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Japanese Fraud Case Highlights Weaknesses in Scientific Publishing

Yoshitaka Fujii faked nearly 200 medical studies over two decades. How was he able to avoid detection for so long?

By David McNeill

Tokyo

The office of the Japanese Society of Anesthesiologists is tucked away in a discreet corner of Tokyo's Bunkyo Ward, an educational hub dominated by the country's most prestigious college, the University of Tokyo. It was an auspicious venue for a low-key showdown with perhaps the greatest academic fraudster of the past 10 years.

By the time Yoshitaka Fujii was summoned to a hearing here this year, his career was unraveling. His employers at the Faculty of Medicine at Tokyo's Toho University had fired the anesthesiologist in March after determining that he had sidestepped the ethics review process for a series of clinical studies on postoperative patients. In fact, as far as the university could tell, he had sidestepped the studies entirely. The faculty retracted eight of his published papers.

John Carlisle, a British anesthesiologist, had demolished the statistical basis of Dr. Fujii's work in an article published the same month in the journal *Anaesthesia*, triggering a demand by a consortium of almost two dozen journals that Toho and Dr. Fujii's previous employers verify his research. At stake, said the group, were an astonishing 193 papers.

"He denied everything," recalls Koji Sumikawa, vice president of the Society of Anesthesiologists, who interviewed Dr. Fujii at length. Dr. Sumikawa, a professor at Nagasaki University, headed an investigative committee looking into the allegations of fraud after the Toho dismissal. "His work was almost complete fiction, but he kept saying that it stood up because it had been accepted by so many journals."

The evidence was overwhelming. After checking 212 original papers, Dr. Sumikawa's committee concluded that just three were authentic and 172 were fraudulent. They could find no evidence either way for 37 other papers. Among the methods that Dr. Fujii had supposedly used to examine the impact of medication on postoperative nausea, he repeatedly cited experiments that had never taken place, at hospitals where he had never worked.

According to Dr. Sumikawa's final report, some of Dr. Fujii's co-authors did not even know the papers were published, because they had been submitted without their approval of those scientists. In at least two cases, Dr. Fujii simply forged their signatures.

The Web site Retraction Watch says Dr. Fujii's remarkable tally of faked papers gives him the record for most retractions by a single author. "He was publishing about 10 articles a year, which is just impossible for original research," points out Dr. Sumikawa. "But nobody spotted it. That indicates there is something wrong with the system."

Universities and the editors of the journals he deceived are still surveying the wreckage from Dr. Fujii's 23-year career. The most pressing initial worry was about the human cost of incorrect medical decisions based on his work. Most observers agree that the damage was minimal. "His research wasn't important at all," says Ken Takamatsu, dean of Toho University's Faculty of Medicine. "When you read his papers, it hardly matters if he was right or wrong."

Indeed, one reason Dr. Fujii managed to avoid detection is that he did not stand out. His research dealt mostly with tweaking doses of postoperative drugs to treat the nausea and vomiting that occurs after surgery. The journals he approached were mostly "second or third class," in Dr. Takamatsu's words. "If his work was going into publications like *Nature* or *The New England Journal of Medicine*, perhaps it would have been noticed sooner."

Colleagues at Toho University recall Dr. Fujii, who was on a salary of around \$110,000 a year, as an unremarkable researcher and lecturer who caused little friction.

Checks and Balances

The much bigger question left from his deceit is about the system of checks and balances for refereed academic work. Alarm bells rang about Dr. Fujii's research way back in 2000. Peter Kranke, a German anesthesiologist, and two colleagues sent a letter to the journal *Anesthesia & Analgesia* noting "with increasing amazement" Dr. Fujii's unlikely results. Dr. Kranke and his colleagues said they "became skeptical when we realized that side effects were almost always identical in all groups." The journal printed the letter along with a tepid response from Dr. Fujii, and did nothing else.

That's a response the journal's current editor in chief, Steven L. Shafer, admits was "inadequate." Journals are "very reluctant to act" in such cases, he writes in an e-mail.

"The basic problem is that the entire scientific enterprise is not set up to deal with outright fraud. Scientists trust other scientists, and assume that nobody is intentionally cheating the system," he says. "I

think there is a belief that the rewards of fraud are so modest (additional publications), and the costs of fraud are so enormous (loss of a career), that cheaters look to careers in other sectors (e.g., banking) where the returns for dishonesty are higher."

In total, the journal published 24 of Dr. Fujii's papers, including 11 after the initial 2000 allegations.

A follow-up study by Dr. Kranke et al. in 2001 in the journal *Acta Anaesthesiologica Scandinavica* queried Dr. Fujii's findings for a postoperative drug called granisetron. An analysis published in the journal was accompanied by an editorial defending Dr. Fujii. Toho University's Dr. Takamatsu says it is "very unlikely" that Dr. Fujii's then-employers, at the University of Tsukuba, were unaware of this controversy. He believes that they ignored it, fearful of the costs of a confrontation and a possible lawsuit.

Instead, in 2005, they personally recommended Dr. Fujii to Toho, which was struggling with a shortage of qualified anesthesiologists. "Honestly, we didn't look too closely at the time, because we were in difficulties," recalls Dr. Takamatsu. Looking back now, he says his university had been deceived. The professor above Dr. Fujii was about to retire, "so they faced a tough decision on whether to promote him." Tsukuba University declined to comment, saying it was still in the middle of its own investigation.

That limp response to the 2000 and 2001 controversies led Steve Yentis, editor in chief at *Anaesthesia*, to call for John Carlisle's statistical probe of Dr. Fujii's research. Meanwhile, from his new academic home, Dr. Fujii continued his remarkable output of articles before finally tripping wires in 2011 at the *Canadian Journal of Anesthesia*, which had published 39 of his papers. Unbeknownst to him, the journal's editor in chief, Donald R. Miller, was one of several involved in the effort to uncover his fraud. Dr. Miller, a professor of anesthesiology at the University of Ottawa, told the chair of anesthesiology at Toho University that the data in Dr. Fujii's latest submission "didn't make sense."

In August of last year, six years after it hired Dr. Fujii, the university began its investigation. Dr. Miller says it was "a huge discovery with tremendous negative implications," adding that "we've never seen anything like this."

Failings of Peer Review

How did Dr. Fujii avoid detection for so many years? Dr. Miller insists that the peer-review process is just not set up to detect fabrications. "It's impossible to dissect patterns in a given article. It's only in hindsight when you look at data across a large number of articles that problems come to light."

Everybody is responsible for the accuracy and openness of reporting, he says, but university chairs of department and research

heads "have enormous responsibility."

Dr. Shafer agrees that peer review is "a lousy place to catch fraud."

"Cheaters typically know their field well, and so they put forward data that look reasonable," he says. "Peer reviewers look for reasonableness in the studies they review. Most of Dr. Fujii's papers, taken on their own, look reasonable. It is only when looked at en masse that the fraud becomes obvious."

But while Japanese researchers connected to the case agree that universities need to work harder to stop fraud, in practice, says Toho's Dr. Takamatsu, that would be "extremely difficult."

"The burden and cost of checking articles is immense," he points out. "I'm not an anesthesiologist, so how can I read and understand articles in that field?"

The lessons from the Fujii case are still being digested. One likely result is closer vetting of journal articles. Many researchers point to the increasingly important work of the international Committee on Publication Ethics, set up in 1997, which publishes guidelines for editors on how to detect and deal with fraud. (Dr. Shafer is on the group's board.)

Regardless of the difficulties, observers say research ethics boards at universities must closely monitor clinical trials and research. And, says Dr. Miller, "all journals should require accurate statements that research they publish has passed ethical review, statements that were not included with many of Dr. Fujii's articles, nor for the vast majority of anyone's articles published during that period."

In exceptional cases, the punishment can be severe. Scott Reuben, a professor of anesthesiology at Tufts University, was sent to prison in 2010 after admitting that he had faked clinical trials on pain management. Some professors want similar treatment for Don Poldermans, a Dutch heart specialist who published more than 500 articles, many now believed to be fraudulent.

"Fujii may be an extreme case," says Dr. Shafer, "but I think it likely that there are hundreds, or even thousands, of investigators who regularly commit fraud."

Fallout from the Fujii episode continues. The *Canadian Journal of Anesthesia* is in the process of retracting 17 articles, with another 17 likely to be retracted once the University of Tsukuba ends its probe. Says Dr. Miller: "We don't have the authority to investigate. That has to be done by the institutions."

As for Dr. Fujii himself, he effectively left behind his career as a researcher in the interview room of the Japanese Society of Anesthesiologists. He quit the society in July before it could discipline him; the toughest punishment in its arsenal was

expulsion, so he simply pre-empted it.

He later found work at Fukushima University, near the nuclear-disaster zone. When news of the hire reached Toho, Dr. Takamatsu contacted the university about Dr. Fujii's background. The job offer was withdrawn.

Dr. Fujii has since dropped out of sight. E-mail sent to his former address bounces back. Most observers believe he is somewhere in Tokyo, probably working part time at several hospitals.

"There's an acute shortage of qualified anesthesiologists," says Dr. Sumikawa. "Many hospitals are desperate and will take who they can get."

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brian_carnell 6 days ago

Paging Scott Reuben:
<http://www.scientificamerican...>

2 people liked this.



fortysomethingprof 4 days ago in reply to brian_carnell

Ah yes, Scott Reuben, the "Pfizer Celebrex / Merck Vioxx Professor Demeritus of Medicine."

Reuben most likely made quite enough money to retire on prior to his half-penny term as a guest of the state. He's probably relaxing comfortably in his living room smoking a joint right now while the rest of us are at least pretending to work. What's comical about Reuben's sentence is that he had to pay \$300k+ in restitution to the righteously indignant pharmaceutical companies who probably made hundreds of millions if not billions more in profits as a direct result of his fraud.



davi2665 6 days ago

This kind of violation should be pursued as a criminal charge. How many patients were treated (or mistreated) because of this man's fraud and fabrication. He should join Scott Ruben, and should never see the light of day. Here's a question for the home institution- where are your research administrators and IRB leaders. These individuals have access to research records, know the investigators, and surely can detect when someone cranks out close to 200 fraudulent studies. It sounds as if the entire university compliance and auditing system needs a total overhaul and a change in personnel.

8 people liked this.

Like

Reply



kyushumntsphil 4 days ago in reply to davi2665

Please remember this is Japan, where individual responsibility scarcely exists.

Remember Fukushima-Daiichi? The explosions at its nuclear plants were all mainly due to human error and institutional malfeasance, as the independent national commission of inquiry here found. But no individual has been charged for any of the long history of lies, cover-up, and PR flak, neither at host company TEPCO (Tokyo Electric Power Company), nor at any of the revolving door government agencies also responsible.

In Japan, one learns to defer to those men -- always men, always non-transparent at the top. One learns in the schools never to question anything.

The schools instead serve up a regime of group games, regimentation, and heavy doses of prep for standardized tests. No one learns any skills of writing where individuals might see themselves and others in larger contexts.

It's just the culture -- not Japanese culture alone anymore, by the way, but one totally corrupted also by the consumerism and sprawl brought in from Corporate America, and reliant on the nukes also brought in by Corporate America (by GE, mainly, but also by the CIA, which 50 years ago did the PR here to persuade the Japanese to believe the lies being sold to them).

Like

Reply



willismg 4 days ago in reply to kyushumntsphil

And folks think that conservatives have the market cornered on conspiracy theories...

Like

Reply



Madhumi Mitra 6 days ago

Wow~ publish or perish...now publications have led to his destruction.

3 people liked this.

Like

Reply



tdupont 5 days ago in reply to Madhumi Mitra

No, his disregard for ethics led to his destruction.

12 people liked this.

Like

Reply



Socratease2 4 days ago in reply to tdupont

Yeah, but it took 23 years, a period in which he earned over two million dollars in salary and maintained a high status as university researcher. Considering most of his work was pure fiction, doesn't sound like he was working all that hard either. So his disregard for ethics worked out pretty well I would say. Of course his future prospects in his field are not looking good but who knows in Japan.

Like

Reply



jstudents 5 days ago

OMG?? Why waiting for two years if these studies were that poor? Are readers not reading them?

1 person liked this.

Like

Reply



i_am_nomad 5 days ago

This is the Bernard Madoff case for academic misconduct. Publishing ten papers in a single year? Ya darn tootin' that it was impossible to publish so much and yet make a claim for original research...just like it was impossible for Bernie to have a "sure thing" that paid 30% dividends even though the market tanked.

4 people liked this.

Like

Reply



fairday 5 days ago

The peer review process cannot be expected to detect this sort of fraud article by article but in a way it is the process that triggered doubts about Dr. Fujii's data and led to his unmasking. Publish or perish can be stressful but should not be the justification to engage in such egregious and arguably criminal misconduct. When I see scientists being lauded because they have hundreds of publications, I wonder how such persons are able to be so prolific. It is chilling as accolades and rewards are given on the basis of numbers of publications how many Dr. Fujiis are out there.

4 people liked this.

Like

Reply



awegweiser 4 days ago

This seems somewhat like a new "University" advertising every month with "campuses" in dozens of places. How many just rent some office space in a warehouse, and get away with it, I wonder?

2 people liked this.

Like

Reply



willismg 4 days ago

Like many frauds that are uncovered, he got greedy. If he wasn't publishing so many papers, would anybody have ever even looked at him? So I guess the lesson for all future (and currently active) frauds is: Publish or perish, just don't publish too much.

5 people liked this.

Like

Reply



mbelvadi 4 days ago

Buried in the more obvious issues is one that librarians may pick up on: the idea that his published research didn't matter at all, whether it was right or wrong. My library pays almost \$1,400 per year to subscribe to Anesthesia & Analgesia - if they're publishing articles that are so trivial that no one really cares except on abstract moral grounds whether those articles contain any useful information, what on earth are we paying for? Maybe libraries should form a class action lawsuit to recover the portion of their subscription costs represented by the articles found to be fraudulent. After all, the vetting/editing/peer-reviewing-management process is the only serious argument the publishers make to justify those costs, so they failed to deliver on the only quality that we pay them for.

30 people liked this.

Like

Reply



mbelvadi 4 days ago

In an era where we are continually hearing about scholarly publishing scandals involving Big Pharma ghostwriting "studies" that help them sell millions of dollars worth of product, I find it beyond disingenuous that anyone would claim that it's reasonable for the current scholarly publishing model to ignore the threat of cheating because there's little profit to be made by cheating in biomed scholarship. Aside from the specifics of this case, there is obviously huge profit to be made by academic cheating, and it's time the scholarly communication industry stop hiding behind the "tradition of trust" that has long since been proven dysfunctional. Or do you still leave your car doors unlocked when you park in a big city too?

3 people liked this.

Like

Reply



blesstayo 4 days ago

Isn't this what happens when universities demand "publish or perish"???

Looks like people will do anything to become famous, right???

Like

Reply



nontraditional001 4 days ago in reply to blesstayo

Not even close, its more like be competent or perish. Competent work is publishable whether or not its ground breaking.

Like

Reply



nontraditional001 4 days ago

Time for his Seppuku.

Like

Reply

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