18/3=29!!: Post-mortem of Dan Olmstead's amazing math

by David N. Brown

Since I wrote "Paul Offit's Mythical Millions", several additional developments have occurred. First, my findings were presented on several "neurodiversity" blogs. Second, AOA's original fallacy made national news thanks to a release given to Reuters by the National Association of Autism. Third, after briefly posting one of my corrections, an AOA editor made a rather bizare statement: "Mr Brown's comment was posted in error. He has perseverated on this topic and was abusive to our staff in the past. If he has a blog or site, feel free to continue the discussion there. Not here. Thank you." It is clear from this statement that AOA is completely unwilling to admit to their readers that the "29M or more" figure is in error, yet on the other hand seems reluctant to defend it.

As this has received increasing attention by (other) critics of AOA, some have gone so far as to describe the original article as fraudulent. This may be overstating the case: While Blaxill and Olmstead displayed gross incompetence, and are likely to have knowingly made significant distortions of fact, there is no reason to doubt that they were sincere in their major claims. Even the refusal to issue an open retraction, which is even less excusable, may charitably be regarded as an exercise in "saving face" rather than active denial.

The deeper problem with waving the charge of "fraud" is a very fundamental one in dealing with scientific error: Charges of fraud, however justified, easily distract from other issues of greater importance. By any informed appraisal, actual fraud is at best a minor source of scientific falsehood. For every researcher who knowingly fabricates his "findings", there are nine or ninety-nine who instead are lead into falsehood by unquestioned assumptions, unconscious bias, and misguided enthusiasm. And even when fraud is proven or probable, the villain himself is, from a certain perspective, only a small part of the problem. As Stephen Jay Gould wrote of Piltdown Man, "All this speculation (about the forger's identity) provides endless fun and controversy, but what about the prior and more interesting question: why had anyone believed Piltdown in the first place?"

One of the common denominators when fraud or gross error is exposed is that inquiry *after the fact* will show that many warnings were made of what was happening, not infrequently by the same people most responsible for allowing it to happen. In the case of Piltdown, there was a very persistent segment of professionals who called the thing exactly what it proved to be, a composite of the originally separate members of a man and an ape. The main purpose of this new essay is to make much the same point with the inflation of Offit's income: Blaxill and Olmstead themselves, in their original article, repeatedly made statements undermining the headline claim of "29 million or more".

Since most universities calculate income based on net royalties, the lower ($153 M) number might more closely reflect the basis for calculating Offit's income.
This is noteworthy as it argues against the "$29M" figure of the headline. The figure is specifically reported as the difference between gross and net, and suggested to "reflect the distribution to Offit" of a 15.6% inventors' share. But then the share would be ca. 15% of gross, which they admit is improbable. Even more fundamentally, the $29M difference ***could not possibly*** represent the inventors' share alone. It would also ***have*** to include the expenses of the creation of the patent and arranging the subsequent

sale, a figure which would certainly be in the thousands and quite possibly into the millions. Thus, if the inventor's share was removed from the gross rather than the net entered in the hospital's budget, then the inventor's share would be ***definitely less than $29M***. There is, incidentally, a strong symbolic significance in the $29M figure: As presented on the AOA site, the article headline includes, "30 pieces of silver". It is hard to ignore the possibility that the authors chose ca. $30M *a priori* (perhaps not wholly consciously), and "fudged" their analysis to place it in the headline.

CHOP's 30% policy for inventor share is consistent with the current practices of other children's hospitals. But depending on what standard was in effect when the patents were filed and how it was applied to Offit's proceeds, the amount could be lower

At this point, it is effectively admitted that a $45.9M "high" figure, based on 30% of the $153M net was based on a policy that might not have been in effect. In fact, application to the 1998 Rotateq patent is *explicitly precluded* by the terms of the 2006 policy: "For Intellectual Property having an Effective Disclosure Date *between July 1, 2005 and October 31, 2006,* inclusive, Hospital Personnel may elect, which election is irrevocable, to have the Intellectual Property subject to this policy (in lieu of the 2000 Policy)..." (it. added) Even this limited provision is more than might be expected. For example, in the University of California intellectual properties policy, referred to in the article, it is explicitly stated, "Inventions reported on or after October 1, 1997 will be subject to the new policy. Inventions reported before the effective date will be governed by the November 18, 1985 policy. ". Hence, the $45.9M figure was clearly improbable even in theory, as the authors stated, and in fact clearly excluded by the document on which it is based. Which begs the question, why was the $46M figure even mentioned? It would seem that Olmstead and Blaxill are, at best, indulging in quite extravagant speculation, and at worst, trying to insinuate what they know to be false or probably so.

So although it is clear that Offit's personal share of CHOP's royalty transaction was large, the exact amount could range from as little as $29 million to as much as $55 million.

The $55M figure could only have been arrived at as 30% of the gross income. But it has already been admitted that net is the more likely basis for calculation, and the largest percentage cited for any institution is "35% of net royalties". Once again,the authors clearly consider a given figure to be improbable at best, yet cite it anyway.

CHOP spokeswoman Rachel Salis-Silverman, contacted by Age of Autism about Offit's income from the vaccine, first said, "I don't even know. That's not public information."

The implication of this statement is that the terms of the deal were subject to a significant level of confidentiality, possibly a formal "non-disclosure" agreement which might bind Offit (and all other parties) to secrecy. I considered this possibility during my own inquiries. Blaxill and Olmstead, on the other hand, appear intent on suggesting that Offit wanted to hide the amount of the payment because of its large size.

Offit told Newsweek reporter Claudia Kalb last year that he got a "small percentage" of the paymentand confessed that "it's like winning the lottery."

This quote substantially undermines the amounts and percentages suggested by the authors. It would be a stretch to call 30% or even 15% a "small percentage"! The remainder is not in the spirit of the quote, which reads, "He won't give a precise amount, but says `it's like winning the lottery.'" It is not improbable that Offit's intent, as in a similar quote in a June 2009 interview with Mike Fagone, was to indicate how *surprising* the payment was.

15% is the lowest inventor share percentage we uncovered in our investigation.
This makes it painfully clear Blaxill and Olmstead made no attempt to investigate the history of CHOP policy, or they would have learned of the 10% standard which the 2006 policy replaced. Furthermore, it establishes that the actual spread given by the authors' sources is not $29-$55M (15-30% of gross), but $23-53.5M (15-35% net).

At Boston Children's Hospital, inventors get 25% of "net lifetime revenues" for all income over $500,000. (Underlining added.)

"Lifetime revenue" would mean lifetime of the patent, which is 20 years by US law. This citation can be considered fair warning to Blaxill and Olmstead of a very important fact: An employee who assigned a patent to his employer can collect royalties whether or not he remains an employee. According to the World intellectual Properties Organization, "failure to comply with the future royalty obligations" is "actionable with the recovery of damages for non payment". The only legally defensible grounds on which an assignee could *refuse* payment is if the inventor at some point signed an agreement to waive the rights to royalties, which would typically involve a "lump sum" payment to the inventor. (Employers can also require such an agreement as a condition of employment, but this might or might not hold up in court.) The obvious implication is that if any other CHOP employee had shared the patent with Offit, paying Offit alone could have led to him and/or the hospital being sued.

Offit is one of the three listed inventors on the vaccine patents but holds 100% of CHOP's inventor rights. The other two inventors, Fred Clark and Stanley Plotkin, are both affiliated with the Wistar Institute. (When I first made the argument that the share would have been divided between all three, they made an even stronger statement: *"Offit was the only CHOP inventor..."*)

At this point, even I must conclude that the authors are almost certainly lying. If they did enough investigation to know that Clark and Plotkin were Wistar employees, they would have had almost no chance of *missing* the information that they were also Offit's fellow CHOP employees. (In the early 1990s, Plotkin was effectively Offit's *boss!*) As long as they knew this, it *should* have become apparent that Offit was NOT the only person eligible to receive payment This goes well beyond misstating fact. It is clearly the authors' intent to maximize Offit's income, to strengthen their attack on his ethics. In the process, they also effectively libel CHOP. Failure to honor a royalties agreement is a very serious allegation to make, which could easily undermine an employer's professional standing . To suggest that an employer would deny two employees merely to pay a third triple is even harsher, as it suggests favoritism toward one particular employee. It may, indeed, be the authors' intent to imply that Offit was not "really" for his patent, but, as many secondary sources say explicitly, "promoting vaccines".

On this point, I must admit a mistake of my own. Faced with Blaxill's direct denial that Plotkin and Clark were affiliated with CHOP, my initial reaction was to accept the "correction" at face value. This was in part because of a misguided decision in my own research. The result was that I delayed spending the minute or so necessary to find Plotkin's and Clark's resumes on Google, while wasting a great deal of time investigating what, if anything, was given to the other doctors and miscellaneous lab peons who didn't have their names on the patent but did contribute to the research behind it. (Nothing, as it turned out.) But, I can say that what sidetracked me was a fundamental issue in law, science and business: how an "inventor" is defined, and how well patent policy rewards those involved in creating a product. And that leads to something I find especially disagreeable about the article, and its secondary use in other "anti-vax" sources: In all the complaints about Offit's income, I have yet to see even protest to the effect that paying the share only to the patent holder(s) was unfair to many others who worked on the same vaccine. This speaks very poorly for the critics' priorities. At best, they show more interested in criticizing Offit than the system of which he is but one part. At worst, they seem unable

or unwilling to view individual vaccine researchers sympathetically.

The CHOP policy manual that delineates the distribution of income for inventions owned by CHOP can be found HERE (see section III B) Clearly, based on the distribution of income rights outlined in this manual, Paul Offit had a greater personal interest in Rotateq's commercial success than any other single individual in the world. And more than other individual in the world, he found himself in a position to directly influence that success.

This marks a segue from conjecture about Offit's income to allegations that he acted inappropriately in voting for rotavirus vaccination. But, even taken at face value, this is an exercise in irrelevancy: *The policy is dated November 2006, while Offit was on the ACIP between 1998 and 2003!* In any event, Section IIIB explicitly directs readers to Section IIIC, which says the following: "The Inventor Share, *as set forth in Section III.B*., is the total amount payable to *all* Hospital Personnel who are Inventors, Authors, or other creators of the Intellectual Property generating the Net Income... Each Inventor, Author, or other creator will be entitled to receive his/her Inventor Share of Net Income in accordance with this policy *whether or not he/she remains Hospital Personnel.* In the event of the *death* of an Inventor, Author, or other creator, *such Net Income will be paid to his/her estate*." (Italics added.) In many ways, this is spectacularly unhelpful. (The intriguing phrase "other creator" is especially vague, and if/when it comes up in court, I expect only the lawyers will walk away rich.) But it is entirely clear that an inventor who no longer works at the hospital is still completely eligible for a portion of the inventors' share, and that even being dead is not automatic disqualification. A similar provision for payment to heirs, which would logically extend to the merely unemployed, is in the policy statement of the Arkansas Children's Hospital, source of the "35% net royalties" figure. It thus becomes even more difficult to regard the insistence that Offit alone was paid as anything *but* knowing deception.

Four months before Offit was appointed to ACIP in October 1998, the committee had voted to give the rotavirus category a "Routine Vaccination" status, in anticipation of an FDA approval of RotaShield.

This is something I only noticed in my most recent cross-examination. It had previously been my understanding that Offit took part in the vote to recommend rotavirus vaccination. But here, in his critics' own words, it is noted that this decision was made by others before he was a member of the ACIP. It is further alleged that this vote was influenced by ongoing developments with the RotaShield vaccine. So at what point was Offit "using role to create market"? For that matter, why would he have *needed* to do so? One may argue on principle that Offit should not have participated in any vote about rotavirus vaccination (as Blaxill and Olmstead could have done without bringing up his eventual Rotateq income), but no evidence has been presented that his votes were ever decisive. Indeed, given that the committee had already voted in favor of rotavirus vaccination before his arrival, there is no reason to doubt that it would have continue to vote favorably with or without his influence.

In summary, by any appraisal, Blaxill and (especially) Olmstead were grossly unethical and unprofessional in composing their article. But, did they knowingly misstate the facts? It is probable that, at the very least, they knowingly omitted information on Clark's and Plotkin's employment history and knowingly lied in denying that they were eligible for the inventor's share. But that conscious wrongdoing is best regarded as an extension of a larger, unintentional misdeed. Having begun with the assumption that vaccination in general is only a scheme to raise funds for "Big Pharma" (practically a paradigm among anti-vaccine groups), it was only "logical" to regard Offit as an unethical, calculating mercenary, and to assume that he had received huge payments from pharmaceutical companies. Where they did consciously omit , distort or flatly contradict known facts, they could have rationalized it as

somehow unimportant compared to “proving” to others what they very sincerely believed to be trua. That is, in all likelihood, the course of most scientific fraud. And, as with anthropologists and Piltdown, even those who were deceived cannot escape responsibility. Would AOA's readers have responded the same way if they had been told that Offit made $6 million, $18 million, or even $55 million? Maybe not. Would they have been equally happy if the authors/editors had stated in conclusion that, while Offit had bent or broken rules and standards, he probably did not do so with financial gain in mind? Probably not. Would the authors have configured the presentation of their story according to foreseeable reader response? Of course.

I would add that I doubt that the two named authors are equally responsible for the article's falsehoods. The article is structured in two parts, with a double dash at the above-mentioned “segue”. I suspect that it was Olmstead who wrote the article up to the noted “segue”, in which falsehoods are to be found. Olmstead, with his background in investigative journalism, was the natural choice to “investigate” the inventor's question, and he especially *should* have known that what was finally published was false or probably so. Whether he did know this really makes little difference to me. If anything, I would personally think even less of him as a person if he did believe in what he put his name to. That would only mean that, rather than intentionally misrepresenting facts, he was too lazy, inattentive, conceited, malicious, incompetent and generally unprofessional to study the facts at all. But I hope that his associates, including his coauthor, are better beings who may gather the sense to desert him.

Ultimately, the charge of fraud by an individual or conspiracy by a group is the easy way out, if not the lazy one. In many ways, it can be considered the less discomforting way of looking at things. On a certain level, one can presume to be safer dealing with a villain who knows exactly what he's doing than someone too deluded or ignorant to know what is really good for others or himself. That is the kind of thinking that supports conspiracy theories which groups like AOA are built around. Critics should not, in justly condemning them, fall into the same fallacy.

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