

An occasional column, in which Caveman and other troglodytes involved in cell science emerge to share their views on various aspects of life-science research. Messages for Mole can be left at mole@biologists.com.

Any correspondence may be published in forthcoming issues.



Eyes on the prize

I've been thinking big the last day or two. "Big" as in "big questions." And of course, always bringing things into Mole-sized perspective so my poor insectivore brain could grasp it, I, as so often appears to be the case in these columns, started to think about science and what motivates us as scientists.

You see, it started with this really lovely painting in Madrid. Madrid is an absolutely terrific city, filled with absolutely terrific people, where one apparently dispenses with sleep (at least, during scientific meetings) and enjoys the food, architecture and spirit of the place. And, if one can sneak away, there are some museums with a great deal to see. But if you were to find yourself in Madrid with only, say, a few tens of minutes to spare, and said, "What's just

one thing to do in Madrid?", I might say, "Go look at the Velázquez" – of course, on another day I might say, "Oh, just have a brandy in the bar ...".

The painting is *Las Meninas* – also known as *The family of Philip IV* – and is in the main runway of the Prado Museum. Most likely, you know it, and most likely much better than I. A beautiful five-year-old infanta, Margarita Teresa, daughter and joy of King Philip IV, stands center, served by two Maids of Honor (*Las Meninas*). Several others hover nearby, including two achondroplastic dwarves and a dog, and not least of all, the artist himself, at an easel and working on a canvas. And everyone in the picture, except the dog, is looking right at us. But here's the best part, who *are* we? Well, way in the back is a mirror with a hazy reflection of us, the king and queen. We get to be the

center of attention, not only of the picture, but (in the Spain of that time) of, well, everything. One can get caught up in that feeling, that being-the-center-of-attention feeling. It's worth the admission price, just standing there in that special place. (Oh, you might want to have a look around, it's a very nice museum, but you get what I mean.)

The painter, Velazquez, knew this was a great work, a defining work – an immortal work. Unlike most painters of masterpieces of the time, he didn't change it at all after its completion (except for one thing, which I'll come to) – in contrast, Da Vinci, for example, fiddled with the painting many of us call *The Mona Lisa* until nearly the end of his days.

But being a painter, even a master (and immortal) wasn't what Velazquez really wanted. What he *really* wanted was to be a noble. The king gave him a number of titles, like (I think) Keeper of the Keys to the Royal Liquor Cabinet (thus the keys he wears in the painting), but these weren't really the same as being a noble. And then, towards the end of his life, he was inducted into the nobility – the Order of the Knights of Santiago – and this was so *huge* that he broke out the paint set to modify *Las Meninas* by painting the Cross of St James on his shirt.

So what's my point? Well, let's go back to standing there at the center of attention, there on the main runway in the Prado. If (and it's not at all a given) you like that feeling – like to think about aspiring to some small level of attention in your craft (and not all of us do), how do you go about it? Velazquez pined for the marks of authority bestowed and

recognized by his society. However, he lives forever not for these but because of something else he left us that is of far more value (I certainly can't name anyone else in the Order of the Knights of Santiago), something else, like *Las Meninas*.

I admit it, I *like* standing in front of that painting. But who do I want to be as the focus of that attention? Do I want to work for accolades that come from political standing, from positioning myself for recognition and the marks of achievement granted by my society – prizes, fellowships of academies or societies, those sorts of things? Or is it just the tiniest bit possible to strive for something else – something that begins and ends with excellence, insight and creativity in our craft?

And, of course, who gets to judge? Who would we *want* to judge? Well, the little five-year-old girl in *Las Meninas* is giving us the *most* mischievous and heart-felt smile. A smile that speaks of respect and love, but also self-confidence born of the strength that emanates from the center of her attention (the royal couple, perhaps, or we, who stand in their place). Maybe it would all be worth it if our scientific 'children', our students and trainees, were to look at us that way. Maybe that would be something worth striving for.

So how do we get *that* smile? As we struggle with being scientists, in whatever arena of science we do, there comes a point for many of us when we make a big step, moving from the collection of those who work *in* labs to those who *have* labs. Not everybody wants that, of course, and a huge amount

of superb science is done by people who never "have" but are "in." But when we *have* a lab, very often, we have people who come to work with us, explore with us and learn from us. For the most part, such individuals are collectively known as "cheap labor."

Think about it. We hire college-educated individuals, who are seeking or already have advanced degrees, and under the guise of training we pay them a pittance and expect Bob-Cratchit-like effort and respect. From what I see while serving on thesis committees, many of these hard-working individuals are treated as hands to get the dirty work done, with little or no real training in a range of techniques and, more importantly, ways to think about scientific problems. Upon obtaining their advanced degrees, these same individuals will usually seek more low pay and gigantic effort in the hope that their next mentor will spare some time to teach them how to advance from an "in" to a "have."

So, if you are a "have," ask yourself whether you are likely to see that smile – because if you are a "have" you are in that place already, standing at the center of attention of those who work with you, or have worked with you and moved on. Do you see that smile, that look of respect and self-confidence born of the strength that you have nurtured? And if not, what can you do to get it? After all, that's the prize, the achievement, the recognition that counts, long after everyone forgets about the high-impact paper, the societies and the other fleeting honors. That's the masterpiece.

Mole

Journal of Cell Science 117, 1615-1616
Published by The Company of Biologists 2004
doi:10.1242/jcs.01089

Letters

JCS welcomes correspondence provoked by articles in all sections of the journal. Responses to articles in the Sticky Wicket section should be sent directly to Caveman (email: caveman@biologists.com). Correspondence relating to Research Articles, Commentaries and Cell Science at a Glance should be addressed to the Executive Editor and sent to *Journal of Cell Science*, 140 Cowley Rd, Cambridge, CB4 0DL, UK.