

I was invited to give a talk at an international conference on environmental science in Washington, DC. The topics presented included global warming, the safety of food additives, the side-effects of drugs, the health risks of environmental electromagnetic fields, breast implants, Agent Orange, tampons and toxic shock, the hazards of lead paint, asbestos, the effects of pesticides and herbicides, the link between vaccines and autism, mercury poisoning, the dangers of x-rays, indoor spraying of DDT, Gulf War Syndrome, and benzene in drinking water. Experts of various stripes attended the conference, many of whom were towed around by lawyers. I was interested in what all these issues had in common.

Immediately after my presentation, while I was still pumped up, some men approached me. The oldest appeared to be in his mid-70s; he identified himself as a lawyer named Peter Richman, and introduced me to the others in the group, which included his son who was a lawyer and an engineer. Young Richman reminded me of Bob Simpson, and as I was reflecting on their similarities in appearance and manner, Peter Richman asked me to meet with him to discuss some cell-phone cases. As he spoke I suddenly placed him – he was the famous trial lawyer who had become a billionaire by winning some big cases against tobacco and asbestos companies.

Before I could respond to the invitation he departed, saying only that he was late for an appointment to discuss the cases with someone else. When I recovered from my surprise that he had not waited for my reply I turned to young Richman and told him that I would not attend the meeting. He was not in a mood to accept no for an answer, and urged me to attend. I declined again, and explained that I did not approve of his father's legal approach to toxic-tort cases because I thought it was based on a mistaken understanding of environmental science. At that moment one of the others in the group, a young man named Dr. Faul, said to me that he thought Peter Richman actually had a good idea of what environmental science was because "I myself have worked with him on many different cases and have always taken the trouble to point out what it was."

"I'd like to hear what you think it is," I said.

"Easy enough," he replied. "Take, for example, the presentation we heard today on global warming. Various kinds of scientific facts were mentioned; they included temperature measurements, data concerning wind velocity, mathematical models for predicting the weather, and so forth. All this information adds up to the environmental science of global warming. Similarly with the environmental science of breast implants. We know how many women received the implants, how many developed problems with their immune system, and how many who had such problems never had breast implants. Everything that affects people has a different environmental science because the facts differ from issue to issue."

"All you've done is give me a gang of instances," I said. "Suppose I had asked you what a cow was. Would you answer by pointing to each cow you saw, or would you tell me what they all had in common?"

"One cow is pretty much like another," he said.

"That's what I'm after – what do all of the topics at this conference have in common?"

"I don't know, exactly," he said.

"If we can't identify it, there is no such thing as environmental science," I said.

"Well, I certainly didn't mean to deny that," he replied.

At this point Dr. Stein, a friend of Faul's, said to him, "Why don't you just tell him what environmental science is and end this charade?"

"I think he tried," I said to Stein.

"And failed," he replied.

"If you know that, you must know what it is. Why don't you tell me?" I asked.

"Environmental science is health information of the highest quality, objectivity, utility, and integrity," he barked.

"What do those words mean?" I asked.

"It's a matter of judgment by experts," he replied.

"How do they know?"

"Because of their training and experience."

"When experts disagree, whose information is highest?"

"The consensus."

"A consensus is never highest because it is a harmony of different opinions," I replied. "So, on your account, there is no such thing as environmental science."

One of the others in the group jumped into the conversation. After telling me that his name was Dr. Milkin and he worked for an electronics company, he said, "If you just look around, I think it's plain what environmental science is. People hear all kinds of stories about what's going to happen unless they change their ways. If they use too much energy the glaciers will melt. If they eat tuna, they'll get mercury poisoning. If a woman gets a breast implant, it will destroy her immune system. On and on. The businessman knows that these are not problems, but opportunities. When a need arises in a free market, someone comes along to fill that need. In this way we get nuclear power, which doesn't lead to global warming, methods for growing tuna in underwater farms where there is no mercury, and breast implants that don't activate the immune system. Cigarettes present another opportunity. Somebody needs to figure out which of the thousands of chemicals in cigarette smoke are actually responsible for cancer and remove them. It's all simply a matter of technology. Environmental science is technology that promotes health."

"Suppose the thing impacted by the technology had no relation to health," I suggested.

"What do you mean?" he said.

"Just this. If man's activities didn't cause global warming, or breast implants didn't compromise the immune system, or mercury didn't cause brain damage, or smoking didn't cause cancer, then the technology that changed or removed these factors wouldn't be environmental science because it wouldn't promote health," I said.

"I suppose so," he replied.

"So environmental science must be prior to technology, rather than technology itself."

At this point Dr. Morris, whose name tag identified him as being from the Harvard Center for Risk Analysis, raised his hand as if he were asking for permission to speak. Milkin nodded, and Morris said, "Suppose we say that environmental science is technology whether or not there is a true threat."

"No, no, no," Milkin said. "Environmental science is based on truth, not assumptions."

"If so, there must be knowers who are recognized as such," I said.

"Of course, there are scientific experts," Milkin replied as he waved

his hand in the general direction of the meeting participants who were milling about.

I said, "There are scientists here from the National Academy of Sciences, the World Health Organization, and the Mobile Phone Manufacturers Forum. Would you say that they are experts?"

"They could be, I just don't know," he replied.

"In other words, they are not necessarily experts, even though they are scientists."

"Yes."

"So it seems that you don't know what environmental science is because you don't know who is truly an expert. I think you were closer to some truth when you said that technology was the work of businessmen."

"Everybody knows what environmental science is," he replied, and then turned away.

Young Richman finally broke his silence. "So environmental science cannot be explained by means of examples, and it's not quality data or technology. Instead of telling us what it is not, can you tell us what it is?"

"I think so," I replied.

"Would you like to really persuade us, or don't you care what we think?" he asked.

"I'd like to persuade you," I replied.

"Suppose I tell you the kind of thing people say environmental science is, and where it came from, and then explain why they don't think it's any good. If you intend to make any headway with us you will need to overcome these points."

"That's fine with me," I said, "please proceed."

"When powerful organizations like governments or companies want something they pursue it. If they get what they want they are happy, and they don't think about the suffering they caused. The people who are harmed resent this behavior, but they recognize that governments are necessary and that companies are the source of their livelihoods. Moreover the weak admire the strong and regard them as naturally superior. So the weak don't insist that the strong entirely avoid causing harm, only that the harm not be excessive. Since the strong are relatively few in a democracy but the weak are plentiful, they can force the strong to establish such rules. This is the genesis of environmental science."

I could see young Richman had not yet finished so I waited, and he

continued. "Environmental science restricts the powerful. They follow the rules out of practical necessity while at the same time working to weaken their effects and cloud public perception of the nature and extent of the harm that the rules address. That's only natural. Anyone would do exactly the same thing. There's a story about a professor who had often testified in court against tobacco companies, where he swore that smoking was addictive, and caused cancer and heart disease. He criticized the companies for suppressing evidence and for developing new strains of super-addicting tobacco. One day he found some stock certificates in a trunk in the attic of an old house he had recently inherited from his grandfather. The certificates indicated that the bearer was a part owner in a new company whose business was manufacturing cigarettes. Over time the company had grown into one of the tobacco companies whose activities he had attacked. Because of stock splits, mergers, and acquisitions, and a healthy financial environment for tobacco, the value of the stock had grown into a great fortune. Thereafter, he had only good things to say about the research published by the companies, which he called true lovers of science."

"I heard about him," I said. "He taught at Harvard, didn't he?"

"I don't remember," young Richman replied, "but the case is a good proof that people are not willing to accept evidence when it is against their interests. Indeed, if the professor had continued his public pronouncements that smoking causes cancer, everyone would have said that was exceedingly strange behavior for an owner of a tobacco company, whether or not what he said were true."

"I agree," I said, "that when people make decisions for themselves about what is or is not true, they do so with regard to their own interests. The point was in the front of my mind when I came to this conference."

Young Richman continued, "The more a company opposes environmental science the more scientific the company will seem to be in the eyes of ordinary people, so the best course for any company is to totally oppose environmental science."

This assertion seemed contradictory on its face, so I asked for an explanation and he replied, "Consider two companies that follow starkly contrasting approaches to the issue of whether their products have harmful side-effects. One company diligently seeks to avoid inadvertently causing harm. When hazardous situations are uncovered, this company immediately warns the people so that they can protect themselves. The other com-

pany never discloses even a hint of potential risk, but rather manipulates research data and calls the data of others 'junk science.' Let's consider the fate of these companies, each of which is perfect at what it does, either discovering or obfuscating practical scientific knowledge. The first of the two companies will be seen to be error-prone, while the other will be seen to be perfectly able to guarantee that its customers and the public are completely safe. So the company that knows the least will seem to be the one that knows the most.

"I'm saying all this," young Richman said, "to explain why companies always deny that they are bringing about unintended health consequences, not because I think what they do is right."

"Not only companies," I said. "Some government agencies do the same thing."

"Are you conceding the argument?" he asked.

"Quite the contrary," I responded.

"Well, persuade me about what environmental science is and why it's a good thing," he replied.

"All right. First imagine a vertical line," I said. "The region on the left side represents the information that we have about things in the world, and the region on the right represents the corresponding mental state concerning how confident we are that the information is true. Can you visualize what I'm talking about?"

"I can," he said.

"Now suppose we divide the line into three segments," I said. "The region on the left side of the bottom segment corresponds to having no information. The same region on the right side would then correspond to a guess, because if we had no information about something we could always guess at what it might be. Do you agree?"

"I do."

"The region on the left side of the top segment corresponds to having perfect information. For example, a mathematical system. In this case, on the right side we could say that we are certain we understand what the truth is, because every mathematical statement is either certainly true or certainly not true," I said.

"Not exactly," Morris interjected. "You are forgetting Godel's Incompleteness Theorem."

"I would like to neglect that for now," I said. No one objected so I

continued. "The middle segment corresponds to imperfect information on the left side and some level of uncertainty on the right side."

"Yes. I see that," young Richman said.

"If we were to represent the regions using colors, we could imagine that the region of certainty is red, that of uncertainty is green, and that of a guess is yellow," I said.

"If you like," he replied.

"The green region, unlike the other two, would need to be graded continuously from light to dark," I said, "to represent progressively more certainty and less uncertainty."

"Yes," he said.

"Within the region of graded green, which we have agreed corresponds to imperfect knowledge, what types of such knowledge do you recognize?" I asked.

"I'm not sure what you mean," he replied.

"Would you agree that common sense is a kind of knowledge?" "Yes."

"And that on the basis of common sense, sometimes we are confident that we understand what is true and other times less confident, but that we never say we are absolutely certain based on common sense."

"Yes, because, as you have said, our information is always less than perfect."

"Do you recognize other kinds of imperfect knowledge?" I asked.

"I would say that skill is another kind," he said. "For example, the skill to steer a supertanker or try a lawsuit or hit a baseball."

"And in these cases some people are better than others, which is another way of saying that they know more about how to do the thing."

"Yes."

"But in matters of skill, no one is perfect."

"Of course not."

"Science is a third kind of imperfect knowledge, isn't it?" I asked.

Everyone agreed except Stein, who only grunted.

"And so the different kinds of science have different shades of green."

"Do you mean because they differ regarding how perfect their knowledge is or can be?" young Richman asked.

"That's exactly what I mean," I replied.

Then Faul asked, "What color do you think should be assigned to the

various parts of science?"

"I would put some parts in the yellow region," I replied. "For example, astrology, or phrenology."

"I suppose that creation science would also be yellow," he said.

"Not necessarily," I replied. "It is not science, but it might be a part of common sense, or some other kind of imperfect knowledge. Let's discuss that point some other day." He nodded.

I turned back to young Richman and said, "Mathematics belongs in the red region, at least if we continue to ignore Godel's Theorem."

He agreed.

"In the empirical realm, gravity belongs at the top in the green region," I said.

"Our knowledge about that subject is certainly impressive," he commented.

"Next," I said, "we could list technology. We know how to build reliable machines. Just imagine, you can use any telephone to contact any other telephone in the world, and when you punch in the same number you reach the same phone. Not 100% of the time, because the system is not perfect, but with a degree of success that is truly impressive," I said.

"Very true," he replied, after which he asked, "What sciences would you say are a paler shade of green than technology?"

"Medicine is one," I replied. "We have wonderful drugs, surgeries, and forms of therapy. Sometimes they work and sometimes they don't, but no one can predict with certainty what will occur in any particular case, or tell why."

"You seem to have a place for everything," he said, "but what's all this to do with defining environmental science and explaining why it's a good thing?"

"Well, the first important point is that environmental science is a form of imperfect scientific knowledge."

"What shade of green?" he asked.

"The same as medicine," I replied.

"How so?"

"Because its methodology permits the formulation of statements whose truth values are like those of medicine, and because both sciences aim to promote health."

Stein said, "Many of the claims of environmental science are yellow."

"As in medicine," I replied. "Nevertheless, on average, they are both green."

"Still," young Richman said, "I'm not persuaded that you have adequately explained what environmental science is."

"I haven't finished," I said. "I've told you why it's like medicine, but I haven't explained how the two differ. You can't judge me until I've finished."

"Sorry. How do they differ?"

"Environmental science is based on justice," I said.

That remark seemed to rub Milkin the wrong way, and in an irritated tone of voice he said, "You're going to have to explain what you mean. I always believed that science was based on laws and principles, like gravity and DNA."

"Different parts of science are based on different laws or principles," I replied. "What distinguishes environmental science is that it is partly based on the principle of justice."

"What relationship do you see between environmental science and justice?" young Richman asked.

"If we consider a particular case we will be able to understand," I said. "Please proceed," he replied.

"Let's take cell phones," I said. "I know they interest you and your father." "Fine," he said.

"Companies that manufacture them expect to make a profit."

"Indeed."

"And the people who buy cell phones do so because they are convenient and useful."

"Correct."

"A cell phone works by means of EMFs that pass from the phone to a base station and from the base station to the phone, like two people shaking hands."

"Yes, that's the technology of cell phones," he said.

"It is also true," I said, "that part of the EMF from a cell phone does not travel to the base station but goes in the opposite direction and enters the user's head and is absorbed by the user's brain."

"There's no denying that fact," he said.

"It also cannot be denied that the brain is an electrical organ that sends electrical messages to all parts of the body and also receives messages from those parts."

"Yes."

"And some of the information remains in the brain in the form of a mysterious code that allows us, for example, to recognize the faces of our children, recall the beauty of a sunrise, acquire expertise, and examine our lives so that we understand who we are."

"Yes."

"It is therefore prudent," I said, "to inquire into whether the EMFs produced by cell phones interfere with what brains do."

"Yes," he said. "People would demand it."

"Some people who use cell phones might not do so if it were true that the radiation altered the function of the brain, or injured it, for example by causing the brain to develop cancer, and if they *knew* that the radiation was capable of producing these consequences."

"Obviously."

"Every company that makes cell phones," I said, "also publishes promotional literature saying that the phones are completely safe."

"Yes," he said. "Every company says that."

"If cell phones caused disease," I said, "it would not be true that they were completely safe."

He agreed.

"Suppose there was evidence that cell phones could cause brain cancer. Would the company's claim be untrue?"

"From the company's perspective, only if the company agreed that's what the evidence showed."

"A company can't accept or reject evidence," I said. "Only *people* at the company can do that."

"Of course," he said.

"Which people?" I said. "Would it be the experts who work there?"

"Surely they would have something to say, but I think that the decider would be the company president because the buck always stops there."

"But regardless of the evidence, a president of a cell phone company is unlikely to say publicly that the cell phones manufactured by his company can cause cancer," I said. "Do you agree?"

"Yes," he replied with a smile.

"So, under my hypothesis the company's claim would be untrue, whether or not the president accepted the evidence."

"Yes."

"And if he privately accepted the evidence, the claim would be a lie."

"Yes."

"Now, let's suppose that some experts outside his company disagree with his expert risk assessors regarding whether cell phones are safe."

"Yes."

"Isn't it only fair," I said, "for the company president to tell the public that the experts are in disagreement regarding whether cell-phone EMFs can cause cancer?"

"In principle, yes," young Richman replied. "In practice, that's not going to happen."

"I'm trying to explain the connection between justice and the environmental science of cell phones," I said, "so it's the principle that's important."

"Then I think the even-handed approach would be for the company president to tell both sides of the story, regardless of which story he adopted on behalf of his company."

"Suppose that evidence of the proper sort..."

"What do you mean by that?" he interrupted.

"Peer-reviewed publications in archival scientific journals," I said.

"Excuse me for interrupting," he said, "but I just wanted to be completely clear regarding what kind of evidence you believed was necessary. Please continue."

"Suppose that the proper kind of evidence showed that radiation from cell phones could alter the function of the brain, but that there was no evidence directly showing a link between cell-phone EMFs and disease. Would it be misleading to say that cell phones were safe?"

"Not if, according to his experts, the alteration had no health consequences."

"Otherwise it would be unjust?"

"Yes," he said.

"Would his experts need to know that there were no health consequences," I said, "or would it be enough to know that there was no direct evidence of such consequences?"

"There can't be evidence of nothing," he said, "unless you call the absence of evidence of something evidence of nothing."

"I don't," I said.

"Then the strongest statement the company experts could make is that there is no direct evidence of health consequences."

"Would that mean that cell phones are safe?" I asked.

"Only if you believe that direct evidence is needed," he replied.

"I don't," I said.

"Then evidence of effects of cell-phone EMFs on brain function would falsify the claim that cell-phone EMFs are safe."

"In that case," I said, "continuing to make the claim would be unjust." "Yes," he said.

"How should we determine whether cell-phone EMFs affect the function of the brain," I asked, "or cause brain cancer?"

"By experiments, I think," he said. "There is no other way."

"Who would do these experiments? Scientists employed by the companies?"

"I suppose that would be putting the saddle on the wrong horse," he said.

"We know from experience," I said, "that studies controlled by companies always conclude that their products are safe, whether or not that is the reality."

He agreed.

"We must also consider the kinds of studies that we will accept as evidence regarding whether EMFs can alter what takes place in the brain. For example, suppose a Harvard professor used physics and mathematics to show that EMFs had no effect on the brain," I said. "Should we consider his evidence?"

"Of course," he said, "but if that were possible, there would be no serious dispute about the propensity of EMFs to cause health problems. Since there is a dispute it's safe to say that we won't encounter a professor who offers that kind of evidence, at least not in court."

"Yes – some do offer it in the media where they can't be effectively challenged. So, next question. Should we allow questionnaire studies?" I asked.

"My friend Judge Weinstein would become apoplectic if he heard you ask that," he said. "Why would we even consider not allowing them?"

"If questionnaire studies were permitted," I said, "people would have cell phones before anyone knew that they were hazardous to health because cell phones would need to be in general use before anyone could do a questionnaire study."

"Yes," he said.

"In the beginning, when there were no questionnaire studies, the companies would claim that cell phones were safe." "Yes," he said. "That's how everything new gets started, it's a kind of fundamental principle of technological progress."

"Then if it should turn out that brain cancer actually did occur more frequently among users of cell phones, the news would be greeted with skepticism by those who had been initially deceived into believing that cell phones were harmless."

"I suppose that reliance on questionnaire studies would give the companies an illegitimate advantage," he said.

"That's not the half of it," I said. "An *intention* to rely on questionnaire studies amounts to a conscious decision to use human beings as guinea pigs, which is wrong."

"It does seem unethical," he said. "On the other hand, the principle of trial and error was exactly how our forefathers determined what was safe to eat, or what was poison."

"Their experimentation was voluntary. If it were done by force or deceit, it would have been wrong."

"All right," he said.

"Even a scientist who had no moral scruples about involuntary human experimentation would object to using questionnaire studies to determine if cell phones were safe."

"What objection do you imagine he would make?"

"That epidemiology has no conceptual bedrock because there are no basic concepts or agreed-upon methods and that the investigators have no control over their 'experiment,' so every study leads to controversy, even those involving cigarettes.

"The point is that epidemiology, at least insofar as cell phones are concerned, is the palest possible shade of green, perhaps even yellow."

"Where does this leave us, then? What are good experiments?"

"The morally and scientifically correct thing," I said, "would be to rely on experiments with mice and rats and other animals. That is the standard practice."

"By whom?" he asked.

"The Environmental Protection Agency," I said, "relies on animal studies for setting guidelines for cancer risk."

"Yes."

"And also for determining risks due to pesticides and herbicides." "Yes."

"And the Occupational Safety and Health Administration relies on animal studies when it sets occupational exposure limits, as for example to ethylene oxide."

"Yes."

"And the Food and Drug Administration relies on animal studies when it evaluates the safety of drugs and medical devices."

"Yes."

"And even though animal studies are far from perfect in predicting human risk, they are better than questionnaire studies which are not even real experiments. It's wrong to trick people into believing something is truly beneficial when it's just cheap and easy."

He agreed and said he thought laboratory studies on human subjects who had given their consent to participate were also good experiments, and I quickly agreed with him. "So now," I said, "we must face the problem of how to connect the results of laboratory experiments with the possibility of health consequences in people. This task requires an expert.

"Experts are necessary," I said, "but they present a special problem." "What kind of problem?

"The kind President Truman had with General MacArthur. After carefully studying the military situation MacArthur decided that the best course would be to launch a nuclear attack against enemy sanctuaries. The President, whose military knowledge was far less than that of MacArthur's, disagreed profoundly. Should the President have deferred to the general, who was the expert?"

"The President is the decider," he said, "but what does choosing a nuclear option have to do with environmental science?"

"Just this," I said. "Experts are like well-trained dogs. It is good to breed them and use them for our protection and convenience, but we must always remember who is the dog and who is the master."

"What type of opinion should we demand from our dogs?" he asked.

"What type would you say?" I answered.

"I can only give the traditional answer," he said, "the elucidation of safe levels."

"Shall I tell you what safe levels are?"

"Please do."

"They are rules," I said, "made by experts for the purpose of gaining freedom of action for their principals."

"That's what I said environmental science was," he said.

"What you actually described was what are popularly known as safety levels."

"Then what judgments should we demand of experts?" he asked.

"That all possibilities be investigated, that the evidence be interpreted honestly, and that all reasonable inferences be disclosed in their stark significance. Then every person could make his own choice, like deciding whether or not to smoke. The importance of values must be recognized. Different people value pleasure and health in different proportions. For those who attach great value to health, environmental science is a good thing."

"But people think that only experts can say what is or is not true in science," he said.

"Yes, many people think that, but they are mistaken in what they believe environmental science is like."

"What is environmental science like?"

"Not like a diamond waiting to be discovered, but like the student who had a revelation and saw the truth, which was not something in his texts or the words of his teacher, all of which only alluded obliquely to truth, but rather something he had added to the world."

"You are like a sculptor, Dr. Marino," he said. "You have made a science that is fair and good."

"Only for those who share my values," I said. "Don't suppose that what I have said applies to those for whom the health of the body is not a paramount concern."

"Now what?" he said. "Is your description of environmental science just theory?"

"It has legal and thus social consequences. Daubert made that possible."

"How would you construct a lawsuit?" he asked.

As I was preparing to respond, Stein grunted and walked off. The other experts also departed because, they said, many years' experience testifying for the Richmans in tobacco and asbestos cases had taught them to stick to science and leave legal matters to the lawyers. When all the experts were well out of earshot I said to young Richman, "Is what you have in mind a method for punishing companies who abuse environmental science?"

"That's what I want," he said.

"Because punishing companies is what you do for a living?" He grinned.

"Let's begin by considering what kind of case we should bring," I said. "Perhaps the case should be for assault and battery, or even murder, if the victim dies. If a few company presidents were electrocuted there would probably be a groundswell of corporate support for the principles of environmental science."

"But we agreed that environmental science is a type of imperfect scientific knowledge, and the standard of proof in a criminal case is 'beyond reasonable doubt.' If we took your suggestion we would never win."

"Then an intentional tort would be a better choice," I said. "A 'preponderance' standard fits the nature of scientific evidence better than any strict criterion. A company that assaults a victim should have to pay up. Besides, lawyers can make more money in civil cases. But I suppose I don't have to tell you that."

He grinned again and said, "We shouldn't be troubling ourselves with the difficulties of proving intention. The defendant should pay if he did the act, regardless of his intention."

"Agreed," I said. "We should prosecute an unintentional tort."

"My father and I have a series of cases involving cell phones and brain cancer. Why don't you come down to our law offices so that we can discuss them. We will meet in the boardroom, which can easily accommodate the firm's attorneys who are working on the cases, and you can then tell us in concrete terms about the method you have in mind."

"When someone is old and set in his ways," I said, "he is not likely to welcome new ideas or novel methods, particularly when he has enjoyed great success. Such a man has neither the motivation nor the capacity for change."

"You should come and present your point of view, and defend it – perhaps you will win converts. Without the backing of a law firm such as ours, your environmental science will remain only an abstraction without any real presence in the society, and will therefore be unable to promote justice. So if you are serious, you will come."

"I will do so," I said, "under the condition that I may begin the discussion by explaining how environmental science should properly be used by lawyers in court cases."

He agreed.