

# The m word

Marc Kuchner, an astrophysicist at NASA Goddard Space Flight Center, and author of a blog and a recent book titled *Marketing for Scientists*, talked to *Nature Materials* about his views on the progress of scientific business from Versailles in the 1700s to modern days.

■ **Marc, you've recently written a book on marketing for scientists. How did that project come about?**

About six years ago I switched from being a postdoc myself to advising postdocs. That was awkward enough as it was, but then the economy crashed. It's hard enough to succeed in science under normal economic conditions, but all of a sudden people around me were coming to me for help, and I felt that I needed to take my new role as a mentor seriously. I used to advise my students just by telling them anecdotes; I used to say, "this is how I did it, this was my random path through the academic system". But a scientist shouldn't find that acceptable. We should work systematically, and get to the bottom of things, even the process of building a career in science. At the same time, I was studying marketing for an unrelated reason: for the past 15 years I have been writing country songs, and trying to get them on the radio. So I started learning all I could about business and marketing to better understand the music business. At some point it dawned on me that what I was learning about marketing in the music business could apply just as well to the business of science.

■ **Why do scientists nowadays think about marketing?**

I think scientists have always thought about marketing. If you go to the palace of Versailles you learn about scientists putting on elaborate demonstrations for the French nobility. That was how they got funding back in the 1700s, and it's not all that different now. The difference to me seems to be that we don't like to use the word 'marketing'. It's the word that's a taboo, and that's a disaster in my mind. It's as though as a scientist you can't search the marketing literature and have an informed discussion about what you are doing. Probably half of our work as scientists is marketing, and as soon as I started calling it that, a whole world opened up for me; a world of books, people with expertise, a new vocabulary of concepts. Everyday while I was writing this book on marketing I learned something new that blew my mind. The service that I think I am providing is distilling the field of marketing for use by us scientists.



DAVID FRIEDLANDER

Marc Kuchner's blog can be found at <http://www.marketingforscientists.com>

■ **What do you think are the ingredients that scientists have to work on?**

The key ingredients of marketing that scientists need are branding and relationship building. And although it isn't technically marketing, sales is also part of our job.

■ **Can you translate these terms into the scientific world?**

Young scientists these days are always told "network, network, network". So they go around to meetings and they try to meet as many people as possible. They think that they're done if they just shake a lot of hands, but a marketer has a different view of that whole process, and that's what I call relationship building. A marketer would draw something called a marketing funnel, which depicts all possible customers at various stages of interest, and try to craft a means of pulling people through the funnel from one stage to the next, eventually ending up with some kind of mutually beneficial relationship. For scientists, this would be something like a collaboration, or advocating each other's work. I tried to paint a picture of this marketing funnel for scientists, and the need to go beyond networking.

■ **You also talked about branding and sales. Following this line of thought, what products does a scientist have on offer?**

I argue that the main products of scientists are proposals. Back in the halls of Versailles

in the 1740s, you would show up with your experiment, and you would do some sort of demonstration — maybe it was a telescope. And you would have the king look through the telescope and go "ooh and aah", and then you would put out your hand and ask for money. And I think that's still the way scientists earn money today, except that we assemble a team and we write a formal grant proposal. That, in some way, is our product, that's how we get money to flow.

■ **Semantically, one of the core activities of scientists is generating knowledge. If you follow this marketing picture, where do you see knowledge as a 'product'?**

Scientific knowledge is a product that other scientists, especially young scientists, are big consumers of. But scientists don't always have money to fund themselves. So we spend a good bit of our time working on other products, like proposals. If we are interested in maintaining science as a way to create knowledge, then it's our responsibility as scientists to demand that, because our main customers that fund us often won't. Our main customers have a variety of other interests, from entertainment to politics. Knowledge may be one of their interests.

■ **Who do you think are these main customers?**

Well, back to Versailles if I may. I imagine that the king was profoundly enjoying the demonstrations by the scientists at his court. Some knowledge may have come as part of that entertainment, but I think that it was a lot about entertainment. Why do people enjoy flashy pictures from the Hubble space telescope? I think they are enjoying the entertainment, and those tax-payers are the kings who pay us today. That's just one of many examples of how scientists are paid for things other than the knowledge they are generating.

■ **You also mentioned branding. What does that mean for you, and why do you think it is important today?**

Branding is a reaction of marketers to certain aspects of human nature: the first impression counts the most, and people tend to stick with brands they trust. Many

scientists understand these aspects of human nature intuitively and they will go out of their way to create a strong brand for themselves, but not all of them are eager to think about this task. So becoming a scientist often involves a crisis when you realize that you need to brand yourself, and that not all opportunities will fall in your lap automatically. Young scientists often suffer this crisis the month that they first apply for jobs; you have to ask yourself “how am I different from the other job applicants?”. Instead of suffering this crisis, I want them to have all of the tools of branding available throughout their careers. For example, let's assume you have developed a new material, and you're going to name it. It turns out that the name will be more memorable if you use letters that are worth many points in Scrabble. That's one example of a branding technique that scientists could use every day, or at least a few times a year.

■ **How have your ideas been perceived by fellow scientists?**

There has been a range of reactions to this project, the book and the workshop. Some scientists are delighted. Others are upset. They may prefer to think that they do not need to market their work because their work should speak for itself. I've also noticed that scientists in different disciplines have different reactions. For example, psychologists are often repelled by the notion that scientists should market, whereas astronomers are mainly delighted by it. Another distinction I found is that people seem to be more open to it in the US, and that European scientists are less so. Also, people confuse marketing and self-promotion, which are two very different things.

■ **Where do you see the boundary?**

We all know self-promoters, annoying scientists who grandstand and who publicize their results prematurely. Self-promotion is just thinking about yourself, whereas marketing is trying to understand what other people want and need. They are almost opposites in a way, but it's sometimes confusing because scientists haven't generally studied these distinctions.

■ **If everybody in the scientific community went ahead and studied marketing in depth, what do you think would change about the scientific business?**

One change that I'd really like to see is that scientists would be more comfortable and confident, not suffer these crises when they suddenly realize that science works in many ways like a business, and that they have to market themselves. They'll just know that this is part of the game from the beginning, and they'll start their own study of marketing when they arrive in graduate school.

■ **And on the larger scale?**

Marketing can be applied to all different aspects of a scientist's career. So far I've been talking about marketing yourself when you're trying to get a job. But we also market our work to policy makers, to governments, to the public. There's a big crisis going on right now, where roughly half of adult Americans think that the Earth was formed less than 10,000 years ago, and a similar fraction of adult Americans don't know how long it takes for the Earth to go around the Sun. Marketing is useful for outreach, and I think that scientists can do outreach much better if they think about it in marketing terms. That's another change I'd like to see — scientists marketing their work to non-scientists much more powerfully.

■ **If you view science as a market, isn't there also the danger that good science, just because people don't have the knowledge or funds to market their work, will not get funded?**

To me it sounds like you are describing the world we already live in. We live in that world where sometimes wonderful science gets buried! Should we have honest discussions about this aspect of our job or not? Of course we should.

■ **In addition to your book you've been running a blog and a Facebook group on marketing. What did you learn from these activities?**

Thankfully, I have a lot of smart colleagues that participate in the Facebook group; I've been running ideas by them, and collecting new ideas from them. There seems to be

a growing community of scientists who recognize the potential of marketing to improve their lives and their work. And it's really been delightful to get connected with this community.

■ **You've been working on *Marketing for Scientists* alongside your normal job in academia. Do you think you'll remain active in the area?**

Well, I'm not going to be able to forget what I've learned, and it will probably take me years to learn to practise what I preach. It's going to be a life-long project, and it has changed my perspective enormously.

■ **What has been the biggest change in your perspective?**

In science, we do our best work and then people don't necessarily pay attention. A proposal gets rejected, a paper gets rejected, or maybe the paper gets accepted and still nobody cares. We scientists often bridle at this neglect. But in the business world you seldom get any feedback whatsoever. If customers walk into your restaurant and they don't like the smell, they just turn around and walk out. They don't write you a letter explaining why they rejected your work. And I realize now that I do that too, that I'm entitled to that as a customer. I think I am able to understand that that's how customers of science behave and that I shouldn't expect otherwise. And understanding this reality has helped me enjoy my life as a scientist.

■ **You think we simply have to adjust to such a customer attitude?**

Being a scientist has always meant handling rejection on a daily basis. We talk about how you need to have a thick skin to handle it, but I think it's more about trying to entice people. It's like, you are a garden of delights and you are sharing your creations with the world, and, you know, sometimes a child comes by to admire the blooms and sometimes not. With a more sharing-and-giving mindset you can enjoy the process of sharing your proposals, your papers, your ideas with the scientific community.

INTERVIEW BY CHRISTIAN MARTIN