

Comment

## Having an impact (factor)

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*The time: Some time in the not-too-distant future.*

*The place: The entrance to The Pearly Gates. There are fluffy clouds everywhere. In the center is a podium with an enormous open book. A tall figure in white robes with white hair and beard stands at the podium. Approaching is a thin, middle-aged man with glasses and a bewildered expression. He is the soul of a recently deceased genome biologist.*

**GB:** My gosh is this...? Are you...? Am I really...?

**St Peter:** Yes, I'm St Peter. And yes, this is where souls such as yours enter heaven.

**GB:** Wow. I mean, I didn't expect to live forever, but still, this is something of a shock. (*Pauses.*) OK, I guess I can live with it. Uh, I mean ...

**St Peter:** I know.

**GB:** Well, at least I'm here. I'm not thrilled to be dead, but it's a relief to know I'm going to heaven.

**St Peter:** I'm afraid it's not that simple. We have to check.

**GB:** Check what?

**St Peter:** Your life history. (*He leafs through the enormous book.*) It's all here, you know.

**GB:** I'm sure it is. I can imagine you guys keep records that make PubMed seem like a stack of index cards. I'm a little surprised you don't use something more up-to-date, though.

**St Peter:** If you mean a personal computer, no - we don't. After all, they were invented elsewhere.

**GB:** You mean on earth?

**St Peter:** No, somewhere a lot warmer. (*He stops at a page.*) Here you are.

**GB:** Hey, I'm not worried. I was a good scientist, a good citizen, a good family man, I think, too. I never...

**St Peter:** Yes, yes, I'm sure, but you see, none of that matters. The only thing that matters is your IF.

**GB:** IF?

**St Peter:** Your impact factor. That's all we use now. If your IF is above 10, then you enter here. If it's lower, well...

**GB:** My impact factor? What the hell - oops, sorry - is that?

**St Peter:** It's something we borrowed from you science chaps on earth. Oh, we used to do it the hard way: send a fledgling angel down to check on your deeds; look at how your life affected your friends and family, consider your intentions *versus* your actions. All that sort of thing. It was tedious and required huge numbers of new angels, who have become somewhat scarce since free-market capitalism became all the rage down there. Then we noticed that you scientists never bothered to do anything like that. If you had to evaluate someone, all you did was look at this number called the impact factor. So we did the same thing. Now when anyone comes here, all we do is look up their number.

**GB:** A single number? Are you nuts? You can't sum up someone's whole life in a single number!

**St Peter:** You do. At least, you sum up their career that way, when you decide if they've published in the best journals or done the best work. It's how you work out who gets promoted and who's a star and who gets funded and...

**GB:** Yes, but it's a terrible idea! We should never have done it. It ruined European science in a matter of a few years, and

then it spread to Australia, China and Japan, and finally to Canada and the US; and before too long, science was totally controlled by unimaginative bureaucrats who just used that number for everything. It was a disaster!

**St Peter:** That's not what St Garfield thinks.

**GB:** St who?

**St Peter:** St Eugene Garfield, PhD. He invented citation analysis, remember? He thought using the IF was a great idea - really, a logical extension of his own work creating the Citation Index. So we set it up: for example, I see here that you contributed regularly to several local charities.

**GB:** Of course. They do good work. I never did it because I thought it would get me into heaven, but...

**St Peter:** Just as well, because it won't. Local charities, you know. Small impact factor. Doesn't really add much to your total. Besides, how bad could the idea be? Why, the journal *Genome Biology* advertises its impact factor right at the top of their website. Didn't you use to write a column for them? (*He looks at the ledger again.*) Oh my, I see that won't add much to your total either.

**GB:** But that's all ridiculous! It's the whole problem I was trying to explain to you. That's like saying that a paper only has significant impact if it's published in *Nature*, *Science*, or *Cell*. Once you do that, then the impact factor of where you publish becomes a surrogate for the use of your own judgment. No one bothers to read anyone's papers when they're up for a fellowship or being considered for a job or for a promotion or having their grant proposal evaluated; all you do is look to see how many papers they've published in high-impact journals. No one considers whether the work was better suited to a more specialized journal or a journal where other work that puts it in context was published previously; no one considers whether those handful of high impact-factor journals have the best referees or whether they in fact may have a disproportionate number of incorrect papers because of the pressure to publish there. And look, over reliance on one stupid number gave a small bunch of editors enormous power over the careers of people who, for the most part, they never met or heard speak, and whose body of work they never read. It was probably the worst idea since General Custer thought he could surround the whole Sioux Nation with a couple of hundred troops.

**St Peter:** Ah, yes. St Sitting Bull still talks about that.

**GB:** Huh? (*Shakes himself.*) Look, once the impact factor dominated scientific judgments, creative people were doomed. Bureaucrats didn't need to know anything or have any wisdom; all they had to do was rely on arbitrary

numbers. And now you're telling me you're doing that to determine who gets into heaven?

**St Peter:** Yes; it's a lot simpler. It doesn't matter if you were kind or tried hard or did good work or were pious or modest or generous. The only thing that matters is how big an impact we calculate you had.

**GB:** But that's just wrong! Look, maybe I could talk to the people who thought up that idea and pushed for its use. If I can just get in for a minute...

**St Peter:** Oh, they're not here. (*He waves his hand and an image appears on a cloud. It shows a huge pit of boiling sulfur and brimstone. In it, up almost to their necks, are a bunch of men in business suits.*) As you can see, they're in a warmer climate.

**GB:** Well, at least, that seems fair somehow. Wait a minute - is that George W Bush?

**St Peter:** Yes.

**GB:** But his impact factor should have been huge.

**St Peter:** Oh, the absolute value was off the charts. But we do take the sign into consideration...

**GB:** Then why is he only in brimstone up to his knees?

**St Peter:** Oh. He's standing on Dick Cheney's shoulders. (*The image vanishes.*) Now let's get back to you...

**GB:** But don't you see, the idea that you can determine someone's impact in the future from where they publish today is totally absurd. On that basis, God would have an impact factor of zero. I mean, He did his best work a long time ago; it has never been repeated by anyone; and all His ideas were published in a book, not in a peer-reviewed journal!

**St Peter:** Very funny. Go to hell.