), and both can accept that the mc is truthful about their own ontological status. Mc's may find greater difficulty in reciprocating the charity.

**Polemics:** I tell the OC to all nmc's without caring whether only I exist, and I treat all nmcs as if indeed the external universe exists and they are indeed nmc's, even though maybe they are lying or deluded mc's.

Just as I the dreamer will laugh away the claim of a character in my dream who claims I don't exist, so too when I am awake re the claim of a materialist, who may or may not exist,

And I will tell all nmc's when i am awake not to pay attention to mc's denial of our essence. And as to the objection: "empirical data showing the common structures of our brains guarantee a minimum level of trust to the assertions concerning other individuals' internal states (emotions, intuitions, feelings, etc.)." In my interpretation, the writings of materialists - eg that excerpted below - comprise empirical data about their brain's lack of association to nmc.

My bluntness is a bit "uncharitable", but it is meant as a means of countering the type of attitude expressed in the below article, which permeates much of the science ecosystem - an attitude that is certainly not "charitable"!

<https://www.sciencedirect.com/topics/neuroscience/mind-body-problem#:~:text=The%20mind%E2%80%93brain%20schism%20was,is%20what%20the%20brain%20does.>

**From: Issues and Impediments to Theoretical Unification: Warren W. Tryon, in *Cognitive Neuroscience and Psychotherapy*, 2014**

AR's italics & bold:

**“Mind vs. Body (Brain): *The mind–body problem is actually a mistake based in ignorance. Had Rene Descartes (1596–1650) lived and received a doctorate in neuroscience in this twenty-first century versus having no such degree in the sixteenth century it is extremely unlikely that he would have ever proposed that mind is in any way independent of brain.***

**LeDoux’s book entitled *Synaptic Self: How Our Brains Become Who We Are* reflects contemporary neuroscience. The bottom-line of this book is ‘You are your synapses’ (p. ix, emphasis added).**

My notion of personality is pretty simple: it’s that your ‘self,’ the essence of who you are, reflects patterns of interconnectivity between neurons in your brain (p. 2).

The totality of the interconnections among all neurons in a brain is called a connectome. The Human Connectome Project<sup>13</sup> is currently underway. It aims to map all of the major neural network connections in the human brain. Seung (2012) wrote a book entitled *Connectome: How The Brain’s Wiring Makes Us Who We Are*, in which he claimed ‘You are more than your genes. You are your connectome’ (p. xv, emphasis added). ‘You are the activity of your neurons’ (p. xviii, emphasis added). He noted that connectomes are modified by what he refers to as the four Rs: reweighting, reconnection, rewiring, and regeneration. All of these are experience-dependent plasticity mechanisms, which means that they modify our connectome throughout our lifespan. The dedication in his book emphasizes this point: ‘To my beloved mother and father, for creating my genome and molding my connectome’ (emphasis added).

There is no evidence that mind exists independent of brain and massive evidence that mind is what brain does. For example, people with a flat line for an EEG don’t exhibit any properties of mind. Infants born without a brain (anencephaly) do not exhibit characteristics of mind.

Anesthesia alters brain function and renders the mind unconscious. Brain damage via strokes, tumors, and/or trauma alters the mind. Many drugs alter the mind.

The mind–body debate also entails the question of whether or not a machine can be constructed that can sufficiently simulate functions of the mind such that one can no longer distinguish the simulation from a real person. This is the essence of the Turing Test. Substantial progress has already been made in this regard. The IBM computer named Watson<sup>14</sup> can process natural language sufficiently well that it beat the human champion at Jeopardy. This accomplishment was considered to be impossible just a few short years ago. There is little reason to doubt that further progress can and will be made. The new Siri Assistant in the iPhone 4S and 5S represents another major advance in computer understanding of natural language.

In conclusion, while philosophers such as Van Oudenhove and Cuyper (2010) continue to review philosophical positions on the ‘mind–body problem’, sufficient empirical evidence exists to effectively resolve this issue.

***The mind–brain schism was born out of ignorance and continues due to ignorance of the massive body of evidence that clearly demonstrates that mind is an emergent property of brain; mind is entirely dependent upon brain.*** Natural science has consistently taken the view that the mind is what the brain does. This means that at least 98% of contemporary psychologists believe that the mind is what the brain does. Hence, this formal schism should no longer divide most of us; it should not constitute an impediment to theoretical unification.”

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### **Re the materialist quote above, and its lack of 'charity':**

An analogy to express what it is like when I am talking to a materialist who denies I have nmc, since as they say nmc does not and cannot exist.

I have experienced dreaming while being aware that I am dreaming (a realization which then enables lucid dreaming). However mostly of course this is not so, and I dream and there might be a 'me' in my dream, who is not aware that he is a figure in

my dream. Imagine in my dream I am talking to a group of people, one of whom states categorically 'we are not in a dream and there is no dreamer, this is the full reality'. Perhaps the 'me' in the dream accepts this proposition as true. However it is different in the scenario where I am dreaming, and there is a 'me' in the dream but this 'me' is aware it is a dream. That is, the real "I" is somewhat 'awake' (and perhaps even knows that the me in the dream is a group of neurons within my brain), and the 'me' in the dream knows it is a representation of the real "I". So if a materialist in the dream states categorically 'we are not in a dream and there is no dreamer, this is the full reality' of course the 'me' in the dream laughs at this folly (though maybe aware that it is indeed simply a group of neurons, and maybe does not have 'its own' nmc), but there is no way for that me to prove that indeed there is a dreamer - not the 'me' in the dream, though he and the real "I" are of course associated in some way (the dream-me knows that it is not 'me' who is dreaming, but rather it is the real "I").

There is nothing that the sceptic in the dream can do to convince me-in-the-dream (nor to convince the real "I" of course), but neither is there any automatic way for 'me' to convince them (though the real I can of course cheat by changing the dream to make them agree). However, it is deliciously absurd even to the dream-me that a dream-character can tell 'me', the representative of the real "I" the dreamer, that "I" do not exist - with the clear irony that it is of course the dream-character materialist who does not actually exist, except as a group of neurons in the brain associated to the dreamer "I". (It would also seem absurd if they claimed they are nmc, and exist as an individual independent of any other nmc, since me is aware that even if they do have nmc it is only because they are 'borrowing it' from the nmc of the dreamer.) This is what it is like when I am awake and a materialist tells me I have no nmc. My brain is material and is like the dream-me in that it knows of its association to the "nmc-I" however it is not possible to prove this to other brains, who are like co-characters in "I"'s dream. Me (ie my brain) knows that its association to an nmc-I cannot be proven - and my brain and my nmc-I conclude that ironically it is the real-world materialist (speaking to the real-world brain associated to my "I") who does not exist as an "nmc-I", only as a material brain. In other words, the materialist brain cannot appreciate what is to me/I a great irony that their denial of the existence of my brain's associated "I" is simply an indication to me that their brain is not so associated (to an "nmc-I").

.....

**Below is the final Appendix of the present paper: (the last 38 pages of this google doc)**

**Appendix: Descartes (13 pages), and Huxley re Descartes (20 pages),  
a little of Darwin and Wallace,  
plus some Whitehead and Eccles**

**Precursor to Descartes:** Gómez Pereira (1500–?)<sup>112</sup> was a Spanish physician and philosopher who is mainly known for having formulated a complete theory of animal mechanism **a hundred years before Descartes**. In the context of the debate over the immortality of the soul, he defended a **radical division between the soul and the body, and a conception of the soul as simple form whose essential activity lies in self-consciousness**.

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## Descartes

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offer something that no true skeptic could ever offer: a conclusion. He began by doubting everything, but wrote of his own doubting, “In doing this I was not copying the sceptics, who doubt only for the sake of doubting and pretend to be always undecided; on the contrary, my whole aim was to reach certainty—to cast aside the loose earth and sand so as to come upon rock or clay.”<sup>7</sup> Beginning with absolute (Cartesian) doubt, then, and questioning the reality of even his own body, the certainty Descartes reached was “that I, who was thinking [that everything was false], was something. And observing that this truth, ‘*I am thinking, therefore I exist*’ was so firm and sure . . . I decided that I could accept it without scruple as the first principle of the philosophy I was seeking.”

But, of course, in his regimen of doubt Descartes was able to cast aside many of the ideas that were accepted by other thinkers of his age. Perhaps most crucially, the close connection between the body and the soul, so central to discussions about the immortality of ill health, for example, was severed by Descartes:

I knew I was a substance whose whole essence or nature is simply to think, and which does not require any place, or depend on any material thing, in order to exist. Accordingly this “I”—that is, the soul by which I am what I am—is entirely distinct from the body, and indeed is easier to know than the body, and would not fail to be whatever it is, even if the body did not exist.<sup>8</sup>

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### **Animals are machines (automata)**

Descartes proposed that the body and brain were machines, in other words one need not postulate any special ‘life-force’ to explain anything about their operation. However, in addition, and perhaps more radically, by ‘machines’ he meant they do not possess nmc.

In some sense it is not so radical since it is about animals, but in another sense it is very radical because he is stating that no nmc is required to produce any of the mechanical inner operation of an animal, nor its behavior, and of course this means that the similar type of phenomena in humans - ie all except for speech and reason - requires no special non-material explanation

This notion is stated briefly in the “Discours de la Méthode,” and more fully in the “Réponses aux Quatrièmes Objections,” and in the correspondence with Henry More.

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<sup>112</sup> <https://plato.stanford.edu/entries/gomez-pereira/>

- “Réponses aux Quatrièmes Objections,”  
<https://philosophicaljourney.wordpress.com/2015/03/22/rene-descartes-objections-and-replies-fourth-objection/>,  
[https://books.google.com.br/books?id=2lLb8lWoV\\_YC&pg=PA138&hl=pt-BR&source=gbs\\_toc\\_r&cad=3#v=onepage&q&f=false](https://books.google.com.br/books?id=2lLb8lWoV_YC&pg=PA138&hl=pt-BR&source=gbs_toc_r&cad=3#v=onepage&q&f=false)
- correspondence with Henry More.
- brute animals machines “Discours de la Méthode,”

Descartes assumed reason and speech implied a status of non-automat, ie not just conscious but also a consciousness which had effect beyond what is possible for non-conscious entities, and so the question of the possibility of human-automata did not arise for him.

“he did everything short of spelling out the idea of zombies. The nearest thing was automata whose behavior was easily recognizable as not fully human.”

<https://plato.stanford.edu/entries/zombies/>

Since speech and rational thought are hallmarks even of materialists, if his proposition were true we would need to ascribe nmc to them as well, however we assume here that had he been alive now, he would have stressed nmc as the unique ingredient, not speech and rational thought, and so it becomes possible to imagine rational speaking beings who are not associated to nmc.

...

<sup>1</sup> A similar theory in which animals were compared with clocks had been proposed by the sixteenth-century Spanish philosopher, Gomez Pereira. Descartes denied reading his work. See Stephen Gaukroger, *Descartes: An Intellectual Biography* (Oxford: Oxford University Press, 1995), 271.

.....

Paragraph 9 of Meditation 6 “...I know with certitude that I exist, and because, in the meantime, I do not observe that aught necessarily belongs to my nature or essence beyond my being a thinking thing, I rightly conclude that my essence consists only in my being a thinking thing or a substance whose whole essence or nature is merely thinking]. And although I may, or rather, as I will shortly say, although I certainly do possess a body with which I am very closely conjoined; nevertheless, because, on the one hand, I have a clear and distinct idea of myself, in as far as I am only a thinking and unextended thing, and as, on the other hand, I possess a distinct idea of body, in as far as it is only an extended and unthinking thing, it is certain that I, that is, my mind, by which I am what I am], is entirely and truly distinct from my body, and may exist without it.” “.....[T]here is a great difference between the mind and the body, inasmuch as the body is by its very nature always divisible, while the mind is utterly indivisible. For when I consider the mind, or myself in so far as I am merely a thinking thing, I am unable to distinguish any parts within myself; I understand myself to be something quite single and complete....By contrast, there is no corporeal or extended thing that I can think of which in my thought I cannot easily divide into parts; and this very fact makes me understand that it is divisible. This one argument would be enough to show me that the mind is completely different from the body...”[first quote from AT VII 78: CSM II 54). ..., second from AT VII

86-87: CSM II 59). See eg discussions in <https://iep.utm.edu/rene-descartes-mind-body-distinction-dualism/>,  
<https://www3.nd.edu/~jspeaks/courses/2006-7/20208/descartes-mind-body.html>

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Project Gutenberg E-text of **A Discourse on Method, by René Descartes.**

<http://www.gutenberg.org/files/59/59-h/59-h.htm>[1/6/2012]

<https://www.uky.edu/~rsand1/china2017/library/NOTES/Descartes%20-%20Beast-Machine%20-%20Notes.pdf>

Descartes' physical cosmology, planetary formation etc:

**DISCOURSE ON THE METHOD OF RIGHTLY CONDUCTING THE REASON, AND SEEKING TRUTH IN THE SCIENCES** by Rene Descartes

...speak only of what would happen in a new world, if God were now to create somewhere in the imaginary spaces matter sufficient to compose one, and were to agitate variously and confusedly the different parts of this matter, so that there resulted a chaos as disordered as the poets ever feigned, and after that did nothing more than lend his ordinary concurrence to nature, and allow her to act in accordance with the laws which he had established. On this supposition, I, in the first place, described this matter, and essayed to represent it in such a manner that to my mind there can be nothing clearer and more intelligible, except what has been recently said regarding God and the soul; for I even expressly supposed that it possessed none of those forms or qualities which are so debated in the schools, nor in general anything the knowledge of which is not so natural to our minds that no one can so much as imagine himself ignorant of it. Besides, I have pointed out what are the laws of nature; and, with no other principle upon which to found my reasonings except the infinite perfection of God, I endeavored to demonstrate all those about which there could be any room for doubt, and to prove that they are such, that even if God had created more worlds, there could have been none in which these laws were not observed. Thereafter, I showed how the greatest part of the matter of this chaos must, in accordance with these laws, dispose and arrange itself in such a way as to present the appearance of heavens; how in the meantime some of its parts must compose an earth and some planets and comets, and others a sun and fixed stars. And, making a digression at this stage on the subject of light, I expounded at considerable length what the nature of that light must be which is found in the sun and the stars, and how thence in an instant of time it traverses the immense spaces of the heavens, and how from the planets and comets it is reflected towards the earth. To this I likewise added much respecting the substance, the situation, the motions, and all the different qualities of these heavens and stars; so that I thought I had said enough respecting them to show that there is nothing observable in the heavens or stars of our system that must not, or at least may not



appear precisely alike in those of the system which I described. I came next to speak of the earth in particular, and to show how, even though I had expressly supposed that God had given no weight to the matter of which it is composed, this should not prevent all its parts from tending exactly to its center; how with water and air on its surface, the disposition of the heavens and heavenly bodies, more especially of the moon, must cause a flow and ebb, like in all its circumstances to that observed in our seas, as also a certain current both of water and air from east to west, such as is likewise observed between the tropics; how the mountains, seas, fountains, and rivers might naturally be formed in it, and the metals produced in the mines, and the plants grow in the fields and in general, how all the bodies which are commonly denominated mixed or composite might be generated and, among other things in the discoveries alluded to inasmuch as besides the stars, I knew nothing except fire which produces light, I spared no pains to set forth all that pertains to its nature,--the manner of its production and support, and to explain how heat is sometimes found without light, and light without heat; to show how it can induce various colors upon different bodies and other diverse qualities; how it reduces some to a liquid state and hardens others; how it can consume almost all bodies, or convert them into ashes and smoke; and finally, how from these ashes, by the mere intensity of its action, it forms glass: for as this transmutation of ashes into glass appeared to me as wonderful as any other in nature, I took a special pleasure in describing it. **I was not, however, disposed, from these circumstances, to conclude that this world had been created in the manner I described; for it is much more likely that God made it at the first such as it was to be. But this is certain, and an opinion commonly received among theologians, that the action by which he now sustains it is the same with that by which he originally created it; so that even although he had from the beginning given it no other form than that of chaos, provided only he had established certain laws of nature, and had lent it his concurrence to enable it to act as it is wont to do, it may be believed, without discredit to the miracle of creation, that, in this way alone, things purely The material might, in course of time, have become such as we observe them at present; and their nature is much more easily conceived when they are beheld coming in this manner gradually into existence, than when they are only considered as produced at once in a finished and perfect state.**

**Descartes continues re the origin of humanity:**

DISCOURSE ON THE METHOD OF RIGHTLY CONDUCTING THE REASON, AND SEEKING TRUTH IN THE SCIENCES by Rene Descartes

From the description of inanimate bodies and plants, I passed to animals, and particularly to man. But since I had not as yet sufficient knowledge to enable me to treat of these in the same manner as of the rest, that is to say, by deducing effects from their causes, and by showing from what elements and in what manner nature must produce them, **I remained satisfied with the supposition that God formed the body of man wholly like to one of ours, as well in the external shape of the**

members as in the internal conformation of the organs, of the same matter with that I had described, and at first placed in it no rational soul, nor any other principle, in room of the vegetative or sensitive soul, beyond kindling in the heart one of those fires without light, such as I had already described, and which I thought was not different from the heat in hay that has been heaped together before it is dry, or that which causes fermentation in new wines before they are run clear of the fruit. For, when I examined the kind of functions which might, as consequences of this supposition, exist in this body, I found precisely all those which may exist in us independently of all power of thinking, and consequently without being in any measure owing to the soul; in other words, to that part of us which is distinct from the body, and of which it has been said above that the nature distinctively consists in thinking, functions in which the animals void of reason may be said wholly to resemble us; but among which I could not discover any of those that, as dependent on thought alone, belong to us as men, while, on the other hand, I did afterwards discover these as soon as I supposed God to have created a rational soul, and to have annexed it to this body in a particular manner which I described. But, in order to show how I there handled this matter, I mean here to give the explication of the motion of the heart and arteries, which, as the first and most general motion observed in animals.

**AR:** According to Descartes, nmc ('soul' as he terms it) sets humans apart. Also: speech (intelligent use of language) and rational thought are impossible without nmc, and so human activity indicates necessarily that they possess nmc, and perhaps we can consider this also to have been to Descartes a type of proof of the existence of nmc, whereas one's nmc itself cannot be proven. Of course in his time when it was assumed there is a God who created the universe and granted humanity nmc, (soul) it would hardly have been considered irrational in his day (or 'unscientific' in our parlance) to talk of nmc, as it is by many today, due to the cultural-intellectual influence of materialists.

**Note re Descartes' use of the notion of 'automata':** Various types of automata were created by the ancient Greeks (eg Hero of Alexandria, Ktesbios), and legends tell of King Solomon's throne-automata. Creating these devices continued up through the ages, including in Descartes' time<sup>113</sup>.

**Descartes: Discourse, Part V:** Nor will this appear at all strange to those who are acquainted with the variety of movements performed by the different automata, or moving machines fabricated by human industry, and that with help of but few pieces compared with the great multitude of bones, muscles, nerves, arteries, veins, and other parts that are found in the body of each animal. Such persons will look upon this body as a machine made by the hands of God, which is incomparably better arranged, and adequate to movements more admirable than is any machine of human invention. And here I specially stayed to show that, **were there such machines exactly resembling organs and outward form an ape or any other irrational animal, we could have no means of knowing that they were in any respect of a different nature from these animals; but if there were machines bearing the image of our bodies, and capable of imitating our actions as far as it is morally possible, there would still remain two most certain tests whereby to know that they were not therefore really men.**

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<sup>113</sup> For the history and illustrations of the automata see <https://themadmuseum.co.uk/history-of-automata/>

**Of these the first is that they could never use words or other signs arranged in such a manner as is competent to us in order to declare our thoughts to others:** for we may easily conceive a machine to be so constructed that it emits vocables, and even that it emits some correspondent to the action upon it of external objects which cause a change in its organs; for example, if touched in a particular place it may demand what we wish to say to it; if in another it may cry out that it is hurt, and such like; but not that it should arrange them variously so as appositely to reply to what is said in its presence, as men of the lowest grade of intellect can do. **The second test is,** that although such machines might execute many things with equal or perhaps greater perfection than any of us, they would, without doubt, fail in certain others from which it could be discovered that they did not act from knowledge, but solely from the disposition of their organs: for while reason is an universal instrument that is alike available on every occasion, these organs, on the contrary, need a particular arrangement for each particular action; whence it must be morally **impossible that there should exist in any machine a diversity of organs sufficient to enable it to act in all the occurrences of life, in the way in which our reason enables us to act.** Again, by means of these two tests we may likewise know the difference between men and brutes. For it is highly deserving of remark, that there are no men so dull and stupid, not even idiots, as to be incapable of joining together different words, and thereby constructing a declaration by which to make their thoughts understood; and that on the other hand, there is no other animal, however perfect or happily circumstanced, which can do the like. Nor does this inability arise from want of organs: for we observe that magpies and parrots can utter words like ourselves, and are yet unable to speak as we do, that is, so as to show that they understand what they say; in place of which men born deaf and dumb, and thus not less, but rather more than the brutes, destitute of the organs which others use in speaking, are in the habit of spontaneously inventing certain signs by which they discover their thoughts to those who, being usually in their company, have leisure to learn their language. **And this proves not only that the brutes have less reason than man, but that they have none at all:** for we see that very little is required to enable a person to speak; and since a certain inequality of capacity is observable among animals of the same species, as well as among men, and since some are more capable of being instructed than others, **it is incredible that the most perfect ape or parrot of its species, should not in this be equal to the most stupid infant of its kind or at least to one that was crackbrained, unless the soul of brutes were of a nature wholly different from ours.** And we ought not to confound speech with the natural movements which indicate the passions, and can be imitated by machines as well as manifested by animals; nor must it be thought with certain of the ancients, that the brutes speak, although we do not understand their language. For if such were the case, since they are endowed with many organs analogous to ours, they could as easily communicate their thoughts to us as to their fellows. It is also very worthy of remark, that, **though there are many animals which manifest more industry than we in certain of their actions, the same animals are yet observed to show none at all in many others: so that the circumstance that they do better than we does not prove that they are endowed with mind,** for it would thence follow that they possessed greater reason than any of us, and could surpass us in all things; on the contrary, it rather proves that they are destitute of reason, and that it is nature which acts in them according to the disposition of their organs: thus it is seen, that a clock composed only of wheels and weights can number the hours and measure time more exactly than we with all our skin.

**I had after this described the reasonable soul, and shown that it could by no means be deduced from the power of matter, as the other things of which I had spoken, but that it must be expressly created; and that it is not sufficient that it be lodged in the human body exactly like a pilot in a ship, unless perhaps to move its members, but that it is necessary for it to be joined and united more closely to the body, in order to have sensations and appetites similar to ours, and thus constitute a real man.** I here entered, in conclusion, upon the subject of the soul at considerable length, because it is of the greatest moment: for after the error of those who deny the existence of God, an error which I think I have already sufficiently refuted, **there is none that is more powerful in leading feeble minds astray from the straight path of**

virtue than the supposition that the soul of the brutes is of the same nature with our own; and consequently that after this life we have nothing to hope for or fear, more than flies and ants<sup>114</sup>; in place of which, when we know how far they differ, we much better comprehend the reasons which establish that the soul is of a nature wholly independent of the body, and that consequently it is not liable to die with the latter and, finally, because no other causes are observed capable of destroying it, we are naturally led thence to judge that it is immortal.

...

**AR: Descartes re animals as automatons, and the implication hidden within this notion that humans are as well, except for their minds.**

**DESCARTES: "DISCOURSE TOUCHING THE METHOD OF USING ONE'S REASON RIGHTLY AND OF SEEKING SCIENTIFIC TRUTH."**

"All the functions which I have attributed to this machine (the body), as the digestion of food, the pulsation of the heart and of the arteries; the nutrition and the growth of the limbs; respiration, wakefulness, and sleep; the reception of light, sounds, odours, flavours, heat, and such like qualities, in the organs of the external senses; the impression of the ideas of these in the organ of common sense and in the imagination; the retention, or the impression, of these ideas on the memory; the internal movements of the appetites and the passions; and lastly, the external movements of all the limbs, which follow so aptly, as well the action of the objects which are presented to the senses, as the impressions which meet in the memory, that they imitate as nearly as possible those of a real man:[73] I desire, I say, that you should consider that these functions in the machine naturally proceed from the mere arrangement of its organs, neither more nor less than do the movements of a clock, or other automaton, from that of its weights and its wheels; so that, so far as these are concerned, it is not necessary to conceive any other vegetative or sensitive soul, nor any other principle of motion, or of life, than the blood and the spirits agitated by the fire which burns continually in the heart, and which is no wise essentially different from all the fires which exist in inanimate bodies."

[On the above passage, T H Huxley notes: "Descartes pretends that he does not apply his views to the human body, but only to an imaginary machine which, if it could be constructed, would do all that the human body does; throwing a sop to

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<sup>114</sup> AR: Similar to Whitehead in criticizing the debilitating effect on civilization of a denial leading to weakening the notion of moral responsibility: Whitehead speaks of the denial of free will and therefore the evisceration of the notion of moral responsibility for one's actions given they are unfree, whereas here Descartes speaks of the denial of the eternity of the soul (or mind) which removes the notion of reward and punishment and thereby removes the motivation for acting morally.

Cerberus unworthily; and uselessly, because Cerberus was by no means stupid enough to swallow it.”]

**The priority (originality) of Descartes:** To what extent Descartes owed some of his ideas to prior thinkers is a matter of opinion, interpretation and debate.

- See eg “Descartes, Plato and the Cave” STEPHEN BUCKLE: “It has been a commonplace..to think of Descartes’ philosophy as he seems to present it: as a radical break with the past,...In several ways, however, recent scholarship has undermined the simplicity of this picture. ..debts to the Neoplatonist tradition, particularly to Augustine, and of his engagement with the Scholastic commentators of his day.... My aim in this paper ...Descartes’ indebtedness to Plato.
- <https://philpapers.org/archive/ROSTRO-16.pdf> : “Cranky old Hobbes complained of Descartes’ opening doubts in the Meditations, that the author had merely rehashed a lot of old stuff: ‘since Plato and other ancient philosophers discussed this uncertainty in the objects of the senses ... I am sorry that the author, who is so outstanding in the field of original speculations, should be publishing this ancient material’. [other translation: Elizabeth Anscombe and Peter Geach:”“I am sorry that so excellent an author of new speculations should publish this old stuff’ ”]

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Descartes: <https://plato.stanford.edu/entries/descartes-epistemology/>

<https://plato.stanford.edu/entries/henry-more/#CarNatThe> The Cartesian claim that animals were more splendid versions of artificial automata, “which move without thought” (Letter to More, February 1649; Descartes 1991, 366), for example, was seen by More as providing hostages to atheists. In the scholastic tradition the ability to move oneself was seen as evidence of the presence of a soul, and therefore of life. Descartes, pointing out that clocks and other automata are capable of moving themselves, denied this traditional view and held the soul to be responsible only for thinking; movement was exclusively a feature of bodies. In the Cartesian system, consequently, plants and animals were living creatures without souls. Evidently, More regarded this position as likely to lead to the conclusion that humans could also be counted as living creatures without souls (it is not clear whether there were contemporary Cartesians who held this, but it certainly became at least a minority view in the period of the Enlightenment) (Cohen 1936, Henry 1989, Thomson 2008, Muratori 2017, Reid 2018).

Anxious to defend the concept of immaterial souls from all atheist threats, More insisted that the soul was necessary for life. He was therefore opposed not only to Descartes, but also to traditional scholastic views. The motions of plants and animals (plants being capable of internal motions associated with nutrition, reproduction, and growth), according to scholastics, proved the existence only of vegetative and animal souls respectively. Both of these kinds of souls were regarded as material, however, being composed of subtle fluids or tenuous but nonetheless material spirits in the body. Descartes simply absorbed the functions of these material souls into his mechanistic theory of creature-as-automaton. By contrast, More, pursuing his overriding concern to deny atheists any footholds, ran counter to both Aristotelians and Cartesians and insisted on the immateriality of animal souls (and presumably vegetative souls, though he does not seem to discuss them). In More’s version of dualism only immaterial entities are self-active and capable of initiating movement in other entities, and so the fact that plants and animals can move themselves is taken to prove that they must have immaterial souls (Henry 1986, 1989; Reid 2012). It should be noted,

therefore, that underlying More's argumentation is a commitment to the belief that matter is essentially passive (capable only of inertial motions), and that only immaterial entities are active. This commitment, however, is not based on any original philosophical arguments developed by More himself. It is simply based on what More sees as a fundamental premise of Cartesianism, namely, that matter or body is completely inert and passive. This is why More seized upon Cartesianism so keenly. If matter is inert then the activity we see all around us must have another source, which must be immaterial. Underlying this, of course, was a desire to deny the claims of contemporary materialist (and therefore atheist) philosophers (Henry 1986, Leech 2013).

## About Descartes

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offer something that no true skeptic could ever offer: a conclusion. He began by doubting everything, but wrote of his own doubting, "In doing this I was not copying the sceptics, who doubt only for the sake of doubting and pretend to be always undecided; on the contrary, my whole aim was to reach certainty—to cast aside the loose earth and sand so as to come upon rock or clay."<sup>7</sup> Beginning with absolute (Cartesian) doubt, then, and questioning the reality of even his own body, the certainty Descartes reached was "that I, who was thinking [that everything was false], was something. And observing that this truth, '*I am thinking, therefore I exist*' was so firm and sure . . . I decided that I could accept it without scruple as the first principle of the philosophy I was seeking."

But, of course, in his regimen of doubt Descartes was able to cast aside many of the ideas that were accepted by other thinkers of his age. Perhaps most crucially, the close connection between the body and the soul, so central to discussions about the immortality of the soul, for example, was severed by Descartes:

I knew I was a substance whose whole essence or nature is simply to think, and which does not require any place, or depend on any material thing, in order to exist. Accordingly this "I"—that is, the soul by which I am what I am—is entirely distinct from the body, and indeed is easier to know than the body, and would not fail to be whatever it is, even if the body did not exist.<sup>8</sup>

....

**Wiki re Descartes:** "He does not seem to distinguish between mind, spirit and soul, which are identified as our faculty for rational thinking. Hence the term "I think, therefore I am." All three of these words (particularly "mind" and "soul") can be identified by the single French term

*âme*." [https://en.wikipedia.org/wiki/Discourse\\_on\\_the\\_Method](https://en.wikipedia.org/wiki/Discourse_on_the_Method)

AR: However, here we of course assume that what was meant is what we would term mind, not spirit or soul.

**Britannica "History of materialism"** <https://www.britannica.com/topic/materialism-philosophy/History-of-materialism>: Greek and Roman materialism: Thales of Miletus (c. 580 BCE) and some of the other pre-Socratic philosophers ... (however), the materialist tradition in Western philosophy really begins with Leucippus and Democritus... Democritus thought that **the soul** consists of smooth, round atoms and that perceptions consist of motions caused in the soul atoms by the atoms in the perceived thing. ... the Epicurean tradition was revived in the first half of the 17th century in the atomistic materialism of the French Roman Catholic philosopher Pierre **Gassendi. (he) was not thoroughgoing in his materialism inasmuch as he accepted ... immortal souls.** ... Hobbes, also propounded an atomistic materialism and was a pioneer in trying to work out a mechanistic and physiological psychology. Holding that sensations are corporeal

motions in the brain, **Hobbes skirted, rather than solved, the philosophical problems about consciousness** .. raised by...Descartes

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## WALLACE

**Wiki:** Wallace's belief that human consciousness could not be entirely a product of purely material causes was shared by a number of prominent intellectuals in the late 19th and early 20th centuries.<sup>[143]</sup>

...

In 1864, Wallace published a paper, "The Origin of Human Races and the Antiquity of Man Deduced from the Theory of 'Natural Selection'", applying the theory to humankind. Darwin had not yet publicly addressed the subject, although **Thomas Huxley** had in *Evidence as to Man's Place in Nature*. Below is an excerpt from his later book:

...

<https://books.google.co.il/books?id=4lIRDwAAQBAJ&pg=PA402&lpg=PA402&dq=an+unseen+universe+%E2%80%94+a+world+of+spirit+to+which+the+world+of+matter+is+altogether+subordinate.&source=bl&ots=64u8nvvpE5&sig=ACfU3U3Jkn6r-ApY8oImnj4o86X7J35urA&hl=en&sa=X&ved=2ahUKEwiQt8nauof7AhUphv0HHd5WA9MQ6AF6BAgXEAM#v=onepage&q=an%20unseen%20universe%20%E2%80%94%20a%20world%20of%20spirit%20to%20which%20the%20world%20of%20matter%20is%20altogether%20subordinate.&f=true>

...

**Example of a theological reaction to Darwin's theory, based on Wallace's ideas:**

..

The Irish Monthly vol 3 Dublin 1893 21st yearly volume

The Church and Science. J. Gerard, S.J. p 38

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<sup>115</sup> Re a possible materialist reaction to Descartes: Gassendi's critique of the cogito argument seems to be based on a materialist's misunderstanding: re Descartes's *cogito* reasoning, Gassendi understands it as a person's inference from his or her indubitable recognition of cognitive activity, to the claim that he or she exists as the selfsame seat of such activity. Against such an inference he points out that recognition that one has a set of thoughts does not imply that one is a particular thinker or another. <https://plato.stanford.edu/entries/gassendi/> "Gassendi's model of the mind is often taken to be wholly materialist in design, particularly as seen through the prism of his critique of Descartes. Yet only one facet of the Gassendist soul is the material anima, the locus of physically-determined pleasure and pain. He also posits an immaterial animus, the seat of the intellect or rational understanding. This cognitive faculty is the locus of spiritually-determined pleasures and pains we associate with, for example, love of God or fear of evil. Here we have an echo of the Thomist interpretation of De Anima, according to which vegetative and motive facets of the soul perish with the body though an intellective facet lives on forever.

Elsewhere on a theological plane, Gassendi shares other core views with Descartes, though some commentators have tried to paint Gassendi as concealing atheist tendencies, owing to his suspected materialist and libertine allegiances. Such a charge is inaccurate."

Some, on the strength of these assurances, lose their faith, and **embrace the materialistic doctrines which science is said to favour.**

I allude at present – and shall in this paper entirely confine myself – to that branch of science which deals with the origin of the world and of man.

it is clear that this theory is not, and cannot be, a final settlement of the problem with which it attempts to deal. **No explanation of the facts of the universe can be satisfactory which does not explain them all, or which, at least, is not compatible with their explanation ; and this is just where all purely material theories of evolution conspicuously fail.**

They cannot even profess to explain the moral order of the world, the distinction between right and wrong, the obligation of conscience. They have, indeed, attempted explanation of all this, but the futility and crude absurdity of the result is enough to stigmatise the hopelessness of the task. And equally impotent is the same science to account for the first beginnings of those forces with which it deals, or the origin of the laws by which they are governed. Here is the great gulf fixed which may not be passed by mechanical hypotheses.

The beginning is the crucial test, but it is just of this that our so-called science is content perforce to tell us nothing, and then it outrages the name of science which it assumes by expecting our minds to be contented with what it offers as a final explanation.

Evidence still more striking even than this is afforded us by Mr. Wallace, who may justly claim to be the joint-author of the Darwinian theory. In defense of that theory he has lately written a book, wherein, after recapitulating the arguments from observation by which Darwinism seems to be supported, he proceeds to some reflections of a more fundamental character, which would appear altogether to destroy all claims on the part of the theory for which he pleads, to be considered as a philosophical explanation of that which it attempts to explain. He says : 'There are at least three stages in the development of the organic world when some new cause or power must necessarily have come into action. The first stage is the change from inorganic to organic, when the earliest vegetable cell, or the living protoplasm out of which it arose, first appeared. The next stage is still more marvellous, still more completely beyond all possibility of explanation by matter, its laws and forces. It is the introduction of sensation or consciousness constituting the fundamental distinction between the animal and vegetable kingdom. Here all idea of mere complication of structure producing the result is out of the question. The third stage is the existence in man of a number of his most characteristic and noblest faculties, those which raise him furthest above the brutes, and open up possibilities of almost indefinite advancement.

These faculties could not possibly have been developed by means of the same laws which have determined the progressive development of the organic world in general" And he concludes with these still more emphatic words : These three distinct stages of progress from the inorganic world of matter and motion up to man, point clearly to an unseen universe – a world of spirit to which the world of matter altogether subordinate."

**AR: Conclusion:** The bottom line of all this for our purposes here is the conclusion that since materialistic theories by definition leave out nmc, and of course cannot account for nmc, nmc's have long felt that these theories are not relevant to issues related to nmc - for example certainly



there is no scientific aspect of the theory of evolution which dictates that all humans today are nmc since nmc is absent entirely from the theory. Our proposition that in fact materialists lack nmc is therefore not in conflict with any scientific fact or theory.

.....-.....

### **AR: The sense in which Descartes' ideas lead to a type of 'materialism'**

Mind/matter parallelism means all matter phenomena can be explained as in materialism, and the complete separation of matter and mind means idealism is a possibility so Descartes' great insight leads to both a form of materialism and to idealism. However the idealism stands on its own, whereas the materialism is simply the mode of explanation of the material ('matter') phenomena, which could after all only be a collection of sensations in our consciousness in a reality in which there actually is no matter (or 'material') at all.

.....

## **T H HUXLEY AND DESCARTES**

**Huxley: "On Descartes' "Discourse Touching the Method of Using One's Reason Rightly and of Seeking Scientific Truth" "(1870): *Collected Essays I***

Below, Huxley:

- makes the above point about Descartes;
- explains the "cogito";
- explains the basis of our 'color test'.

**AR: Below, Huxley summarizes the basic idea of Descartes' 'cogito':**

As the record of his progress tells us, he was obliged to confess that life is full of delusions; that authority may err; that testimony may be false or mistaken; that reason lands us in endless fallacies; that memory is often as little trustworthy as hope; that the evidence of the very senses may be misunderstood; that dreams are real as long as they last, and that what we call reality may be a long and restless dream. Nay, it is conceivable that some powerful and malicious being may find his pleasure in deluding us, and in making us believe the thing which is not, every moment of our lives. What, then, is certain? What even, if such a being exists, is beyond the reach of his powers of delusion? Why, the fact that the thought, the present consciousness, exists. **Our thoughts may be delusive, but they cannot be fictitious. As thoughts, they are real and existent, and the cleverest deceiver cannot make them otherwise.**

**Thus, thought is existence. More than that, so far as we are concerned, existence is thought, all our conceptions of existence being some kind or other of thought.** Do not for a moment suppose that these are mere paradoxes or subtleties. A little reflection upon the commonest facts proves them to be irrefragable truths. For example, I take up a marble, and I find it to be a red, round, hard, single body. **We call the redness, the roundness, the hardness, and the singleness, [173] "qualities" of the marble;** and it sounds, at first, the height of absurdity to say that **all these qualities are modes of our own consciousness,**

**which cannot even be conceived to exist in the marble.** But consider the redness, to begin with. How does the sensation of redness arise? The waves of a certain very attenuated matter, the particles of which are vibrating with vast rapidity, but with very different velocities, strike upon the marble, and those which vibrate with one particular velocity are thrown off from its surface in all directions. The optical apparatus of the eye gathers some of these together, and gives them such a course that they impinge upon the surface of the retina, which is a singularly delicate apparatus connected with the termination of the fibres of the optic nerve. The impulses of the attenuated matter, or ether, affect this apparatus and the fibres of the optic nerve in a certain way; and the change in the fibres of the optic nerve produces yet other changes in the brain; and **these, in some fashion unknown to us, give rise to the feeling, or consciousness of redness.** If the marble could remain unchanged, and either the rate of vibration of the ether, or the nature of the retina, could be altered, the marble would seem not red, but some other colour. There are many people who are what are called colour-blind, being unable to distinguish one colour from another. Such an one might declare our marble to be [174] green; and he would be quite as right in saying that it is green, as we are in declaring it to be red. But then, as the marble cannot, in itself, be both green and red, at the same time, this shows that **the quality "redness" must be in our consciousness and not in the marble.**

**In like manner, it is easy to see that the roundness and the hardness are forms of our consciousness,** belonging to the groups which we call sensations of sight and touch. If the surface of the cornea were cylindrical, we should have a very different notion of a round body from that which we possess now; and if the strength of the fabric, and the force of the muscles, of the body were increased a hundredfold, our marble would seem to be as soft as a pellet of bread crumbs.

Not only is it obvious that all these qualities are in us, but, if you will make the attempt, you will find it quite **impossible to conceive of "blueness," "roundness," and "hardness" as existing without reference to some such consciousness as our own.** It may seem strange to say that even the "singleness" of the marble is relative to us; but extremely simple experiments will show that such is veritably the case, and that our two most trustworthy senses may be made to contradict one another on this very point. Hold the marble between the finger and thumb, and look at it in the ordinary way. Sight and touch agree [175] that it is single. Now squint, and sight tells you that there are two marbles, while touch asserts that there is only one. Next, return the eyes to their natural position, and, having crossed the forefinger and the middle finger, put the marble between their tips. Then touch will declare that there are two marbles, while sight says that there is only one; and touch claims our belief, when we attend to it, just as imperatively as sight does.

But it may be said, the marble takes up a certain space which could not be occupied, at the same time, by anything else. In other words, the marble has the primary quality of matter, extension. Surely this quality must be in the thing and not in our minds? But the reply must still be; whatever may, or may not, exist in the thing, **all that we can know of these qualities is a state of consciousness. What we call extension is a consciousness of a relation between two, or more, affections of the sense of sight, or of touch. And it is wholly inconceivable that what we call extension should exist independently of such**

consciousness as our own. Whether, notwithstanding this inconceivability, it does so exist, or not, is a point on which I offer no opinion. Thus, whatever our marble may be in itself, all that we can know of it is under the shape of a bundle of our own consciousnesses.

Nor is our knowledge of anything we know or [176] feel more, or less, than a knowledge of states of consciousness. And our whole life is made up of such states. Some of these states we refer to a cause we call "self;" others to a cause or causes which may be comprehended under the title of "not-self." But neither of the existence of "self," nor of that of "not-self," have we, or can we by any possibility have, any such unquestionable and immediate certainty as we have of the states of consciousness which we consider to be their effects. They are not immediately observed facts, but results of the application of the law of causation to those facts. Strictly speaking, the existence of a "self" and of a "not-self" are hypotheses by which we account for the facts of consciousness. They stand upon the same footing as the belief in the general trustworthiness of memory, and in the general constancy of the order of Nature—as hypothetical assumptions which cannot be proved, or known with that **highest degree of certainty which is given by immediate consciousness**; but which, nevertheless, are of the highest practical value, inasmuch as the conclusions logically drawn from them are always verified by experience.

...

**AR: Below, Huxley critiques the formulation of the 'cogito':**

This, in my judgment, is the ultimate issue of Descartes' argument; but it is proper for me to point out that we have left Descartes himself some way behind us. He stopped at the famous formula, "I think, therefore I am." Yet a little [177] consideration will show this formula to be full of snares and verbal entanglements. In the first place, the "therefore" has no business there. The "I am" is assumed in the "I think," which is simply another way of saying "I am thinking." And, in the second place, "I think" is not one simple proposition, but three distinct assertions rolled into one. The first of these is, "something called I exists;" the second is, "something called thought exists;" and the third is, "the thought is the result of the action of the I."

Now, it will be obvious to you, that the only one of these three propositions which can stand the Cartesian test of certainty is the second. It cannot be doubted, for the very doubt is an existent thought. But the first and third, whether true or not, may be doubted, and have been doubted. For the assessor may be asked, How do you know that thought is not self-existent; or that a given thought is not the effect of its antecedent thought, or of some external power? And a diversity of other questions, much more easily put than answered. Descartes, determined as he was to strip off all the garments which the intellect weaves for itself, forgot this gossamer shirt of the "self"; to the great detriment, and indeed ruin of his toilet when he began to clothe himself again.

But it is beside my purpose to dwell upon the minor peculiarities of the Cartesian philosophy. [178] All I wish to put clearly before your minds thus far, is that **Descartes, having commenced by declaring doubt to be a duty, found certainty in consciousness alone; and that the necessary outcome of his views is what may properly be termed**

**Idealism; namely, the doctrine that, whatever the universe may be, all we can know of it is the picture presented to us by consciousness.** This picture may be a true likeness—though how this can be is inconceivable; or it may have no more resemblance to its cause than one of Bach's fugues has to the person who is playing it; or than a piece of poetry has to the mouth and lips of a reciter. It is enough for all the practical purposes of human existence if we find that our trust in the representations of consciousness is verified by results; and that, by their help, we are enabled "to walk surefootedly in this life."

..

**AR: Below, Huxley shows that Descartes' ideas lead directly to Kant, and to dealism, but only idealism as a possibility rather than stating that we can now that no physical external universe exists - we cannot know this, rather, it is a possibility.**

**Thus the method, or path which leads to truth, indicated by Descartes, takes us straight to the Critical Idealism of his great successor Kant. It is that Idealism which declares the ultimate fact of all knowledge to be consciousness, or, in other words, a mental phænomenon; and therefore affirms the highest of all certainties, and indeed the only absolute certainty, to be the existence of mind. But it is also that Idealism which refuses to make any assertions, either positive or negative, as to what lies beyond consciousness. It accuses the subtle Berkeley of stepping beyond [179] the limits of knowledge when he declared that a substance of matter does not exist; and of illogicality, for not seeing that the arguments which he supposed demolished the existence of matter were equally destructive to the existence of soul. And it refuses to listen to the jargon of more recent days about the "Absolute" and all the other hypostatized adjectives, the initial letters of the names of which are generally printed in capital letters; just as you give a Grenadier a bearskin cap, to make him look more formidable than he is by nature.**

I repeat, the path indicated and followed by Descartes, which we have hitherto been treading, leads through doubt to that critical Idealism which lies at the heart of modern metaphysical thought. But the "Discourse" shows us another, and apparently very different, path, which leads, quite as definitely, to that correlation of all the phænomena of the universe with matter and motion, which lies at the heart of modern physical thought, and which most people call Materialism.

**AR: Huxley's form of 'materialism': the physical universe operates as if there is no mind, but there *is*.**

"In truth, Descartes' physiology, like the modern physiology of which it anticipates the spirit, leads straight to Materialism, so far as that title is rightly applicable to the doctrine that we have no knowledge of any thinking substance, apart from extended substance; and that thought is as much a function of matter as motion is. Thus **we arrive at the singular result that, of the two paths opened up to us in the "Discourse upon Method," the one leads, by way of Berkeley and Hume, to Kant and Idealism; while the other leads, by way of De La Mettrie and Priestley, to modern physiology and Materialism.**[76] Our stem divides into two main branches, which grow in opposite ways, and bear flowers

which look as different as they can well be. But each branch is sound and healthy, and has as much life and vigour as the other.

If a botanist found this state of things in a new plant, I imagine that he might be inclined to think that his tree was monoecious--that the flowers were of different sexes, and that, so far from setting up a barrier between the two branches of the tree, the only hope of fertility lay in bringing them together. I may be taking too much of a naturalist's view of the case, but I must confess that this is exactly my notion of what is to be done with metaphysics and physics. Their differences are complementary, not antagonistic; and thought will never be completely fruitful until the one unites with the other. Let me try to explain what I mean. **I hold, with the Materialist, that the human body, like all living bodies, is a machine, all the operations of which will, sooner or later, be explained on physical principles. I believe that we shall, sooner or later, arrive at a mechanical equivalent of consciousness, just as we have arrived at a mechanical equivalent of heat.** If a pound weight falling through a distance of a foot gives rise to a definite amount of heat, which may properly be said to be its equivalent; the same pound weight falling through a foot on a man's hand gives rise to a definite amount of feeling, which might with equal propriety be said to be its equivalent in consciousness.[77] And as we already know that there is a certain parity between the intensity of a pain and the strength of one's desire to get rid of that pain; and secondly, that there is a certain correspondence between the intensity of the heat, or mechanical violence, which gives rise to the pain, and the pain itself; the possibility of the establishment of a correlation between mechanical force and volition becomes apparent. And the same conclusion is suggested by the fact that, within certain limits, the intensity of the mechanical force we exert is proportioned to the intensity of our desire to exert it.

**AR: Below, Huxley speaks of Humans as automata, and re free will:**

Thus I am prepared to go with the Materialists wherever the true pursuit of the path of Descartes may lead them; and I am glad, on all occasions, to declare my belief that their fearless development of the materialistic aspect of these matters has had an immense, and a most beneficial, influence upon physiology and psychology. Nay more, when they go farther than I think they are entitled to do--when they introduce Calvinism into science and declare that man is nothing but a machine, I do not see any particular harm in their doctrines, so long as they admit that which is a matter of experimental fact--namely, that it is a machine capable of adjusting itself within certain limits.

I protest that if some great Power would agree to make me always think

what is true and do what is right, on condition of being turned into a sort of clock and wound up every morning before I got out of bed, I should instantly close with the offer. The only freedom I care about is the freedom to do right; the freedom to do wrong I am ready to part with on the cheapest terms to any one who will take it of me.

**AR:** Below, Huxley points out that materialism is correct about the operation of the physical universe, but incorrect when asserting that only the material exists, or even when denying that the mental realm is more fundamental than the material.

**But when the Materialists stray beyond the borders of their path and begin to talk about there being nothing else in the universe but Matter and Force and Necessary Laws, and all the rest of \_their\_ "grenadiers," I decline to follow them.** I go back to the point from which we started, and to the other path of Descartes. I remind you that we have already seen clearly and distinctly, and in a manner which admits of no doubt, that all our knowledge is a knowledge of states of consciousness. **"Matter" and "Force" are, so far as we can know, mere names for certain forms of consciousness.** "Necessary" means that of which we cannot conceive the contrary. "Law" means a rule which we have always found to hold good, and which we expect always will hold good. **Thus it is an indisputable truth that what we call the material world is only known to us under the forms of the ideal world; and, as Descartes tells us, our knowledge of the soul is more intimate and certain than our knowledge of the body.** If I say that impenetrability is a property of matter, all that I can really mean is that the consciousness I call extension, and the consciousness I call resistance, constantly accompany one another. **Why and how they are thus related is a mystery. And if I say that thought is a property of matter, all that I can mean is that, actually or possibly, the consciousness of extension and that of resistance accompany all other sorts of consciousness. But, as in the former case, why they are thus associated is an insoluble mystery.**

**From all this it follows that what I may term legitimate materialism, that is, the extension of the conceptions and of the methods of physical science to the highest as well as the lowest phenomena of vitality, is neither more nor less than a sort of shorthand Idealism; and Descartes' two paths meet at the summit of the mountain, though they set out on opposite sides of it.**

***The reconciliation of physics and metaphysics* lies in the acknowledgment of faults upon both sides; in the confession by physics that all the phænomena of nature are, in their ultimate analysis, known to us only as facts of consciousness; in the admission by metaphysics, that the facts of consciousness are, practically, interpretable only by the methods and the formulæ of physics: and, finally, in the observance by both**

**metaphysical and physical thinkers of Descartes' maxim--assent to no proposition the matter of which is not so clear and distinct that it cannot be doubted.**

.....,.....

## **Are animals automatons? T. H. Huxley**

**AR: Huxley explains Descartes' views, and offers his own, some of them in opposition to Descartes'.**

Huxley makes the assumption re animals that others make for humans, that they are all conscious. I do not accept his hypothesis that animals are conscious automata because although I can agree that it's likely they are automata - ie lacking true free will - I do not simply assume that they are conscious; and so I agree with Descartes that animals may be non-conscious 'machines'. And similarly I don't accept Descartes assumption re humans, that all are conscious.

**AR: Human moral responsibility (and free will):**

We will signify by "MR" (an intuition of a sort of) an 'absolute' moral responsibility, residing in a "materially-Transcendent realm".

It is interesting that Huxley proposes that humans are conscious automatons, and realizes that this can imply no MR, but he says that he believes in mr/MR (AR: I don't know which to place here, mr or MR!) and doesn't agree that one should draw that which seem to be the logical conclusions of what he proposes, and knows he will be criticized but lampoons the reasoning of his expected critics, though to this author (AR) it seems like the critics he invents would be right, and also his critique of drawing logical conclusions seems rather absurd. So maybe he is trying to tell us something in a hidden coded way, eg that he does NOT actually believe in MR/mr?

Or that he knows MR exists by direct knowledge and he also believes no fw ie humans are automatons, and accepts both even though they seem to contradict?

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**AR: Huxley's title should have been "Are humans conscious automata" with an abstract something like: "Animals are conscious automata and their feeling of making free decisions is simply a feeling (arising from some brain stimulus) and does not reflect actuality.**

Similarly for humans. However, does this have ramifications for human moral responsibility? Perhaps in contrast to animals humans are only mostly automata, where 'mostly' means that perhaps their consciousness has some physical effect, ie via true free will. Or perhaps humans too are completely automata"

Throughout most of the article Huxley concentrates on animals, not humans. And he is writing this article not to explain Descartes but to differ from him, but first he needs to explain Descartes' view, and justification or reason.

So his main thrust is that animals DO have consciousness as opposed to Descartes' view. However, his paper seems more interesting in its discussion at the end re humans being automatons (which he felt Descartes could not imagine since it was assumed speech and rational thought required consciousness). Another point of interest is that he did not feel that this re this idea of humans as automatons impacted the notion of moral responsibility.

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**Huxley: Don't be misled about Descartes' ideas by the outdated terms he used**

1) 'soul': nerves which go from the central apparatus to the muscle. ***gave this moving material a particular name-the animal spirits. Nowadays we should not talk of the existence of animal spiritP, but we should say that a molecular change takes place in the and that that molecular change is propagated with a certain velocity,*** from the central apparatus to the muscle. The modification of the idea is not greater than that which has place in our view of electricity, in our of conception of it as a fluid to our conception of it as a condition of propagated molecular change.

2) **Descartes said that the animal spirits were stored up in the brain, and flowed out along the motor nerves. We say that a molecular change takes place in the brain that is propagated along the motor nerve**

..

**AR: re nmc:** Huxley considers Descartes as revolutionary, first to clarify the notion of a mental realm , and that it is totally its own phenomenon, and therefore also it can exist on its own ie there can be purely-mental existence with no physicality, ie idealism,

He says that **when a body which is competent to produce a sensation touches the sensory organs, what happens is the production of a mode of motion of the sensory nerves. That mode of motion is propagated to the brain. That which takes place in the brain is still nothing but a mode of motion. But, in addition to this mode of motion, there is, as everybody can find by experiment for himself, something else which can in no way be compared to motion, which is utterly unlike it, and which is that state of consciousness which we call a sensation.**

***Descartes insists over and over again upon this total disparity between the agent which excites the state of consciousness and the state of consciousness itself.*** He tells us that our sensations are not pictures of external things, but that they are symbols or signs of them ; and in doing that he made one of the greatest possible revolutions, not only in physiology but in philosophy. Till his time it was conceived that visible bodies, for example, gave from themselves a kind of film which entered the eye and so went to the brain, species intentionales as they were called, and thus the mind received an actual copy or picture of things which were given off from it.

***It is to Descartes we owe that complete revolution in our ideas, which has led us to see that we have really no knowledge whatever of the causes of those phenomena which we term external things, and that the only certainty we possess is that they cannot be like those phenomena. In laying down that proposition upon what I imagine to be a perfectly irrefragable basis, Descartes laid the foundation of that form of philosophy which is termed idealism, which was subsequently expanded to its uttermost by Berkeley, and has since taken very various shapes.***

...

**AR:** Huxley says Descartes states that despite the existence of mind, nothing can happen that would not happen without it, in a machine.



"It appears to me to be a very remarkable circumstance that no movement can take place either in the bodies of beasts or even in our own, if these bodies have not in themselves all the organs and instruments by means of which the very same movement would be accomplished by a machine

..

**AR:** Huxley mixes nmc and free will: that nmc is separate from the physical (the mind separate from the body), and that it is not fully separate since it can interfere via free will.

....

**Huxley:**

Why, in fact, may it not be that **the whole of man's physical actions are mechanical, his mind living apart**, like one of the gods of Epicurus, but unlike them **occasionally, interfering by means of his volition?**

**And it so happened that Descartes was led by some of his speculations to believe that beasts had no souls, and consequently could have no consciousness ; and thus, his two ideas harmonizing together, he developed that famous hypothesis of the automatism of brutes, which is the main object of my present discourse.**

**What Descartes meant by this was that animals are absolute machines, as if they were mills or barrel organs ; that they have no feelings ; that a dog does not see, and does not hear, and does not smell, but that the impressions which would produce those states of consciousness in our selves, give rise in the dog, by a mechanical reflex process, to actions which correspond to those which we perform when we do smell, and do taste, and do see.**

**AR:** re the above, Huxley considers this notion hard to grasp, ie it was a very revolutionary counterintuitive way of thinking.

On the face of it this appears to be a most surprising hypothesis, and I do not wonder that it proved to be a stumbling block even to such and subtle men as Henry More, who was one of Descartes correspondents ; and yet it is a very singular thing that this, ***the boldest and most paradoxical notion which Descartes broached***, has received as much and as strong support from modern physiological research as any other of his notions. I will endeavour to explain to you in as few words as possible what is the nature of that support, and why it is that Descartes' hypothesis, **although I am bound to say I do not agree with it**, nevertheless, remains at this present time not only quite as defensible as it was in his own, but I should say, upon the whole, a little more defensible.

....

**Huxley implies quite clearly that the consciousness he refers to is nmc:** "all these accessory questions to which I have referred involve problems which cannot be discussed by physical science as such, as they lie, not within the scope of physical science, but come within the scope of that great mother of all science, Philosophy."

....

Huxley: Descartes put forward this hypothesis, and I do not know that it can be positively refuted. ***We can have no direct observation of consciousness in any creature but ourselves.***

**AR:** ie, Huxley is saying that Descartes is applying this deep idea (problem of other minds) to the question of whether or not animals have consciousness, and is saying that since we cannot know any entity has consciousness, also for animals this is so, and therefore we will assume they do NOT have consciousness.

**Huxley:** “But I must say for myself-looking at the matter on the ground of **taking into account that great doctrine of continuity which forbids one to suppose that any natural phenomena can come into existence suddenly and without some precedent, gradual modification tending towards it, and taking into account the incontrovertible fact that the lower vertebrated animals possess, in a less developed condition, that part of the brain which we have every reason to believe is the organ of consciousness in ourselves, it seems vastly more probable that the lower animals, although** “

**AR:** *Here Huxley is expressing his own view in opposition to Descartes': the doctrine which I have just now put before you. **So far as we know, animals are conscious automata.***

That doctrine is perfectly consistent with any view that we may choose to take on the very curious speculation- -whether animals possess souls or not, and if they possess soul, whether those souls are immortal or not

....

**Expanded version of the above excerpt:** An Address On The Theories Of Life And Motion: Thomas H. Huxley, delivered Aug 24th 1874, published in: The British Medical Journal Vol. 2, No. 713 (**Aug. 29, 1874**), pp. 267-271 (5 pages) <https://www.jstor.org/stable/25239290>, <https://www.jstor.org/stable/pdf/25239290.pdf>

**AR:** Huxley here states that - as opposed to the position presented by Descartes - animals are nmc. He admits there can be no proof of this (AR: as there is none for Descartes' opposite proposition), but it seems to be indicated by the notion of 'continuity' (AR: see eg the notion of the great chain of being, and discussion by Lucretius; and see the opposite view expressed by Darwin), and furthermore since the issue is not determinable scientifically one can introduce ethical notions to guide one to a preferential position:

**Huxley:**

“...to use the very correct words of Father Malebranche:

' Thus in dogs, cats, and other animals there is neither intelligence nor spiritual soul, as we understand the matter commonly ; they eat without pleasure, they cry out without pain, they grow without knowing it, they desire nothing, they know nothing ; and if they act with dexterity, and in a manner which indicates intelligence, it is because God, having made them with the intention of preserving them, has constructed their bodies in such a manner that they escape organically, without knowing it, everything which could injure them, and which they seem to fear' .

Descartes put forward this theory, and I really do not know that we are in the slightest degree competent to give a distinct and definite refutation of that hypothesis at the present day. **You can have no direct observation of consciousness in any creature but yourself**, for beasts cannot tell you anything of it, and **I am afraid that the matter is one wholly incapable of demonstrative proof.**

But I must say for myself, looking at the matter on the ground of analog, taking into account that **great doctrine of continuity** which forbids one to suppose that any natural phenomena can come into existence suddenly and without some precedent, gradual modification tending towards it, taking that great doctrine into account (and every thing we know of science tends to confirm it), and taking into account, on the other hand, the incontrovertible fact that the lower animals, which possess brains at all, possess, at any rate, a rudimentary part of the brain, which we have every reason to believe is the organ of consciousness in ourselves, then **it seems vastly more probable that the lower animals, although they may not possess that sort of consciousness which we have ourselves, yet have it in a form proportional to the comparative development of the organ of that consciousness, and foreshadow more or less dimly those feelings which we possess ourselves.** I think that is probably the most rational conclusion that can be come to.

.....

**AR:** Here Huxley states that these are all speculations rather than scientifically demonstrable notions, ie since nmc is not susceptible to the methods of science.

**Huxley:** “has this advantage, though this is a consideration which could not be urged in dealing with questions that are susceptible of demonstration”

**AR:** And he states this because he is now going to talk about a moral issue and would not introduce such considerations into the discussion if it were susceptible to scientific measurement/detection/proof.

....

**AR: Re ideas which some will consider problematic or objectionable**  
*It is likely that non-scientifically-based objections would be raised against the “ontological conjecture” proposed in the present paper.*

**Continuation of Huxley:** “ but which is well worthy of consideration in a case like the present,... that it relieves us of the very terrible consequences of making any mistakes...”

...

<https://www.gutenberg.org/files/16729/16729-8.txt> LAY SERMONS, ADDRESSES, AND REVIEWS by THOMAS HENRY HUXLEY, LL.D., F.R.S. London: MacMillan and Co: 1870

**AR: A lecture delivered on the 24th of March, 1870 (4 years before the lecture and Nature article “Are animals automatons?”)**

#### **XIV. ON DESCARTES' "DISCOURSE TOUCHING THE METHOD OF USING ONE'S REASON RIGHTLY AND OF SEEKING SCIENTIFIC TRUTH."**

**AR:** worth reading in its entirety, contains many quotes from Descartes, and an interesting attempt to reconcile knowledge of nmc with materialism of a sort:

**AR:** In proposing that Animals are conscious automatons, with the implication that humans are as well, Huxley is worried a bit about the reaction to his ideas. Presumably the ontological conjecture in this paper can also engender some opposition.

“a certain discourse, which brought a great storm about my head some time ago, contained nothing but the ultimate development of the views of the father of modern philosophy.

I do not know if I have been quite wise in allowing this last motive to weigh with me. They say that the most dangerous thing one can do in a thunderstorm is to shelter oneself under a great tree, and the history of Descartes' life shows how narrowly he escaped being riven by the lightnings, which were more destructive in his time than in ours.

His books narrowly escaped being burned by the hangman; the fate of Vanini was dangled before his eyes; and the misfortunes of Galileo so alarmed him, that he well-nigh renounced the pursuits by which the world has so greatly benefited, and was driven into subterfuges and evasions which were not worthy of him.

**AR:** *It is likely that similar non-scientific considerations are relevant to the potential ramifications of the “ontological conjecture” proposed in the present paper.*

.....

**AR:** For context, below is Huxley's entire address/article: excerpts which were presented earlier are prefaced by \*\*.

### **Are animals automatons? T. H. Huxley [1]**

**AR:** Huxley's 1874 Presidential Address to the British Association for the Advancement of Science, published that year in Nature

I SHALL go no further back than the seventeenth century, and the observations which I shall have to offer you will be confined almost entirely to the biological science of the time between the middle of the seventeenth and middle of the eighteenth centuries. I propose to show what great ideas in biological science took their origin at that time, in what manner the speculations then originated have been developed, and in what relation they stand to what is now understood to be the body of scientific biological truth. The middle of the seventeenth century is one of the great epochs of biological science. It was at that time that an idea arose that vital phenomena, like all other phenomena of the physical world, are capable of mechanical explanation, that they are reducible to law and order, and that the study of biology is an application of the great science of physics and chemistry. **Harvey was**

**the first clearly to explain the mechanism of the circulation of the blood, and by that remarkable discovery of his he laid the foundation of a scientific theory of the larger part of the processes of living beings**—those processes, in fact, which we now call processes of sustentation—and by his studies of development he first laid the foundation of a scientific knowledge of reproduction. **But, besides these great powers of living beings, there remains another class of functions—those of the nervous system—with which Harvey did not grapple. It was, indeed, left for a contemporary of his, René Descartes, to play a part in relation to the phenomena of the nervous system which is precisely equal in value to that Harvey played in regard to the circulation.** You must recollect that this man Descartes was not merely, as some had been, a happy speculator. He was a working anatomist and physiologist, conversant with all the anatomical and physiological law of his time. A most characteristic anecdote of him, and one which should ever put to silence those shallow talkers who speak of Descartes as an hypothetical and speculative philosopher, is, that a friend once calling upon him in Holland begged to be shown his library. Descartes led him into a sort of shed, and, drawing aside a curtain, displayed a dissecting-room full of the bodies of animals in course of dissection, and said, "There is my library."

The matters of which we shall treat are such as to require no extensive knowledge of anatomy. I need only premise that what we call the nervous system in one of the higher animals consists of a central apparatus, composed of the brain, which is lodged in the skull, and of a cord proceeding from it, which is termed the spinal marrow, and which is lodged in the vertebral column or spine, and that then from these soft white masses—for such they are—there proceed cords which are termed nerves, some of which nerves end in the muscle, while others end in the organs of sensation. **The first proposition that you find definitely and clearly stated by Descartes is the view that the brain is the organ of sensation, of thought, and of emotion—using the word "organ" in this sense, that certain changes which take place in the matter of the brain are the essential antecedents of those states of consciousness which we term sensation, thought, and emotion.** If your friend disagrees with your opinion, runs amuck against any of your pet prejudices, you say, "Ah! poor fellow, he is a little touched here," by which you mean that his brain is not doing its business properly—that he is not thinking properly—thereby implying that his brain is some way affected. It remained down to the time of Bichat a question whether the passions were or were not located in the abdominal viscera. In the second place, Descartes lays down the proposition that all the movements of the animal bodies are effected by the change of form of a certain part of the matter of their bodies, to which he applies the general term of muscle. That is a proposition which is now placed beyond all doubt whatever. If I move my arm, that movement is due to the change of this mass in front called the biceps muscle; it is shortened till it becomes thicker. If I move any of my limbs, the reason is the same. As I now speak to you, the different tones of my voice are due to the exquisitely accurate adjustments and adjusted contractions of a multitude of such particles of flesh; and there is no considerable and visible movement of the animal body which is not, as Descartes says, resolvable into these changes in the form of matter termed muscle. But Descartes went further, and he stated that in the normal and ordinary condition of things these **changes in the form of muscle in the living body only occur under certain conditions; and the essential condition of the change was, says Descartes, the motion of the matter contained within the nerves, which go from the central apparatus to the muscle. Descartes gave this**

moving material a particular name - the animal spirits. Nowadays we should not say that the animal spirits existed, but we should say that a molecular change takes place in the nerve, and that that molecular change is propagated at a certain velocity which has been measured from the central apparatus to the muscle. Modern physiology has measured the rate of the change to which I have referred.

Next, Descartes says that, under ordinary circumstances, this change in the contents of a nerve, which gives rise to the contraction of a muscle, is produced by a change in the central nervous apparatus, as, for example, the brain. We say at the present time exactly the same thing. Descartes said that the animal spirits were stored up in the brain, and flowed out from the motor nerve. We say that a molecular change takes place in the brain that is propagated along the motor nerve. Further, Descartes stated that the sensory organs which give rise to our feelings gave rise to a change in the sensory nerves, to a flow of animal spirits along those nerves, which flow was propagated to the brain. If I look at this candle before us, the light falling on the retina of my eye gives rise to an affection of the optic nerve, which affection Descartes described as a flow of the animal spirits to the brain; but the fundamental idea is the same. In all our notions of the operations of nerve we are building upon Descartes's foundation. He says that, when a body which is competent to produce a sensation touches the sensory organs, what happens is the production of a mode of motion of the sensory nerves. That mode of motion is propagated to the brain. That which takes place in the brain is still nothing but a mode of motion. But, in addition to this mode of motion, there is, as everybody can find by experiment for himself, something else which can in no way be compared to motion, which is utterly unlike it, and which is that state of consciousness which we call a sensation.

***\*\* Descartes insists over and over again upon this total disparity between the agent which excites the state of consciousness and the state of consciousness itself. He tells us that our sensations are not pictures of external things, but that they are symbols or signs of them; and in doing that he made one of the greatest possible revolutions, not only in physiology but in philosophy. Till his time it was the notion that visible bodies, for example, gave from themselves a kind of film which entered the eye and so went to the brain, species intellectuales as they were called, and thus the mind received an actual copy or picture of things which were given off from it. In laying down that proposition upon what I imagine to be a perfectly irrefragable (AR: irrefutable) basis,***

***\*\*Descartes laid the foundation of that form of philosophy which is termed idealism, which was subsequently expanded to its uttermost by Berkeley, and has taken all sorts of shapes since.***

But Descartes noticed not only that under certain conditions an impulse made by the sensory organ may give rise to a sensation, but that under certain other conditions it may give rise to motion, and that this motion may be effected without sensation, and not only without volition, but even contrary to it. I know in no modern treatise of a more clear and precise statement than this of what we understand by the automatic action of the brain. And what is very remarkable is, that, in speaking of these movements which arise by a sensation being as it were reflected from the central apparatus into a limb—as, for example, when one's finger is pricked and the arm is suddenly drawn up, the motion of the sensory

nerve travels to the spine and is again reflected down to the muscles of the arm—Descartes uses the very phrase that, we at this present time employ. And the last great service to the physiology of the nervous system which I have to mention as rendered by Descartes was this, that he first, so far as I know, sketched out the physical theory of memory. What he tells you in substance is this, that when a sensation takes place, the animal spirits travel up the sensory nerve, pass to the appropriate part of the brain, and there, as it were, find their way through the pores of the substance of the brain. And he says that, when the particles of the brain have themselves been shoved aside a little by the single passage of the animal spirits, the passage is made easier in the same direction for any subsequent flow of animal spirits, and that the repetition of this action makes it easier still, until at length it becomes very easy for the animal spirits to move these particular particles of the brain, the motion of which gives rise to the appropriate sensation, until at length the passage is so easy that almost any thing, especially an associated flow which may be set going, allows the animal spirits to flow into these already open pores more easily than they would flow in any other direction; and in this way a flow of the animal spirits recalls the image—the impression made by a former sensory act. That, again, is essentially in substance at one with all our present physical theories of memory. In one respect Descartes proceeded further than any of his contemporaries, and has been followed by very few of his successors in later days. Descartes reasoned thus: "I can account for many such actions, many reflex actions taking place without the intervention of consciousness, and even in opposition to the will." So far these occur, as, for example, **when a man in falling mechanically puts out his hands to save himself. "In these cases,"** Descartes said, **"I have clear evidence that the nervous system acts mechanically without the intervention of consciousness, and without the intervention of the will, it may be in opposition to it."** Why, then, may I not extend this idea further? As actions of a certain amount of complexity are brought about in this way, why may not actions of still greater complexity be so produced?

**\*\* Why, in fact, may it not be that the whole of man's physical actions are mechanical, his mind living apart, like one of the gods of Epicurus, but unlike them occasionally, interfering by means of his volition?**

**\*\* And it so happened that *Descartes was led by some of his speculations to believe that beasts had no soul, and consequently, according to his notion, could have no true mental operations, and no consciousness; and thus, his two ideas harmonizing together, he developed that famous hypothesis of the automatism of brutes, which is the main subject of my present discourse. What Descartes meant by this was that animals are absolutely machines,***

as if they were mills or barrel-organs; that ***they have no feelings; that a dog does not hear, and does not smell, but that the impression which thus gave rise to those states of consciousness in the dog gave rise by a mechanical reflex process, to actions which correspond to those which we perform when we do smell, and do taste, and do see. Suppose an experiment.*** Suppose that all that is taken away of the brain of a frog is what we call the hemisphere, the most anterior part of the brain. If that operation is properly performed, very quickly and very skillfully, the frog may be kept in a state of full bodily vigor for months, or it may be for years; but it will sit forever in the same spot. It sees nothing; it hears nothing. It will starve sooner than feed itself, although, if food is put into its mouth, it

swallows it. On irritation, it jumps or walks; if thrown into the water, it swims. But the most remarkable thing that it does is this—you put it in the flat of your hand, it sits there, crouched, perfectly quiet, and would sit there forever. Then if you incline your hand, doing it very gently and slowly, so that the frog would naturally tend to slip off, you feel the creature's fore-paws getting a little slowly on to the edge of your hand until he can just hold himself there, so that he does not fall; then, if you turn your hand, he mounts up with great care and deliberation, putting one leg in front and then another, until he balances himself with perfect precision upon the edge of your hand; then, if you turn your hand over, he goes through the opposite set of operations until he comes to sit in perfect security upon the back of your hand. The doing of all this requires a delicacy of coördination and an adjustment of the muscular apparatus of the body which are only comparable to those of a rope-dancer among ourselves; in truth, a frog is an animal very poorly constructed for rope-dancing, and on the whole we may give him rather more credit than we should to a human dancer. These movements are performed with the utmost steadiness and precision, and you may vary the position of your hand, and the frog, so long as you are reasonably slow in your movements, will work backward and forward like a clock. And what is still more remarkable is this, that, if you put him on a table, and put a book between him and the light, and give him a little jog behind, he will jump—take a long jump, very possibly—but he won't jump against the book; he will jump to the right or to the left, but he will get out of the way, showing that, although he is absolutely insensible to ordinary impressions of light, there is still a something which passes through the sensory nerve, acts upon the machinery of his nervous system, and causes it to adapt itself to the proper action.

I need not say that since those days of commencing anatomical science when criminals were handed over to the doctors, we cannot make experiments on human beings, but sometimes they are made for us, and made in a very remarkable manner. That operation called war is a great series of physiological experiments, and sometimes it happens that these physiological experiments bear very remarkable fruit. A French soldier, a sergeant, was wounded at the battle of Bareilles. The man was shot in what we call the left parietal bone. The bullet, I presume, glanced off, but it fractured the bone. He had enough vigor left to send his bayonet through the Prussian that shot him. Then he wandered a few hundred yards out of the village, where he was picked up and taken to the hospital, where he remained some time. When he came to himself, as usual in such cases of injury, he was paralyzed on the opposite side of the body, that is to say, the right arm and the right leg were completely paralyzed. That state of things lasted, I think, the better part of two years, but sooner or later he recovered from it, and now he is able to walk about with activity, and only by careful measurement can any difference between the two sides of his body be ascertained. At present this man lives two lives, a normal life and an abnormal life. In his normal life he is perfectly well, cheerful, and a capital hospital attendant, does all his work well, and is a respectable, well-conducted man. That normal life lasts for about seven-and-twenty days, or thereabouts, out of every month; but for a day or two in each month—generally at intervals of about that time—he passes into another life, suddenly, and without warning or intimation. In this life he is still active, goes about just as usual, and is to all appearance just the same man as before; goes to bed and undresses himself, gets up, makes his cigarette and smokes it, and eats and drinks. But in this condition he neither sees, nor hears, nor tastes, nor smells, nor is he conscious of any thing whatever, and has only one sense-organ



in a state of activity—viz., that of touch, which is exceedingly delicate. If you put an obstacle in his way he knocks against it, feels it, and goes to the one side. If you push him in any direction he goes straight on, illustrating, as well as he can, the first law of motion. You see I have said he makes his cigarettes, but you may make his tobacco of shavings or of any thing else you like, and still he will go on making his cigarettes as usual. His action is purely mechanical. As I said, he feeds voraciously, but whether you give him aloes or asafœtida, or the nicest thing possible, it is all the same to him.

The man is in a condition absolutely parallel to that of the frog, and no doubt, when he is in this condition, the functions of his cerebral hemispheres are at any rate largely annihilated. He is very nearly—I don't say wholly, but very nearly—in the condition of an animal in which the cerebral hemispheres are not entirely extirpated, but very largely damaged. And his state is wonderfully interesting to me, for it bears on the phenomena of mesmerism, of which I saw a good deal when I was a young man. In this state he is capable of performing all sorts of actions on mere suggestion—as, for example, he dropped his cane, and a person near him put it into his hand, and the feeling of the end of the cane evidently produced in him those molecular changes of the brain which, had he possessed consciousness, would have given rise to the idea of his rifle; for he threw himself on his face, began feeling about for his cartouche, went through the motions of touching his gun, and shouted out to an imaginary comrade, "Here they are, a score of them; but we will give a good account of them." This paper to which I refer is full of the most remarkable examples of this kind, and what is the most remarkable fact of all is, the modifications which this injury has made in the man's moral nature. In his normal life he is one of the most upright and honest of men. In his abnormal state, however, he is an inveterate thief. He will steal everything he can lay his hands upon, and, if he cannot steal anything else, he will steal his own things and hide them away. Now, if Descartes had had this fact before him, need I tell you that his theory of animal automatism would have been enormously strengthened? He would have said: "Here, I show you a case of a man performing actions evidently more complicated and mostly more rational than any of the ordinary operations of animals; and yet you have positive proof that these actions are merely mechanical. What, then, have you to urge against my doctrine that the whole animal world is in that condition, and that—to use the very correct words of **Father Malebranche—'Thus in dogs, cats, and other animals, there is neither intelligence nor spiritual soul as we understand the matter commonly; they eat without pleasure—they cry without pain—they grow without knowing it—they desire nothing, they know nothing; and, if they act with dexterity and in a manner which indicates intelligence, it is because God, having made them with the intention of preserving them, has constructed their bodies in such a manner that they escape organically, without knowing it, every thing which could injure them, and which they seemed to fear.'**"

**\*\* But I must say for myself—looking at the matter on the ground of analogy—taking into account that great doctrine of continuity which forbids one to suppose that any natural phenomenon can come into existence suddenly and without some precedent, gradual modification tending toward it—taking that great doctrine into account (and every thing we know of science tends to confirm it), and taking into account on the other hand the incontrovertible fact that the lower animals which possess brains at all possess, at any rate, in rudiments a part of the brain, which we have every reason to believe is the organ of consciousness in ourselves, then it seems vastly more probable that the lower animals,**

although they may not possess that sort of consciousness which we have ourselves, yet have it in a form proportional to the comparative development of the organ of that consciousness, and foreshadow more or less dimly those feelings which we possess ourselves.

I think that is, probably, the most rational conclusion that can be come to. It has this advantage, that it relieves us of the very terrible consequences of making any mistake on this subject. I must confess that, looking at that terrible struggle for existence which is everywhere going on in the animal world, and considering the frightful quantity of pain which must be given and received in every part of the animal world, I say that is a consideration which would induce me wholly to adopt the view of Descartes. Yet I think it on the whole much better to err on the right side, and not to concur with Descartes on this point.

But let me point out to you that, although we may come to the conclusion that Descartes was wrong in supposing that animals are insensible machines, it does not in the slightest degree follow that they are not sensitive and conscious automata;

[AR paraphrasing this rather unclear sentence: although we may come to the conclusion that Descartes was right that animals are non-conscious, ie we think instead that animals are conscious, but nevertheless still automata.]

in fact, that is the view which is more or less clearly in the minds of every one of us. When we talk of the lower animals being provided with instinct, and not with reason, what we really mean is that, although they are sensitive, and, although they are conscious, yet they do act mechanically, and that their different states of consciousness, their sensations, their thoughts (if they have them), their volitions (if they have them), are the products and consequences of the mechanical arrangements. I must confess that this popular view is to my mind the only one which can be scientifically adopted. We are bound by every thing we know of the operations of the nervous system to believe that, when a certain molecular change is brought about in the central part of the nervous system, that change, in some way utterly unknown to us, causes that state of consciousness that we term a sensation. It is not to be doubted that the impression excited by those motions which give rise to sensation leaves in the brain molecular changes which answer to what Haller called "*vestigia rerum*," and which that great thinker David Hartley termed "*vibratiuncles*," which we might term sensigenous molecular, and which constitute the physical foundation of memory. *Those same changes gave rise naturally to conditions of pleasure and pain, and to those emotions which in ourselves we call volition. I have no doubt that is the relation between the physical processes of the animal and his mental processes. In each case it follows inevitably that these states of consciousness can have no sort of relation of causation to the motions of the muscles of the body. The volition of animals will be simply states of emotion which precede their actions. The only conclusion, then, at which there seems any good ground for arriving is, that animals are machines, but that they are conscious machines.*

I might, with propriety, consider what I have now said, as the conclusion of the observations which I have to offer concerning animal automatism. So far as I know, the problem which we have hitherto been discussing is an entirely open one. I do not know that there is any reason on the part of any person, whatever his opinions may be, that can prevent him, if he be so inclined, from accepting the doctrine which I have just now put before you.

**\*\* So far as we know, animals are conscious automata. That doctrine is perfectly consistent with any view we may choose to take on a very curious subject of speculation—whether animals possess souls or not, and whether, if they possess souls, those souls are immortal or not.**

The doctrine to which I have referred is not inconsistent with the perfectly strict and literal adherence to the Scripture text concerning the beast that perisheth, nor, on the other hand, so far as I know, does it prevent any one from entertaining the amiable convictions ascribed by Pope to his untutored savage, that, when he passed to the realms of the blessed, his faithful dog should bear him company. In fact, **all these accessory questions to which I have referred involve problems which cannot be discussed by physical science as such, as they lie, not within the scope of physical science, but come within the scope of that great mother of all science, Philosophy.** Before any direct answer can be given upon any of these questions, we must hear what Philosophy has to say for and against the views that may be held. I have now laid these facts before you.

Huxley then says ***“apply the doctrine I have stated to man as well as brutes... Undoubtedly I do hold that the view I have taken of the relations between the physical and mental faculties of brutes applies in its fullness and entirety to man”***

.....

**AR:** This is the end of the scientific part of the essay. **From here to the end Huxley writes about the potential theological-type opposition to this idea rather than about the ideas and about science.**

I do not doubt that that fate will befall me which has befallen better men, and I shall have to bear in patience the reiterated assertion that doctrines such as I have put before you have very evil tendencies. I should not wonder if you were told that my intention in bringing this subject before you is to lead you ***to apply the doctrine I have stated to man as well as brutes***, and it will then certainly be further stated that ***the logical tendency of such a doctrine is Fatalism, Materialism, and Atheism.***

*Now, let me ask you to listen to another product of that long experience to which I have referred. The logical consequences are very important; but in the course of my experience I have found that they were the scarecrows of fools and the beacons of wise men. Logical consequences can take care of themselves. The only question for any man to ask is this: "Is this true or is it false?" No other question can possibly be taken into consideration until that one is settled.*

Undoubtedly ***I do hold that the view I have taken of the relations between the physical and mental faculties of brutes applies in its fullness and entirety to man***; and, if it was true that the logical consequences of that belief must land me in all these terrible things, I do not hesitate in allowing myself to be so landed. I should conceive that, if I refused, I should have done the greatest and most abominable violence to every thing which is

deepest in my moral nature. But now **I beg leave to say that, in my conviction, there is no such logical connection as is pretended between the doctrine I accept and the consequences which people profess to draw from it.** Many years ago I had occasion, in dealing with the philosophy of Descartes, and some other matters, to state my conviction pretty fully on those subjects, and, although I know by experience how futile it is to endeavor to escape from those nicknames which many people mistake for argument, yet, if those who care to investigate these matters in a spirit of candor and justice will look into those writings of mine; they will see my reasons for not imagining that such conclusions can be drawn from such premises. To those who do not look into these matters with candor and with a desire to know the truth I have nothing whatever to say, except to warn them on their own behalf what they do; for assuredly, **if, for preaching such doctrine as I have preached to you to-night, I am cited before the bar of public opinion, I shall not stand there alone.** On my one hand I shall have, among theologians, St. Augustine, John Calvin, and a man whose name should be well known to the Presbyterians of Ulster—Jonathan Edwards—unless, indeed, it be the fashion to neglect the study of the great masters of divinity, as many other great studies are neglected nowadays. I should have upon my other hand, among the philosophers, Leibnitz; I should have Père Malebranche, who saw all things in God; I should have David Hartley, the theologian as well as philosopher; I should have Charles Bonnet, the eminent naturalist, and one of the most zealous defenders Christianity has ever had. I think I should have, within easy reach at any rate, John Locke. **Certainly the school of Descartes would be there, if not their master;** and I am inclined to think, in due justice, a citation would have to be served upon Emmanuel Kant himself. In such society it may be better to be a prisoner than a judge; but I would ask those who are likely to be influenced by the din and clamor which are raised about these questions whether they are more likely to be right in assuming that those great men I have mentioned—the fathers of the Church and the fathers of philosophy—knew what they were about, or that the pigmies who raise this din know better than they did what they meant. It is not necessary for any man to occupy himself with problems of this kind unless he so choose. Life is full enough, filled amply to the brim, by the performance of its ordinary duties; but let me warn you, let me beg you to believe that if a man elect to give a judgment upon these great questions; still more, if he assume to himself the responsibility of attaching praise or blame to his fellow-men for the judgments which they may venture to express, I say that, unless he would commit a sin more grievous than most of the breaches of the Decalogue, let him avoid a lazy reliance upon the information that is gathered by prejudice and filtered through passion. Let him go to these great sources that are open to him as to every one, and to no man more open than to an Englishman; let him go back to the facts of Nature, and to the thoughts of those wise men who for generations past have been the interpreters of Nature.

....

## Darwin

Darwin believed in the action of materialistic natural law as that which governs physical processes including the evolution of the body including the brain, however he believed that reality included more than just the realm of the ordinary material, not just 'consciousness' but also the development of the physical natural universe followed causes which were not part of the usual material natural order - specifically a teleology - which maybe could be classified as being in the realm of nmc, which in any case he believed existed: as he writes in his notebook:

<http://darwin-online.org.uk/content/frameset?itemID=F1582&viewtype=text&pageseq=23>,  
<https://home.uchicago.edu/~rjr6/articles/Darwinian%20Metaphysics.pdf>

“thought, however unintelligible it may be seems as much function of organ, as bile of liver.—? is the attraction of carbon, hydrogen in certain definite proportions (different from what takes place out of bodies) really less wonderful than thoughts.—One organic body likes one kind more than another—

What is matter? The whole is a mystery.

This materialism does not tend to Atheism. inability of so high a mind without further end, just same argument. without indeed we are step towards some final end. production of higher animals—perhaps say attribute of such higher animals may be looking back, ∴ therefore consciousness, therefore reward in good life”.

...

### **The later Darwin (theories including the human brain)**

Darwin was a non-materialist, however he accepted the view of Descartes that the brain works according to mechanical laws as does the rest of the body, and added that these brain-aspects derived via evolutionary descent from animal brains. In this sense, his theory of the human brain would be as materialistic as would be a theory of an animal brain, but this would not at all imply that there was no non-material awareness associated to it. However to some - misunderstanding his ideas - it might have seemed as if Darwin was embracing a materialistic view. This was not at all the case, and Darwin remained a non-materialist all along.

If consciousness arose in humans at some point after they evolved from the apes, and if apes are not conscious, then at some point consciousness ‘emerged, however he had no explanation for how this could come about - the mind-body problem was as acute for him as it is for Descartes and this problem still exists in modern versions of the theory. As such, there is nothing in the theory of evolution - Darwinian and neoDarwinian - which implies that if some humans possess consciousness that therefore all do.

### **THE DESCENT OF MAN, VOL. I. LONDON JOHN MURRAY.**

At what age does the new-born infant possess the power of abstraction, or become self- [page] 106 conscious and reflect on its own existence? We cannot answer; nor can we answer in regard to the ascending organic scale. The half-art and half-instinct of language still bears the stamp of its gradual evolution. The ennobling belief in God is not universal with man; and the belief in active spiritual agencies naturally follows from his other mental powers. The moral sense perhaps affords the best and highest distinction between man and the lower animals; but I need not say anything on this head, as I have so lately endeavoured to shew that the social instincts,—the prime principle of man's moral constitution<sup>39</sup>—with the aid of active intellectual powers and the effects of habit, naturally lead to the golden rule, "As ye would that men should do to you, do ye to them likewise;" and this lies at the foundation of morality.

In a future chapter I shall make some few remarks on the probable steps and means by which the several mental and moral faculties of man have been gradually evolved. That this at least is possible ought not to be denied, when we daily see their development in every infant; and when we may trace a perfect gradation from the mind of an utter idiot, lower than that of the lowest animal, to the mind of a Newton

AR: He uses the word consciousness but not in a context relevant here: "Although man, as he now exists, has few special instincts, having lost any which his early progenitors may have possessed, this

is no reason why he should not have retained from an extremely remote period some degree of instinctive love and sympathy for his fellows. We are indeed all conscious that we do possess such sympathetic feelings,<sup>19</sup> but our consciousness does not tell us whether they are instinctive, having originated long ago in the same manner as with the lower animals, or whether they have been acquired by each of us during our early years."

<https://teoriaevolutiva.files.wordpress.com/2014/02/darwin-c-the-descent-of-man-and-selection-in-relation-to-sex.pdf> ... I have found on frequent enquiry, that it is the unanimous opinion of all those who have long attended to animals of many kinds, including birds, that the individuals differ greatly in every mental characteristic. In what manner the mental powers were first developed in the lowest organisms, is as hopeless an enquiry as how life first originated. These are problems for the distant future, if they are ever to be solved by man. As man possesses the same senses with the lower animals, his fundamental intuitions must be the same. "

..

AR: Language and terms and notions change eg re that which is uniquely human or non-mechanistic, eg 'soul' and 'life', and 'ability to speak/reason' whereas today we speak of 'mind' or 'consciousness' as that which is known to exist but is not mechanistic (ie we don't consider soul anymore in that category of known, it is more an idea or 'religion', and speak/reason is subsumed in mechanical aspects).

..

AR: Descartes showed the division between mind and matter and showed that we don't need mind for any explanation of physical nature etc.  
Darwin extended this to biology and humans, he found naturalistic explanation for everything about humans including their ideas, eg religion, ethics etc, and this is in consonance with Cartesian dualism, and Darwin was that essentially, ie he agreed of course that there is mind which is not material, but showed that it is not needed to explain anything (which is of course a big mystery), and our proposition would be that **materialists misunderstand him as they do Descartes, thinking that the mind/body division and lack of need of mind for any explanation implies mind doesn't exist.**

....

AR: It seems clear that Darwin did not believe materialist science 'explains all'. He was against revelation, maybe against the notion of a personal God, maybe against the notion of an immortal soul, but NOT against the idea that we are more than material, whether it is called soul or mind or consciousness, and that this is separate from the material universe.

Wikipedia [https://en.wikipedia.org/wiki/Religious\\_views\\_of\\_Charles\\_Darwin](https://en.wikipedia.org/wiki/Religious_views_of_Charles_Darwin)

In a letter to a correspondent at the University of Utrecht in 1873, Darwin expressed agnosticism:

"I may say that the impossibility of conceiving that this grand and wondrous universe, with our conscious selves, arose through chance, seems to me the chief argument for the existence of God; but whether this is an argument of real value, I have never been able to decide. I am aware that if we admit a first cause, the mind still craves to know whence it came from and how it arose.

Nor can I overlook the difficulty from the immense amount of suffering through the world.

I am, also, induced to defer to a certain extent to the judgment of many able men who have fully believed in God; but here again I see how poor an argument this is. The safest conclusion seems to me to be that the whole subject is beyond the scope of man's intellect; but man can do his duty."<sup>[82]</sup>

...

In his 1871 book *The Descent of Man* Darwin clearly saw religion and "moral qualities" as being important evolved human social characteristics.

AR: To Darwin, religion is not correct, but that does not mean there is no mind, nor even that there is no initial Intelligent Design, in which he seemed to believe - but not by a personal God: (somewhat like Einstein)

"I cannot see, as plainly as others do, & as I [should] wish to do, evidence of design & beneficence on all sides of us. There seems to me too much misery in the world. I cannot persuade myself that a beneficent & omnipotent God would have designedly created the *Ichneumonidæ* with the express intention of their feeding within the living bodies of caterpillars, or that a cat should play with mice. Not believing this, I see no necessity in the belief that the eye was expressly designed.

On the other hand I cannot anyhow be contented to view this wonderful universe & especially the nature of man, & to conclude that everything is the result of brute force. I am inclined to look at everything as resulting from designed laws, with the details, whether good or bad, left to the working out of what we may call chance. Not that this notion at all satisfies me. I feel most deeply that the whole subject is too profound for the human intellect. A dog might as well speculate on the mind of Newton.— Let each man hope & believe what he can.<sup>[64]</sup>

In 1876 Darwin wrote the following regarding his publicly stated position of agnosticism:

"Formerly I was led ... to the firm conviction of the existence of God and the immortality of the soul. In my Journal I wrote that whilst standing in the midst of the grandeur of a Brazilian forest, *it is not possible to give an adequate idea of the higher feelings of wonder, admiration, and devotion, which fill and elevate the mind.* I well remember my conviction that there is more in man than the mere breath of his body. But now, the grandest scenes would not cause any such convictions and feelings to rise in my mind."<sup>[86]</sup>

**AR: *The above seems materialistic, but I think perhaps it is not, that instead it is simply against the maximalist beginning of the paragraph, ie re God and immortality of the soul, not against the notion that "there is more to man than the mere breath of his body"***

....

In November 1878 when George Romanes presented his new book refuting theism, *A Candid Examination of Theism* by "Physicus", Darwin read it with "very great interest", but found it unconvincing; the arguments it put forward left open the possibility that God had initially created matter and energy with the potential of evolving to become organised.<sup>[87][88]</sup>

"I can indeed hardly see how anyone ought to wish Christianity to be true; for if so the plain language of the text seems to show that the men who do not believe, and this would include my Father, Brother and almost all my best friends, will be everlastingly punished. And this is a damnable doctrine."<sup>[94]:87</sup>

"The old argument of design in nature, as given by Paley, which formerly seemed to me so conclusive, fails, now that the law of natural selection has been discovered. We can no longer argue that, for instance, the beautiful hinge of a bivalve shell must have been made by an intelligent being, like the hinge of a door by man. There seems to be no more design in the variability of organic beings and in the action of natural selection, than in the course which the wind blows. Everything in nature is the result of fixed laws."<sup>[94]:87</sup>

"At the present day [c. 1872] the most usual argument for the existence of an intelligent God is drawn from the deep inward conviction and feelings which are experienced by most persons.

But it cannot be doubted that Hindoos, Mahomadans and others might argue in the same manner and with equal force in favor of the existence of one God, or of many Gods, or as with the Buddhists of no God ... This argument would be a valid one if all men of all races had the same inward conviction of the existence of one God: But we know that this is very far from being the case. Therefore I cannot see that such inward convictions and feelings are of any weight as evidence of what really exists."<sup>[94]:91</sup>

We are not occupied here in an investigation of the trajectory of Darwin's views on religion etc, but rather to support our conjecture - or defend it against objections - by indicating that Darwin believed in nmc to the end, and also that there is nothing in the scientific aspects of his theories which points to the conclusion that nmc arose at a specific time, or that it is now present in all humans.

...

### Whitehead:

“A scientific realism, based on mechanism, is conjoined with an unwavering belief in the world of men and of the higher animals as being composed of self-determining organisms. This radical inconsistency at the basis of modern thought accounts for much that is half-hearted and wavering in our civilisation. It would be going too far to say that it distracts thought. It enfeebles it, by reason of the inconsistency lurking in the background.” In this quote he is discussing free will, which is not known to exist as a fact, whereas we are discussing the more basic issue of nmc, which *is* known to exist as a fact.

Whitehead was an unabashed anti-materialist, writing: “The doctrine which I am maintaining is that **the whole concept of materialism only applies to very abstract entities**, the products of logical discernment. **The concrete enduring entities are organisms**, so that the plan of the whole influences the very characters of the various subordinate organisms which enter into it. In the case of an animal, the mental states enter into the plan of the total organism and thus modify the plans of the successive subordinate organisms until the ultimate smallest organisms, such as electrons, are reached. Thus an electron within a living body is different from an electron outside it, by reason of the plan of the body. The electron blindly runs either within or without the body; but it runs within the body in accordance with its character within the body; that is to say, in accordance with the general plan of the body, and this plan includes the mental state. But the principle of modification is perfectly general throughout nature, and represents no property peculiar to living bodies. In subsequent lectures it will be explained that **this doctrine involves the abandonment of the traditional scientific materialism, and the substitution of an alternative doctrine of organism.**” *Science and the Modern World (SMW)*, Chapter X, "the Romantic Reaction," pp. 75-80

[re “The concrete enduring entities are organisms” note the possible influence of the holistic aspect of the “ship of Theseus” notion. For a discussion of what the significance is to materialists of the ship of Theseus notion, see the accompanying paper “[Why Consensus.](#)”

.....

### Eccles: The Evolution of consciousness:

Eccles in the following abstract does not explain what are "mental units called psychons", and seems to recognize that they are qualitatively different than the material dendrons etc (and elsewhere wrote that they therefore could not evolve under evolutionary pressures), but then seems to mix the two unrelated types of "conscious" as though not understanding the real issue:

<https://www.pnas.org/content/89/16/7320> PNAS August 15, 1992 89 (16) 7320-7324;

<https://doi.org/10.1073/pnas.89.16.7320>

"The hypothesis of the origin of consciousness is built upon the unique properties of the mammalian neocortex. The apical dendrites of the pyramidal cells bundle together as they ascend



to lamina I to form neural receptor units of approximately 100 apical dendrites plus branches receiving hundreds of thousands of excitatory synapses, the collective assemblage being called a dendron. It is proposed that the whole world of consciousness, the mental world, is microgranular, with mental units called psychons, and that in mind-brain interaction one psychon is linked to one dendron through quantum physics. The hypothesis is that in mammalian evolution dendrons evolved for more effective integration of the increased complexity of sensory inputs. These evolved dendrons had the capacity for interacting with psychons that came to exist, so forming the mental world and giving the mammal conscious experiences.

In Darwinian evolution, consciousness would have occurred initially some 200 million years ago in relation to the primitive cerebral cortices of evolving mammals. It would give global experiences of a surrounding world for guiding behavior beyond what is given by the unconscious operation of sensory cortical areas per se. So conscious experiences would give mammals evolutionary advantage over the reptiles, which lack a neocortex giving consciousness. The Wulst of the avian brain needs further investigation to discover how it could give birds the consciousness that they seem to have."

.....

## Penrose

The fundamentality of consciousness: On the last page of "The Emperor's New Mind": "Consciousness seems to me to be such an important phenomenon that I simply cannot believe that it is something just 'accidentally' conjured up by a complicated computation. It is the phenomenon whereby the universe's very existence is made known. One can argue that a universe governed by laws that do not allow consciousness is no universe at all. I would even say that all the mathematical descriptions of a universe that have been given so far must fail this criterion. It is only the phenomenon of consciousness that can conjure a putative 'theoretical' universe into actual existence!"

The following is included to indicate that Penrose contrasts consciousness with the material, thus clearly indicating that it itself is not material, and then states that it is not material, but supposed perhaps "**consciousness is actually a scientifically describable 'thing'**" or wonders whether or not it is.

He seems to think that he has understood the hard AI approach, but this author would disagree, since the hard-AI supporters are presumably mc's and mean by consciousness something that is in fact indeed entirely material, as opposed to the consciousness Penrose means.

In the final sentence it is quite obvious that the phenomenon Penrose is referring to is not at all 'material', and might not be encompassable by what we refer to today as 'science'.

**Where Lies the Physics of Mind?** Sir Roger Penrose, Martin Gardner

<https://doi.org/10.1093/oso/9780198519737.003.0018>

Pages 523–582 **Published:** October 1989

<https://academic.oup.com/book/40643/chapter-abstract/348319333?redirectedFrom=fulltext>

Abstract: In discussions of the mind-body problem, there are two separate issues on which attention is commonly focused: 'How is it that a material object (a brain) can actually evoke consciousness?'; and, conversely; 'How is it that a consciousness, by the action of its will,

can actually influence the (apparently physically determined) motion of material objects?' These are the passive and active aspects of the mind-body problem. It appears that we have, in 'mind' (or, rather, in 'consciousness'), a non-material 'thing' that is, on the one hand, evoked by the material world and, on the other, can influence it.

However, I shall prefer, in my preliminary discussions in this last chapter, to consider a somewhat different and perhaps more scientific question - which has relevance to both the active and passive problems - in the hope that our attempts at an answer may move us a little way towards an improved understanding of these age-old fundamental conundrums of philosophy. My question is: 'What selective advantage does a consciousness confer on those who actually possess it?'

There are several implicit assumptions involved in phrasing the question in this way. **First, there is the belief that consciousness is actually a scientifically describable 'thing'.** There is the assumption that this 'thing' actually 'does something' - and, moreover, that what it does is helpful to the creature possessing it, so that an otherwise equivalent creature, but without consciousness, would behave in some less effective way.

On the other hand, one might believe that **consciousness is merely a passive concomitant of the possession of a sufficiently elaborate control system and does not, in itself, actually 'do' anything.** (This last would presumably be the view of the strong-AI supporters, for example.)

**Alternatively, perhaps there is some divine or mysterious purpose for the phenomenon of consciousness - possibly a teleological one not yet revealed to us - and any discussion of this phenomenon in terms merely of the ideas of natural selection would miss this 'purpose' completely.**

.....

**Note:** There aren't 'scientific' aspects to the paper other than noting that:

1) since there is no scientific proof of the existence of non-material consciousness, or of its emergence in the evolutionary process, there cannot be proof that this or that person does or does not possess it/is associated to it, and so the assumption that all humans do possess it is neither indicated nor contra-indicated by science or logic.

2) prominent physicists who well understand materiality assert that their consciousness is non-material, and so one cannot claim that the assertion of the existence of non-material consciousness is somehow opposed to what science can assert as necessarily true.

...

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