

To
The Council of the American Mathematical Society
through
The Secretary of the American Mathematical Society
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The following events have been brought to our notice. On 21 October 2005 Sir Michael Atiyah, President of the Royal Society of Edinburgh, gave the Einstein lecture at a meeting of the American Mathematical Society (AMS) at the University of Nebraska-Lincoln.¹ During this lecture, he outlined an apparently new mathematical paradigm for physics speculating that it might explain quantum mechanics. He gave a similar lecture at the Kavli Institute of Theoretical Physics, on 24 October 2005.² Atiyah stated, in conclusion, that he should be remembered for having suggested this, thus claiming independent discovery.

On 26 October 2005, Atiyah was informed by email that very similar ideas had already been published in a 1994 book³ by Professor C. K. Raju who had also explored further consequences of this mathematical paradigm and its connection to quantum mechanics in a paper published in *Foundations of Physics* in 2004.⁴ Atiyah acknowledged this mail, and subsequently had an exchange of emails also with C. K. Raju.⁵

Nevertheless, when a subsequent report of Atiyah's talk appeared⁶ prominently in the *Notices of the AMS* in June 2006, it still neglected to mention Raju's prior work. Instead, the report re-emphasized Atiyah's claim to those ideas by speaking of "Atiyah's hypothesis", and quoting his statement "don't forget I suggested it". An author of the report, M. Walker, has confirmed that a draft of the report was shown to Atiyah prior to submission.⁷

¹A streaming video of the talk is at <http://www.math.unl.edu/~bharbourne1/Atiyah.html>.

²For a streaming video of this talk, see <http://online.kitp.ucsb.edu/online/strings05/atiyah/>.

³C. K. Raju, *Time: Towards a Consistent Theory*, Kluwer Academic, Dordrecht, 1994.

⁴C. K. Raju, "The Electrodynamical 2-Body Problem and the Origin of Quantum Mechanics", *Foundations of Physics*, **34** (2004) 937–62. Preprint available online at <http://www.arxiv.org/pdf/quant-ph/0511235>.

⁵See Annex 5, pp. 35–39 at http://11picsoftime.com/Atiyah_annexes_ssv.pdf.

⁶G. W. Johnson and M. Walker, "Sir Michael Atiyah's Einstein Lecture", <http://www.ams.org/notices/200606/comm-walker.pdf>.

⁷See p. 58. at http://11picsoftime.com/Atiyah_annexes_ssv.pdf.

Eventually, in April 2007, the *Notices* carried a brief letter by M. Walker,⁸ mentioning Raju's prior publications. There was, however, no apology nor any admission of anything unethical, nor even any attempt to correct the nomenclature of "Atiyah's hypothesis".

Raju wrote a letter "Is This Ethical?"⁹ to the *Notices*, pointing out that Atiyah's claim of independent rediscovery on 21 October 2005 was already unethical according to the ethical guidelines adopted by the AMS,¹⁰ which state that "a claim of independence may not be based on ignorance". An inadvertent error ought to have been corrected in a timely way, and the report of Atiyah's talk in the *Notices* presented an opportunity to do so. However, that report reiterated Atiyah's claim while again suppressing Raju's prior work undeniably known to Atiyah at this time. The repeated violation of ethics, Raju argued, showed this was a case of deliberation rather than oversight.

Raju pointed out that the language of "Atiyah's hypothesis" suppressed his past work, and was hence improper according to the AMS ethical code. However, Raju further argued that those who copy often do so without full understanding and tend to make mistakes, so that mistakes are proof of copying, in the context of a claim of "independent rediscovery". Raju asserted that there was also a conceptual mistake in the term "Atiyah's hypothesis", and that no fresh hypothesis is actually needed for this new approach to physics. In his support, he also cited David Gross, 2004 Nobel laureate in physics, as having raised a similar point during Atiyah's videotaped lecture of 24 October 2005. Raju's letter to the *Notices* raised grave questions; it was acknowledged after a month by the editor of the *Notices* who, after another month, refused to publish it without assigning any reasons.

We the undersigned feel that the AMS must live up to its own code of ethics, and be seen to be doing so. If, despite having won two awards at the level of the Nobel prize, Atiyah is competing for credit for these ideas, then these ideas are potentially valuable and could well have a significant historical impact as has been claimed. Further, given Atiyah's undoubted influence, the AMS ought to deal with Raju's complaint of manipulation of history in a transparent manner, that is seen to be fair, and not involving differential standards.

⁸M. Walker, *Notices of the AMS* 54(4) p. 472, available at <http://www.ams.org/notices/200704/commentary-web.pdf>.

⁹See <http://11picsoftime.com/IsThisEthical.pdf>.

¹⁰See <http://www.ams.org/secretary/ethics.html>.

The belated reference to Raju's work shows that there is a *prima facie* case that his work was initially suppressed. Under these circumstances, it is unfair to deny Raju any opportunity to publicly present his side—however, editorial fiat has been used to suppress also Raju's response about the violation of ethics. This only fuels the suspicion that there are no answers to Raju's charges, and that the editor is misusing his authority to shield Atiyah. To dispel this suspicion, we feel the AMS needs to clarify its code of ethics to make it consistent with this editorial action. Is such significantly delayed acknowledgment, without any apology, a valid option for everyone? Or, do the AMS ethics vary with the person involved? The alternative is to make the editorial action consistent with the AMS code of ethics. Accordingly, under these extraordinary circumstances, we urge you to prevail upon the editor of the *Notices* to permit a fuller discussion of this matter in the *Notices*.