

# Black Magic

When I ask a friend whom he thinks of when I say "scientist," he describes a sloppily dressed, absent-minded man in glasses, a bit out of touch with reality. Yet despite his appearance, this proverbial scientist is impressive to my friend for knowing all there is to know about some mysterious field he himself would never be able to fathom – or would never want to, having no need to. This last bit is precisely where the problem lies.

We live in a button-pressing era where everything gets done for us automatically. Microchips now in control of everything, even toilets, relieve people from trying to understand how or why devices work as they do. Having entrusted our daily existence to incomprehensible-yet-convenient advances of science and technology, our society has easily accepted the notion that it can treat them like a kind of black magic. Anyone who has actually mastered the arcana of science becomes something like a miracle-worker whom we admire yet at the same time find disquieting, since they could use their knowledge to serve wicked ends.

Such insufficient knowledge and aversion to science means that there is essentially no public debate about such controversial topics as genetically modified foods, nuclear energy, or the recently much-publicized highway slated to run through Poland's Rospuda Valley. Instead of making an effort to understand issues in more depth, public opinion yields to emotions stoked by the media and takes an extreme stance. If people simply knew more, that would not happen.

All this fosters a myth that science, especially mastering the knowledge necessary to practice science, is something only for a selected few – superhumans with astronomical IQs – while the rest of us should not bother to try since we can live without such knowledge.

Such thinking among society is perhaps what lies behind the shift in popularity away from science- and technology-related university programs, considered difficult majors, towards law, business, IT, and psychology programs, thought to be easier or to at least offer well-paid job prospects.

Yet, let's assume that some awful cataclysm occurs – I certainly do not hope for one, but catastrophes do occur every week or two, and climatologists say they

will become ever more frequent. What sort of knowledge will be most crucial when our power, water, and fuel supplies fail? It seems to me no one will go looking for lawyers, MBA holders, IT specialists or psychologists. It is only in such circumstances that many people realize how essential a working electric socket is for their basic lives, or that they have no idea where electric power even comes from. That is dangerous, because when the bubble of civilization bursts, fear and helplessness summon up people's primal instincts – as has been demonstrated by numerous floods, hurricanes, earthquakes, etc.

The discoveries of recent years show that not just humanity's prosperity but even its survival may hinge upon science, specifically on the kind of "hard science" people see as being too difficult to show any interest in. The dangers are legion: a world energy crisis or bird-flu pandemic, a drastic climate change devastating agriculture or a planetoid striking the earth... What if none of the survivors knows how to start a fire without a lighter?

Another issue is that while such dangers are in fact very realistic, without a grasp of the scientific foundations such forecasts rest upon society simply ignores them. I do

not believe that science has moved too far ahead for ordinary citizens to be able to comprehend it to a basic degree. People just have to be persuaded that they do have a need to do so. That is a task for popular-science promoters, although one for which the traditional methods of showy tricks or colorful test tubes will not suffice. Rather, authentic interest has to be sparked in the problems, not in their solutions. Being totally unaware of the pluses and minuses of nuclear energy, for example, should become something to be ashamed about.

That will require scientists to accept the fact that their profession in fact makes them public figures. Just like politicians, they have to persuade society that their actions are fully comprehensible and transparent. It is high time for scientists to step into the media limelight.



**Society has cut itself off from the scientific basis of its everyday existence, and that could prove dangerous**

ANDRZEJ PIEŃKOWSKI  
Academia  
piand@poczta.onet.pl