

To the Editors of Journal of Physics A (JPA):

I had almost given up hope that JPA would ever come to a decision about my “Comment” submissions, so it was a pleasant surprise to find your 2 November decision in my inbox, even though it was a rejection. I have wasted far too much time on this thoroughly distasteful matter, and it is a great relief that it has come to an end. When I innocently inquired almost two years ago of Jordan and Dressel about the main result (which later turned out to be a false claim) of a paper of theirs (with S. Agarwal) in Physical Review Letters (called DAJ below), I could never have imagined the consequences. Had some fortune teller predicted them, I would have considered her entirely loony.

Before receiving your decision, I had concluded that if the referee had not come to a conclusion after over nine months, he probably never would, or that if he did, it would be unlikely to be a reliable opinion. It seemed that the editorial process of JPA allowed referees to delay recommendations indefinitely. I did not want to write another letter of inquiry, and I expected that in the absence of inquiry, a decision might never be reached.

With these expectations, I was surprised to learn that JPA may have induced the authors to submit an erratum, and that the erratum would be required to acknowledge the arXiv expansion of the longer “Comment”, arXiv:1202.5604. That would accomplish much of what the “Comment” aimed to do, namely to alert readers of Dressel and Jordan’s JPA paper (called DJ below) that *as published*, it was disputed. However, it does not accomplish all, and to that extent I must remain dissatisfied.

The following will explain why. Because there are several distinct issues which are only loosely related, I will address them separately.

1. Clarifying the questionable hypothesis (iv) for DJ’s “General theorem”

DJ claims that my second counterexample is invalid because it does not satisfy their hypothesis (iv). I claim that it *does* satisfy hypothesis (iv) when (iv) is interpreted according to standard logical language. My consultant’s report to JPA states this explicitly:

“Hypothesis (iv) is so unclearly stated . . . , that it is no exaggeration to say that no reader could possibly guess what the authors meant.”

DJ claims that hypothesis (iv) means one thing, whereas I claim that it could not reasonably be interpreted in that way.¹

This is a matter which should be easy to resolve by any referee competent to understand the paper. It does not involve detailed analysis of any complicated proofs. It only requires competence in logic and an understanding

¹I am not disputing that the counterexample does not satisfy DJ’s unusual interpretation of (iv); I claim only that DJ’s interpretation is so unusual that no reader could reasonably be expected to guess it.

of the framework of DJ.

Previous letters have urged JPA to seek a ruling from competent referees on this simple issue, but these requests have been ignored, as far as I know. I am extremely disappointed that the November letter did not address this simple but critical issue.

If DJ's hypothesis (iv) is as unclear as I claim, then their criticism of the second counterexample is invalid and unfair. By publishing it, JPA has implicitly endorsed it. Unless JPA is willing to publicly assert that DJ's (iv) unequivocally means what DJ claims, JPA has a professional obligation to correct this in the same venue, or at least to indicate that there may be some reasonable controversy.

Mere citation of my arXiv posting in an erratum would not accomplish this. At a minimum, an erratum ought to explicitly acknowledge that the counterexample which DJ criticizes *is* valid under reasonable interpretations of (iv). It also ought to provide an unexceptionable statement of (iv) in unambiguous and correct logical language for the benefit of potential readers of DJ.²

2. Is the GT finally proved?

In October, 2011, Dressel and Jordan placed a lengthy paper in arXiv:1110.0418v1 which included essentially the same proof of the GT which JPA published in DJ. On February 29, they replaced this by Version 2, which had been published two days earlier in Phys. Rev. A 85, 022123 (2012). This published version will be called DJPRA below.

The proof of the GT was significantly altered in Version 2, in ways which seem to respond to criticisms in my "Comment", a review copy of which had been furnished to the authors by JPA.³ The centerpiece of my "Comment" was a Conjecture that the GT would be true under an additional "linearity" hypothesis. It stated that I believed that I had proved the Conjecture but because I had not written the proof in detail, I made no formal claims.

One of the ways that the proof of the GT in DJPRA differs from the proof published in JPA is the addition of a Lemma which in the context of the proof is essentially equivalent to my Conjecture just mentioned. Thus

²I remind you that before preparing the Comment, I wrote to the authors requesting a precise statement of (iv), so as to I could be sure that the meaning which I attributed to it was the author's intention. I sent JPA a copy of this letter. The authors did not reply, so I had to use my "best guess" in determining the intended meaning of (iv).

I cannot understand why JPA tolerated such outrageously unprofessional behavior. It should have communicated something to the authors like: "If you will not provide minimal cooperation to the author of the Comment to ensure its accuracy, then we will have to give it the benefit of the doubt and publish it unless it is clearly wrong."

³According to a previous letter from JPA, the authors replied to the review copy on February 14, so their knowledge of its criticisms of the GT came from that source. (The "Comment" had not been placed in the arXiv or circulated in any way until February 25.).

Dressel and Jordan appears to have used privileged information in the review copy of the “Comment” for professional advantage, to my detriment.⁴ This would be unethical according to published standards of the American Physical Society, but that is not my concern here.

My present concern is that the board member appears to be under the false impression that I now endorse the correctness of the GT:

“Concerning the long comment (manuscript code 417459): the comment does not touch on the claim [Conclusion of the GT] (which Dr Parrott seems now to accept) ...”

The only place that I know where he could have acquired this impression is a September 12, 2012 “Update” of the status of the “Comment” posted in Version 6 of arXiv:1202.5604. What I wrote there was:

“Modulo technical mathematical details which I have not checked, it looks as if [DJPRA’s] proof of [their Lemma, my Conjecture] could be correct. If so that will settle the Conjecture.

However, I think that the objection above to the proof of DJ’s GT also applies to [DJPRA’s] attempted proof of the [GT]. That is, I don’t agree that the [GT] has been proved ...”

So, it would be wrong to say that I now endorse the GT. All that I can presently endorse is the truth of the Conjecture and of DJPRA’s Lemma. Perhaps I would be able to endorse the full GT after seeing DJ’s erratum, but I believe that the proof of DJPRA, though much closer to correct than the one published in JPA, is still inadequate.

The authors apparently believed that the attempted proof of the GT presented in DJPRA actually does prove it, and they believed this after having seen the Comment. They may still believe this, and their erratum may reflect this belief. Thus it is not clear that the proposed publication of DJ’s erratum will completely correct the errors in DJ’s proof of the GT.

3. Request for referees’ reports

It is customary for journals to furnish an author all referees’ reports, particularly when a paper is rejected. I was disappointed that only a short message from a member of the editorial board was furnished in lieu of genuine referees’ reports.

There is no indication that the board member has even read the longer “Comment” in detail. Indeed, he makes one statement (see item 2) which suggests the contrary. (I am not suggesting that a board member *should* have read the manuscript in detail; only that his short message cannot substitute for a report from a genuine referee who has actually read the paper in detail.) Could you please send me copies of all referees’ reports

⁴For example, the previous publication of DJPRA’s proof of their Lemma could prevent me from publishing my proof of the Conjecture, should I decide to do so.

for both Comments?

I have put a large amount of work into the longer Comment and have waited almost a year for some indication of what might be an objection to it, (By comparison, DJ was accepted almost immediately.) The board member's report gives no hint. If there is some substantive objection to the Comment (not just that its publication would not be the "most satisfactory" choice for the journal, the only reason that the board member gives), I hope you would agree that common courtesy dictates that I be told.

I also would appreciate copies of Dressel and Jordan's replies to my two "Comment" submissions. You previously indicated that your policy was to furnish these to the Comment's author only after both Comment and Reply were accepted, perhaps to prevent authors of Comments from modifying them in the light of Replies.

If the latter was the reason, it no longer applies now that the Comment has been rejected. I would like to know what is wrong with my "Comment", if anything. If there is anything wrong with it, the authors will be sure to point it out! If not, I will continue to wonder about the reason for the rejection of a Comment on a paper (DJ) that I believe was inadequately scrutinized and should never have been published.

4. **Triviality of the Comment "Minimizing detector variance"**

I agree that the Comment "Minimizing detector variance" [MDV] is mathematically trivial. I submitted it because I think it makes a useful observation unrecognized by Dressel and Jordan, and which might also go unrecognized by readers of DJ. Its value, if any, lies in this observation. Due to its simplicity, it would be impossible to publish as a regular paper as the board member suggests that I do. That is why I submitted it in the "Comment" format.

If JPA declines to publish it, that is fine with me. The reason given (that it is a suggested "improvement", not a "comment") seems contrived (I was unaware that a "comment" could not suggest an improvement!), but that is not my concern. I am retired from my university position, and publication gives no professional advantage. It is only a nuisance.

The board member's suggestion that I publish it jointly with Dressel and Jordan in JPA seems very strange. First of all, these authors refuse to communicate with me. Second, whatever novelty MDV possesses, it is solely my creation. It would be contrary to the ethical standards of most journals to attach to it the names of other authors who had made no contribution. Third, I don't see how a triply authored paper could be acceptable to JPA when the exact same paper would not be, if authors who had made no contribution were removed.

The board member seems to suggest that conversion of MDV into a triply

authored paper might somehow end some perceived “feud”. I do not view my relations (or lack of them) with Jordan and Dressel as a “feud”. I initially contacted them because I was interested in their published claims. Subsequently, I believed that exposing the false ones which they refused to correct would be a public service. Perhaps the latter will seem naive to some, even unbelievable, but that is how it seems to me.

If the board member believes that my behavior at any time has been less than professional, as the term “feud” might be taken to imply, I would appreciate knowing precisely when and how. I realize that public references to the shortcomings of DAJ and DJ after the authors have refused private requests to correct them may be unusual, but this only indicates that my situation and standards may differ from those of the board member.

I am retired and out of the professional fray. I have little to lose or gain. I possess a freedom to act in the public interest without risking consequences that could deter others. I don’t think I have any obligation to do so, but if I choose to do so, that is simply a personal choice. It pains me to realize that people like the board member may dismiss this choice as a mere “feud”.

Yours sincerely,

Stephen Parrott

4 November, 2012