Clever statistical sleuthing by an anonymous fraud hunter in the United States appears to have led to the downfall of a marketing researcher at Erasmus University Rotterdam in the Netherlands. Today, the university announced in a statement (Dutch) that Belgian-born social psychologist Dirk Smeesters, who specialized in consumer behavior, resigned effective 21 June after an investigative panel found problems in his studies and concluded it had "no confidence in [their] scientific integrity." The university has also asked for the retraction of two of Smeesters' papers, one published in the *Journal of Personality and Social Psychology* in January and the other in the *Journal of Experimental Social Psychology* last year.

Smeesters, a professor at the Rotterdam School of Management, could not be reached for comment today, but the university panel's report (Dutch), provided by a university spokesperson, says he conceded to "massaging" the data in some papers to "strengthen" outcomes, while defending his actions as common in his field. The case seems certain to further undermine confidence in social psychology, a field struggling to show that its findings are reproducible, and comes while the Dutch academic world is still recovering from the affair involving social psychologist Diederik Stapel, who made up data for dozens of papers according to investigative panels. Smeesters has worked at Tilburg University, Stapel's academic home, for several years but the two did not collaborate, and the cases appear to be unrelated. There are several parallels, however.

Like Stapel, Smeesters led a number of high-profile studies, which, as Smeesters noted on his home page, were covered by many international news outlets. Some of his catchy research topics were whether models that look like the girl-next-door might be better than Kate Moss, the effects of messiness (also a topic Stapel explored), and whether death-related media stories might make consumers prefer domestic brands. Like Stapel, Smeesters often collected and analyzed his data alone, even when collaborating with other researchers who helped design the studies, according to the university panel's report.

The case came to light after a whistleblower analyzed one of Smeesters's published papers and found that the data were "too good to be true," according to the panel. The whistleblower contacted Smeesters himself last year, the report says; Smeesters sent him a data file, which didn't convince his accuser. On 30 November 2011, Smeesters himself asked for an appointment with a special university counselor to whom staff and students can report suspicions of misconduct, the report says. It doesn't say what Smeesters hoped to achieve, but the appointment, initially set for 7 February, was later canceled and replaced by an interview with an investigative commission.

In its report sent to Sciencenews, the whistleblower's name is redacted, as are most details about his method and names of Smeesters's collaborators and others who were involved. (Even the panel members' names are blacked out, but a university spokesperson says that was a mistake.) The whistleblower, a U.S. scientist, used a new and unpublished statistical method to search for suspicious patterns in the data, the spokesperson says, and agreed to
share details about it provided that the method and his identity remain under wraps. "If he wants to publish his findings in a journal, the results shouldn't be out on the street in Rotterdam," the spokesperson says.

The investigating panel asked two statistical experts to analyze the method; after concluding it was "valid," it took a close look at the papers co-authored by Smeesters—including those still under review—for which he had control over the data. The statistical method could be applied to a total of 22 experiments; of those, three experiments were problematic. Those experiments were described in the two papers now up for retraction and a third that had been submitted but not yet published, says the spokesperson.

The panel doesn't comment on the veracity of the remaining papers. Smeesters gave the group a series of data files, but because of time constraints, the committee examined only those pertaining to the two papers already published. In those files, the panel "discovered patterns that ranged from remarkable to extremely unlikely."

Smeesters conceded to employing the so-called "blue-dot technique," in which subjects who have apparently not read study instructions carefully are identified and excluded from analysis if it helps bolster the outcome. According to the report, Smeesters said this type of massaging was nothing out of the ordinary. He "repeatedly indicates that the culture in his field and his department is such that he does not feel personally responsible, and is convinced that in the area of marketing and (to a lesser extent) social psychology, many consciously leave out data to reach significance without saying so."

But the university panel goes on to say that it can't determine whether the numbers Smeesters says he massaged existed at all. He could not supply raw data for the three problematic experiments; they had been stored on a computer at his home that had crashed in September 2011 and whose data his brother-in-law had assured him were irretrievable. In addition, the "paper-and-pencil data" had also been lost when Smeesters moved his office at the school. The panel says it cannot establish Smeesters committed fraud, but says he is responsible for the loss of the raw data and their massaging.

One of the two papers that the university says will be retracted was written with Jia Liu of University of Groningen in the Netherlands; the other with Camille Johnson of San Jose State University in California and Christian Wheeler at Stanford University. None of these researchers responded to e-mails and voice messages left by Science Insider today. The Erasmus University Rotterdam statement today said that there is "no reason whatsoever to question the co-authors' good faith." The investigative report notes that Smeesters would usually find collaborators by approaching them at meetings, "during which Smeesters indicated he had access to an excellent lab with a subject pool, allowing him to take care of data collection easily."

Smeesters' Ph.D. students never had any doubts about his integrity, according to the commission; the allegations "came as a complete surprise to them."

*This item has been updated on 29 June. A previous version of this story erroneously said Smeesters claimed to have lost the data when he moved house, instead of his office at school.*

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15 comments · 80 reactions
The report about this alleged misconduct remains shaky, to say the least and may well be nothing more than settling scores between rancorous or individuals or some kind of witch hunt. No details are given about what this ‘massaging’ data means and it is suggested that performing data manipulation equals scientific misconduct. Not only is such misleading, it is simply untrue. For example, log-log transformations is an accepted technique applied to raw data to make certain differences come out better.

It is also suggested that the fact that the researcher’s raw data are no longer available is part of some conspiracy or proof of his misconduct. That too is misleading and simply untrue. Scientific journals require raw data to be available for only 5 years. The article does not mention that and simply takes over the implicit suggestion that such data should be available indefinitely which is quite absurd. Researchers change employers, computers do crash and sometimes not everything is backed up, so none of what the researcher has said in that context is proof of any wrongdoing.

Thirdly, as far as the information that is given here, the inconsistencies or even likely impossibility of certain statistical outcomes may well simply be the result of poor research. If you choose the wrong statistical procedures (as simply as assuming that data are normally distributed when in fact they are not) you can arrive at wrong results. There is quite a difference between poor research and research misconduct. If the whistleblower is correct in his/her suggestions that the outcomes are likely wrong, then all it says is that the journal’s peer reviewers in which the studies appeared, either did not do their job, or simply failed to realize the discrepancies. However, on the basis of such shaky suggestions publicly humiliate a researcher and destroy his scientific career, in itself is professional misconduct.

Anonymous 2 2 months ago parent

What is said in the official report doesn’t make the "cherry picking" clear. It sounds like he chose to exclude data from subjects who weren’t attentive to instructions, which is important in behavioral research. All the reports make this sound like something deceptive, but it’s a reasonable step to take when conducting behavioral research. If your subjects aren’t attending to instructions then they probably aren’t going through the psychological process that you intend to investigate.

If the exclusion criteria were applied only to cases that make the data look bad then that may be more of an issue, but if you have exclusion criteria that are collected a priori (e.g., checks on attention to instructions) and applied to all cases, there’s nothing wrong with that.

Angua2 2 months ago

I agree with the previous comments and find the whole situation deeply disturbing. Using an unpublished (and therefore not properly peer-reviewed) statistical method to prosecute a person and ruin his career seems to me extreme and not morally or professionally justifiable. Even if the method works as advertised, and assuming one uses a 5% probability threshold, this means that your null hypothesis will be rejected in 5% of cases due to the chance alone. In this context it...
that your null hypothesis will be rejected in 5% of cases due to the chance alone. In this context it
means that "too good to be true" data set will be generated, on average, in 1 papers out of 20 that
are published. I find it sad that the university officials were so quick to accept the results of an
unpublished statistical technique against the opinions of the colleagues, Ph.D. students and
everyone else who have known this researcher for years as a good scientist and had no reasons to
question his integrity. Will this statistical technique stand in court? I am thinking of all the checks
and cross-checks and expert testimonies that need to be done for DNA data before anyone can be
convicted and wonder wherefrom comes this confident reliance on a technique that is little tested,
not peer-reviewed and evidently developed by a person with an agenda of his/her own when the
consequences are so dire.

Bob  2 months ago

CAUTION: only 3 of 22 expts were identified to be statistically problematic.

I argue that using statistics alone is problematic in itself, as you would expect some experiments to
be flagged as "problematic" even if they are not.

Jsherman  2 months ago

Don't know what this mysterious "blue dot" procedure is, but eliminating subjects who do
not follow instructions is the right thing to do. Of course, they should be eliminated without
examining whether their data support the hypothesis or not. Smeesters' assertion that this is
common practice in the field of social psychology is absolute bull. It is blatant scientific fraud, and
it is rare.

Angua 2  2 months ago  parent

I did not read it this way. I am not sure what "bolster the outcome" means in this
context but it can mean "improve statistical power by reducing subject variability" or
"improve the study by removing unreliable data" as well as "support my hypothesis". That's
a big difference, so it would be nice if the journalist went for precision rather than a catchy
phrase in this instance.

ssenecal5000  2 months ago  parent

Noting subjects who do not follow instructions is the right thing to do........not
eliminating

Markusk  2 months ago

Leaving out data of research participants who have not followed instructions is indeed
common practice in the field of social psychology. To the extent that the instructions enable
researchers to test focal hypotheses, doing so is mandatory, not only optional. However, the
problem enters when cases are being removed selectively ONLY IF they support one's own
hypotheses, but not if they do not support them. The above report suggests that the latter
occurred in Smeesters' case. This constitutes unmitigated bias. It is easy to see how individual
researcher may fall into this temptation. However, the fact that data have to be "cleaned is
unavoidable when dealing with behavior that requires any kind of cooperation. For instance, any
medical researcher would feel free to eliminate a patient from the final analysis if it turned out that
the patient never took the medication that s/he was supposed to take. -- Still, the Smeesters case
means more misery for social psychology. The above quote does not exactly suggest a very high
level of ethical reasoning: "Everybody in my field does it, so when I do it, I am not responsible." But
then it may all be hearsay, and we don't know what Smeesters really said. But to Smeesters'
credit, he did share his data with an outside researcher who asked him about them. Given that only
a minority of colleagues whom I have asked for their data have even responded to me, you have to
respect that.
Your post is very nice. Your way of presentation is good. I need more details from your post.

marketing list a month ago
Don’t know what this mysterious “blue dot” procedure is, but eliminating subjects who do not follow instructions is the right thing to do.

marketing list a month ago
“The case seems certain to further undermine confidence in social psychology...”

Well, to be sure, this data “massaging” doesn’t only happen in social psychology!

telemarketing lists 2 months ago
“Well, to be sure, this data "massaging" doesn’t only happen in social psychology!

TheLando 2 months ago
When I was an undergraduate I worked in the lab of a prominent Decision Science researcher, and one of our PhD students was found to have been falsifying data for all of the 5 years she’d been with the lab. She wasn’t even making up huge results: our core findings stood, she was just inserting made-up extras, even going so far as to physically change answers on paper surveys filled out by subjects. Luckily we had original copies of all the surveys that were made immediately after experiments and thus hadn’t been altered, so we were about to re-enter and re-analyze all the data (which I guess was good because it gave me a lot of experience with SPSS). It was a huge embarrassment to the lab, as it lead to us having to issue retractions on every paper she’d been involved with, which ended up being quite a few.

I don’t know how widespread this sort of behavior is in the field, but it hugely undermines researchers’ faith in colleagues and the public’s faith in researchers. We as scientists only get to do the things we do because of public funding, and the selfishness of a person who commits scientific fraud endangers us all. Obviously I don’t know the details of this case, but I fully support aggressive pursuit of all cases of falsified or conveniently selective data.

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