Bill Glovin:	How do you write about brain research? That's today's topic. And our guest is Phil Boffey, who is live and in person in our podcast studio at the Dana Foundation offices in midtown Manhattan. Phil will be writing a neuroethics column for one of our publications, <i>Brain in the News</i> , and we will also be featuring Phil's column on our homepage at dana.org.
	First a little about Mr. Boffey, who I've known for some 40 years and who grew up in Nutley, New Jersey, the town where I live. We've invited Phil onto the podcast to talk a little bit about his plans for the neuroethics column, but mostly about how to write about brain research, not always the easiest topic to communicate. In one of the publications I edit, <i>Cerebrum</i> , we asked prominent neuroscientists to write about recent developments in their areas of expertise for the lay reader. Often, they struggle with how to clearly and concisely communicate their research and almost always struggle with how to make it interesting.
	We think Phil is more than qualified to speak on how to do this. Before retiring a few years ago, Phil spent 38 years at <i>The New York Times</i> . He was editor of Science Times, but mostly wrote on health and science for the editorial page. He also served as the page's deputy editor for a dozen years and has shared in two Pulitzer prizes. Anyway, Phil moved from Irvington, New York to San Francisco a few years ago, but is visiting New York for a couple of weeks and was kind enough to come in to talk about science writing. Anyway, does New York City seem any different to you since you're back here?
Philip Boffey:	Since I now live in San Francisco where there's a tremendous homeless problem, I realized that the homeless problem in New York is not as bad as I recall, that it's much worse than San Francisco. Other than that, New York looks pretty much the same.
Bill Glovin:	Let's start with this. The Dana Foundation was founded in 1950 as a philanthropic organization to fund mostly cancer and arts initiatives. It wasn't until 1985 under the stewardship of Chairman David Mahoney that funding brain research became its top priority. He felt the public and funders needed to know more about brain research. As someone who was covering health and science for <i>The Times</i> at that time, did you notice that brain research had lagged behind heart and cancer research?
Philip Boffey:	Definitely, it lagged behind heart and cancer as it should have because far more people are affected by heart and cancer problems than by Alzheimer's and other brain problems that usually emerge in later life. Now that's beginning to change in the sense that we've brought a lot of the heart ailments and the cancer ailments under control, but still, far more people are affected by them than, at this point, by various brain problems.
Bill Glovin:	Well, not that I want to diminish those terrible problems, but depression, for example, falls under brain research. That's an enormous issue. Stroke, of course.

	So besides the neurodegenerative diseases like Parkinson's and Alzheimer's, there's a lot of mental health issues.
Philip Boffey:	Right, I hadn't been thinking of depression. Of course, stroke is a cardiovascular impact on the brain. But you're right. I mean there's a lot of depression, much of it not diagnosed. So yes, it's clear that we need more funding I think for brain- related research, though that's one of the issues at some time that I intend to explore. What kind of funding is adequate to meet the need?
Bill Glovin:	One important initiative of the foundation was to create something called the Dana Alliance with the idea that prominent neuroscientists might ban together and that there would be strength and influence in numbers. This alliance has today grown to over 400 members including a European branch. Neuroscientists are very busy conducting research and teaching and directing research labs. What role should they play in advocating for brain research?
Philip Boffey:	Neuroscientists like any interest group are free to and should advocate on behalf of their various fields and the funding it needs and other support it might need. It's a two-edged sword because some people look at scientists who start advocating for their own fields as self-interested lobbyists. Others want to know, what do experts in the field think about something, think about the importance of their field and put great stock in what they say. So, as any citizen, they should get out there and advocate on their discipline's behalf.
Bill Glovin:	Well, one thing I've wondered about is how you were able to distinguish the hype from what is truly significant. In other words, in the competitive world of research funding, universities and other institutions are often contending that this new drug or this positive sign in an early clinical trial will have groundbreaking significance. How do you decide what is truly worthy of coverage?
Philip Boffey:	It's like any field of journalism, you take the initial claim with a grain of salt and seek other opinion as best you can. And sometimes you can just tell by looking at the evidence cited in say a university press release that there are gaping holes and they're probably exaggerating. But you do it just by looking at as much material as you can to indicate does this really matter and is it really maybe worth ignoring if there's a whole spate of other material that suggests it's all BS.
Bill Glovin:	Would you sometimes get on the phone and try to find sources who could talk about or validate the research?
Philip Boffey:	Either the phone or emails, whatever is the easiest way to communicate. Sure, I often would get on the phone, but also a lot of scientists prefer an email contact because they can deal with it in their own time. You're not interrupting whatever they're doing. You're not trying to find an appropriate time that both of you can do. So I use both email and phone.

Bill Glovin:	When you get into the nuts and bolts of brain research, you invariably get into
	the biological underpinnings of various disorders and the science can be difficult
	to explain. What is the best way to communicate topics like the brain waste
	disposal system or how platforms in the brain can cause neurodegeneration?

- Philip Boffey: My column's going to focus on ethical issues involved in brain research. And for that, you don't really very often need to communicate anything more than the bottom line. You don't have to explain in any kind of detail what is going on in the brain or oftentimes scientists themselves don't know what's going on. They know what some experiments showed, so you've got that relatively firm bottom line, but they don't always know the mechanisms involved. And even if they do know the mechanisms, for the purposes of a column focusing on ethical issues, you don't need to spend a lot of time explaining the science. So there are ways to explain the science, through analogy is one of my favorite, or some people try to do it through visual presentations. But still, my point is what's crucial is the bottom line, not, for the purposes of this column, what the science is that led to that bottom line.
- Bill Glovin: How do you determine if maybe the writer is going too far in terms of explaining some of the technical details, and getting so immersed in it, that the public or the reader will get lost in trying to break down the molecular structure of cells? I mean, are there areas that it's best not to even delve into which are unexplainable? Or can everything be explained, just the right methodology needs to be found?
- Philip Boffey: My basic point is you don't need that. All you need to know is what's the expert consensus or what's this latest study show as a bottom line. You do not have to get into the details to discuss the political, social, ethical impacts of that. I spent most of my career writing in *The New York Times* or on *The New York Times* editorial board not going into the background science, but basically springing off of what is the bottom line here and what are the implications of that for society. To the extent it's easy to explain what's going on, sure, I would often throw that in. But for the most part, I didn't.
- Bill Glovin: How about when you were editing *Science Times* and your writers would come at you with stories with a lot of technical detail? Did you find that you would often have to go back to them and ask them to clarify? Or were they very good at explaining it?
- Philip Boffey: Well, yes, the *Science Times* is a different ball of wax because there, you are focusing on the research. And sure, they had a very talented group of writers when I was there, most of whom were very good at explaining the technicalities of things. And if there was anything murky, we could go back to them and they would make it more clear. So that was a very different mission for that part *The New York Times.*

Bill Glovin:	Do you feel overall that brain research is prominent enough in the media overall? Is there enough information out there about it in the mainstream media?
Philip Boffey:	I don't know. There's a lot of it. Is it enough for I don't know, it seems to me every time I turn around, people are talking about what can you do about Alzheimer's or Parkinson's or some other brain-related issue. So there's a lot of discussion in the media. Is it enough? I'm not sure.
Bill Glovin:	Yeah, because I guess one of the reasons for the founding of this foundation was because people felt that there really wasn't enough. And so half of our mission is to communicate brain research to the public and we do that in various ways and I think the feeling was that there wasn't enough. Now there is more and it's improved. But along with the Dana Foundation, you now have associations and societies across the board for various disorders. So the whole thing has blown up in the last 15 to 20 years. So there's a lot more information out there.
Philip Boffey:	There's a lot more and I'm sure Dana had a lot to do with it, pushing hard to get more information out there. So yeah.
Bill Glovin:	Okay. Let's turn to neuroethics for a minute. So as brain research has evolved, so have a host of issues that are tied to research. And about 20 years ago, your New York Times colleague, William Safire as chair of the foundation, organized a meeting of prominent neuroscientists in San Francisco that led to the founding of the International Society for Neuroethics, which has been at the forefront of many public policy issues having to do with the brain. In terms of neuroethics, is that something that has been on your radar? And have you written about that before? Did you cover that on the editorial page regularly?
Philip Boffey:	I may have written pieces on treating or over-treating children say for hyperactivity by dosing them with some drug that probably wasn't good for them and probably wasn't good for them in terms of brain functioning.
Bill Glovin:	How about funding for let's say opioid addiction? That seems to be a big issue.
Philip Boffey:	I plan to tackle that in one of my early columns and that's the kind of thing that's become a very big political issue in Congress and looking for ways to deal with the opioid crisis without creating new crises at the same time.
Bill Glovin:	How about Dr. Kevorkian, assisted suicide? Was that anything you ever tackled?
Philip Boffey:	Well, assisted suicide, I did write on, on the editorial board and I fundamentally backed and the editorial board allowed me to back the notion of assisted suicide being appropriate in carefully circumscribed circumstances, such as multiple doctors having to agree on diagnoses and what to do. I forget what all of the ramifications were, but I endorsed assisted suicide much to the consternation of

	many medical professionals who just think it's outside the realm of what doctors should do.
	I guess one feeling I had was that there's nothing illegal about suicide and people who want to commit suicide, assuming their mental health is assessed and depression is ruled out and that kind of thing. People who want to commit suicide should have the benefit of the best advice possible on what doses to take over what time period of whatever they're going to take to assist the suicide. But I did denounce the Was it Kevorkian? There was some guy that was out of control and not doing it in any kind of careful way. So I denounced in a couple of editorials his approach. So I have dealt with it in the past.
Bill Glovin:	And in neuroscience, one of the big avenues now is possibly solving a lot of neuro issues with genetic tinkering, which leads to possibly other areas of genetic interference and so that needs to be carefully regulated. And is that something that is on your radar at all in terms of how that would work?
Philip Boffey:	It certainly could be. I mean, it would be an avenue to explore in a future column. My general feeling is that if you're not tinkering with germline genetic modification, it's a relatively straightforward issue of deciding "is this good or not good for a particular patient?" Once you start getting into germline stuff that's going to be transmitted to future generations is more complex and I'm loath to get into that unless it's 100 percent clear that there are safeguards.
Bill Glovin:	Well, what are some of the issues that you may want to tackle in your column?
Philip Boffey:	In the very early column, maybe my first column, I'm going to be tackling CTEs and traumatic brain injury in high contact sports. I think I will try to get into the funding issue at some point in the not too distant future just because that's a central issue that the field must face. I haven't thought hard about As I mentioned, I'll be doing something on opioids. Beyond that, I haven't really thought that far ahead. I mean, this is all very new to me. I'm just starting out. But I think there'll be no shortage of topics to tackle. Often, they'll be brought about by what the current public policy issue is that everybody's discussing, such as opioids is the example of that. Beyond that, I haven't thought that far ahead.
Bill Glovin:	So would you be tying your column to news events or scientific studies or both?
Philip Boffey:	Well, clearly both would be avenues to approach it from. If I had to guess, I think that more often than not it might spring off news events. I mean, opioids have been around for a while. What leads me to want to do something is that Congress is getting involved in what to do about it. But on the other hand, if one or more studies come out with important new information affecting brain research, sure, that would be a springboard. So basically either/or, sometimes both.

Bill Glovin:	Well, that's all I have unless you want to add anything.
Philip Boffey:	No, I feel relieved that I got through this first podcast without stumbling too much.
Bill Glovin:	Well, let the listener decide about that. But thank you so much for coming in and agreeing to do this column and we look forward to it very much. And we will be telling you how to get your hands on <i>Brain in the News</i> , which is one of our free publications that you can sign up for. And of course, you could always go to the homepage to read Phil's column as well, and that would be at <u>dana.org</u> . So I think we'll say goodbye for now and thanks for listening.