S. James Gates, Jr. (University of Maryland): If string theory fails to provide a testable prediction, then nobody should believe it.

Joseph Lykken (Fermilab): String theory and string theorists do have a real problem. How do you actually test string theory? If you can't test it in the way that we test normal theories, it's not science, it's philosophy, and that's a real problem.

Sheldon Lee Glashow (Boston University): No experiment can ever check up what's going on at the distances that are being studied. No observation can relate to these tiny distances or high energies. That is to say, there ain't no experiment that could be done, nor is there any observation that could be made, that would say, "You guys are wrong." The theory is safe, permanently safe. Is that a theory of physics or a philosophy? I ask you.

Sheldon Lee Glashow (Boston University): And let me put it bluntly. There are physicists and there are string theorists. It is a new discipline, a new – you may call it a tumor – you can call it what you will, but they have focused on questions which experiment cannot address. They will deny that, these string theorists, but it's a kind of physics which is not yet testable, it does not make predictions that have anything to do with experiments that can be done in the laboratory or with observations that could be made in space or from telescopes. And I was brought up to believe, and I still believe, that physics is an experimental science. It deals with the results to experiments, or in the case of astronomy, observations.

Michael B. Green (University of Cambridge): People often criticize string theory for saying that it's very far removed from any direct experimental test, and it's…surely it's not really, um, um, a branch of physics, for that reason. And I, my response to that is simply that they're going to be proved wrong.

S. James Gates, Jr. (University of Maryland): These exercises in our imagination of mathematics are all, at the end of the day, subject to a single question: "Is it there in the laboratory? Can you find its evidence?"

Brian Greene (Columbia University): No matter how hard you try, you can't teach physics to a dog. Their brains just aren't wired to grasp it. But what about us? How do we know that we're wired to comprehend the deepest laws of the universe?

Michael Duff (University of Michigan): If string theory is right we would have to admit that there are really more dimensions out there, and I find that completely mind-blowing.

Edward Witten (Institute for Advanced Study): Some cynics have occasionally suggested that M may also stand for "murky," because our level of understanding of the theory is, in fact, so primitive. Maybe I shouldn't have told you that one.

Brian Greene (Columbia University): For most of us, it's virtually impossible to picture the extra, higher dimensions: I can't. And it's not suprising. Our brains evolved sensing just the three spatial dimensions of everyday experience. So how can we get a feel for them?

Michael B. Green (University of Cambridge): We feel, as physicists, that if we can explain a wide number of phenomena in a very simple manner, that that's somehow progress. There is almost an emotional aspect to the way in which the great theories in physics sort of encompass a wide variety of apparently different physical phenomena. So this idea that we should be aiming to unify our understanding is inherent, essentially, to the whole way in which this kind of science progresses.

S. James Gates, Jr. (University of Maryland): For about 2,000 years, all of our physics essentially has been based on…essentially we were talking about billiard balls. The very idea of the string is such a paradigm shift, because instead of billiard balls, you have to use little strands of spaghetti.

Amanda Peet (University of Toronto): People who have said that there were extra dimensions of space have been labeled crackpots, or people who are bananas.

David Gross (University of California, Santa Barbara): String theory is really the Wild West of physics.

Joseph Lykken (Fermilab): There was a lot of panic, if you like, realizing that big things were happening, and all of us not wanting to get left behind in this new revolution of string theory.

Gary Horowitz (Institute for Advanced Study): Well, we think these extra dimensions exist because they come out of the equations of string theory. Strings need to move in more than three dimensions. And that was a shock to everybody, but then we learned to live with it.

Joseph Lykken (Fermilab): There have been periods of many years where all of the smart people, all of the cool people, were working on one kind of theory, moving in one kind of direction, and even though they thought it was wonderful, it turned out to be a dead end. This could happen to string theory.

Gabriele Veneziano (CERN): I see occasionally, written in books, that, uh, that this model was invented by chance or was, uh, found in the math book, and, uh, this makes me feel pretty bad. What is true is that the function was the outcome of a long year of work, and we accidentally discovered string theory.

Leonard Susskind (Stanford University): And I fiddled with it, I monkeyed with it. I sat in my attic, I think for two months on and off. But the first thing I could see in it, it was describing some kind of particles which had internal structure which could vibrate, which could do things, which wasn't just a point particle. And I began to realize that what was being described her was a string, an elastic string, like a rubber band, or like a rubber band cut in half. And this rubber band could not only stretch and contract, but wiggle. And marvel of marvels, it exactly agreed with this formula.