



BONUS, BUBBLES AND BANGS

Sunday, March 22, 2009

Every weekend CUIP's president Jacqueline Salit and strategist and philosopher Fred Newman watch the political talk shows and discuss them. Here are excerpts from their dialogues compiled on Sunday, March 22, 2009 after watching selections from "Hardball with Chris Matthews," two Charlie Rose interviews and "The Tonight Show with Jay Leno."

Salit: We watched Barack Obama on Jay Leno. Obama is pretty reassuring.

Newman: He is.

Salit: For example, every time he asserted the need to approach the situation with the AIG bonuses as a structural problem, as a long-term problem, the audience reaction was very supportive of him. As he said, we want to get out of the mode of "lurching from thing to thing."

Newman: True. Lurching from thing to thing can leave you in the lurch.

Salit: In discussing the bonuses and whether AIG broke the law, Obama observed that most of the stuff that got us into trouble was perfectly legal and that we have to focus our attention on the kind of regulatory reform necessary to protect the interests of the American people. And, he commented that 40% of our recent economic growth has been in the financial sector and, as he put it, it turns out that that growth isn't real. A lot of it was "on paper" and it evaporated. These are both devastating problems, but he was upbeat and confident. Were there things that struck you in Obama's conversation with Leno?

Newman: Those same things. He's very bright. He's eminently sensible. And the issue – and the Republicans know this is the issue – is whether or not this approach will work. It's not as if there's an absolute history of this kind of stimulus approach to a troubled economy working. There's a mixed history. Some of it works, some of it doesn't. It depends, in part, on the depth of the crisis and on the capacity of leadership to carry it out. That's what's still up in the air. There's no way of knowing that. It's like going to a doctor when you have a serious illness and the doctor says that the treatment he's prescribing works 65% of the time.

Salit: You could be in the 65%. You could be in the 35%.

Newman: There you go. You don't know. So, we'll see.

Salit: Obama has a feel for the "bubble" and the need to stay outside of it, even while he knows that he's got to work inside of it. He told that funny story about getting off the helicopter and wanting to walk the 750 yards to where they were going and how the Secret Service wouldn't let him. But he understands that government, particularly

government in Washington, and the whole media circus that surrounds it, is very much a bubble and you have to get outside of it and not let it predetermine or over-determine how you respond.

Newman: Yes. In a word, he's trying to do his job.

Salit: Exactly.

Newman: That's how he comes across. A regular guy trying to do the job that he got elected for.

Salit: We watched an interview that Charlie Rose did with Gwen Ifill about her book "The Breakthrough: Politics and Race in the Age of Obama." She talked about the changing nature of black politics, attributing the changes to generational shifts and to tactical shifts. She described how Obama began his political life as a community organizer and how his route to becoming a player, and ultimately becoming president, was not the traditional route. He didn't go through the civil rights arc. He didn't go through the traditional political machine, in Chicago or anywhere else. To use her term, "he created another way into the process."

Newman: It was another time, too. I'm sure if he'd been around X years earlier, he would have been involved in the civil rights movement, or in other traditional political routes. If you're progressive-minded and right-thinking, as he is, you get involved in what is at hand to be involved in.

Salit: And if those options have played themselves out, you create a new way. If you can. Ifill's characterization of the changing conversation about race is that Americans, black and white, want to talk about race, but they want to talk about it in a way that is not blaming and not about grievance. She also points to people like Al Sharpton and Jesse Jackson who see their role more as agitators. They're not necessarily looking to move the conversation beyond grievances because those grievances are still there, they're still legitimate, and you have to keep agitating. So they see themselves in a different mold, playing a different role. What are some of the things that you think about when you hear these discussions about the conversation on race changing?

Newman: It makes sense. I think it's a little bit parochial, in this way: having non-blaming conversations is something that the entire civilization has yet to learn about everything, not just about race. That's a huge undertaking. Our movement is playing some kind of role in engaging that, but it's a long-term business. I doubt any of us will live long enough to see a new bible written without blaming. Basically what Ifill said is sound. I don't think it's very insightful, but I think it's sound.

Salit: In more political terms, what do you think about her commentary on those black leaders who still see racial politics in terms of grievance?

Newman: As she said, there is plenty of room for an Al Sharpton or a Jesse Jackson. They play an important role, but there are new and more varied options for black political expression. There's room for playing it lots of different ways.

Salit: Including the numbers of African Americans who are now political independents.

Newman: Yes. That in itself is a sign of a generational development and growth.

Salit: Next we watched an interview about science, really more about the teaching of science, with Shirley Tilghman, the president of Princeton. She was focused on the ways in which, to use her terms, "science has been denied" to influence public policy in certain kinds of ways. Then she and Charlie Rose got into a discussion about Darwin and Darwinism, about Darwin's influence 150 years down the road. Darwin was right, Tilghman says, and 'with very little evidence, what an extraordinary insight.' Darwin opened the door on a whole new paradigm of understanding species development, including human evolution.

Newman: That's true of early modern science, in general. Early modern science had shockingly little evidence of the kind that is now available and made some brilliant guesses on how the universe works. Some were wrong. But what's remarkable is not how many were wrong. What's remarkable is how many were right.

Salit: It's so interesting. The common understanding about scientific breakthroughs is that a body of evidence is accumulated and then new conclusions or new paradigms are introduced off of all this evidence.

Newman: That's exactly what didn't happen. Almost exactly what didn't happen. No. The key element – and I've written about this and talked about this extensively – was not that there was so much new evidence, but that there was mathematicalization. That was the key to modern science. Most of the breakthroughs are based on that.

Salit: Yes.

Newman: It's easier to teach that discovery is based on evidence. It's like teaching people that the sodium atom is looking for a beautiful chlorine atom. Chlorine is over here looking for a guy to go out with on Friday night. They get together and suddenly we have salt. That's an easy story to tell. That's fine. Stories are a part of it, but they shouldn't be mistaken for a relatively accurate understanding of what took place. Actually, in pre-modern science, so called Baconian science, the model was essentially a very strict deterministic empiricism. Find this evidence and, boom, next thing you know you have a discovery. That's not how it works at all. Never worked that way, even in Baconian science. The role of insight in all of this is critical to understand. And the major tool for insight itself was the mathematicalization of science.

Salit: I know you have talked about this for quite a long time and written about it. For Talk/Talk readers, is there a short way to characterize what the mathematicalization of science is?

Newman: The application of mathematical models for explaining physical phenomena. The capacity for and the interest in looking at things that are happening by way of saying, well, here are a set of mathematical formulas which bear a critical relationship to those things. And then using that seeming relationship to create further tests, modest as they might be, and discovering that those tests turn out positive for a new framework, a new paradigm. You know, I've read a number of books over the last 10 years about the role of clocks and the mathematical applications of understanding how clocks work as they apply to the universe. In one sense, in retrospect, this is not surprising. But to have seen that, to have recognized that, is extraordinary. Yes, in some ways, pre-modern science had a simple notion that the universe is like a clock. Well, the universe is like a clock, but it's also not like a clock. And other mathematical models were necessary for understanding its other features, even in the earliest days of modern science.

In some ways, all the argumentation that I offer around Gödel's* work is about that. And there's a way in which part of my critique of the anti-postmodernist Alan Sokal** is that he understands this, but he wants to say there are certain mathematical discoveries which don't have the same applicability as earlier mathematical discoveries. I don't agree with that. I think there's an unfolding series of mathematical discoveries which should be continuously attended to, to determine whether they give us insights into new models of both physical and social reality. In a sense, at a sophisticated level, that's what Sokal's and my debate comes down to. I don't think it's a question of the fundamentality of mathematicalization and I don't think he's a great scientist. But he's at least competent enough to appreciate that.

Salit: What is science struggling with today? I mean that at a methodological level.

Newman: When you say methodological, do you mean philosophical?

Salit: Yes. Philosophical.

Newman: There's a one word answer to that, in my opinion. Cosmology.

Salit: Science is struggling with cosmology?

Newman: Yes, meaning it's continuing to struggle with achieving greater clarity in the area of cosmology. That's the highest level theoretical work, where philosophy is most applicable. A great deal of science, like a great deal of everything else, turns naturally into engineering. A great deal of science is applied engineering. That's good. But, the

* Kurt Gödel (1906-1978) was the Austrian-born mathematician, logician, and philosopher who obtained what may be the most important mathematical result of the 20th century: his famous incompleteness theorem, which states that within any axiomatic mathematical system there are propositions that cannot be proved or disproved on the basis of the axioms within that system; thus, such a system cannot be simultaneously complete and consistent.

** Alan Sokal (born 1955) is a professor of mathematics at University College London and professor of physics at New York University who works in statistical mechanics and combinatorics. To the general public he is best known for his criticism of postmodernism, resulting in the Sokal affair in 1996.

most creative new areas of thought, in my view, are in the area of cosmology. Some people would argue that it's more in genetics. That's certainly a reasonable contender, microgenetics. I don't know much about the area. My knowledge of genetics is roughly Gregor Mendel.^{***}

Salit: Mine, too.

Newman: But the truly esoteric, cutting edge stuff, in my opinion – and I might just not know what's going on in every field – is in cosmology.

Salit: And what are the questions that those scientists are asking?

Newman: The questions that we asked as children, basically. How did the universe begin? How did it all get started? How do you go from nothing to something?

Salit: From non-existence to existence.

Newman: Yes. There are a lot of theories, the Big Bang and so forth. And they're highly reputable, and there is a lot of work that's been done in those areas. But I think there are still a lot of underlying philosophical, methodological questions about cosmology. I don't think they're unanswerable. I don't have any desire, or need, to turn to religion to answer those questions because I think there are discoveries to be made, both in the mathematical arena and in the empirical arena.

We talked the other day about fusion power. The whole concept of what fusion power is, and perhaps we're only halfway there technologically, is still being clarified. There's still a question of whether you can make it work. Again, I'm the furthest thing from an expert on fusion power. But, an amazing feature of the experimentation on this alternative energy source, is that it appears to require humongous tunnels to create the experiment, to create the action that produces the fusion. So for starters, I don't know if you can solve the problem of where the hell the tunnels are going to be built, never mind harnessing the results of the experiments. Those are very, very complex problems. Is that amount of space required for it? If so, it might just be beyond the level of practicability. What I'm raising is silly in comparison to the level of sophistication of their actual questions. But it's still very real stuff. There are processes out there of which we, meaning our species, have not even an inkling. That's part of why cosmological work is so important.

So, if I had to do it all over again and I were to become a scientist, I'd definitely become a cosmologist. That's what would most interest me, as someone who is philosophically inclined. I like the study and the analysis of big things, as opposed to the analysis of little, tiny things, like genetic things. I don't know why. I think they're both terribly important. And we're seeing results from both. I couldn't agree more with those who advocate for more money being invested in scientific research. We should spend every

^{***} Gregor Mendel (1822-1884) was an Augustinian priest and scientist who is often called the father of genetics.

penny that's available. At the same time, we need to spend money on other research, which is more directly applicable to human health and development. So, we need a lot more money...but good money, healthy money, as opposed to the unhealthy money that we've spent over the last batch of years.

Salit: Maybe we need discovery bonuses.

Newman: Discovery bonuses. Yes.

Salit: To incentivize scientific discovery.

Newman: Of course, one problem is that the same corrupt investors would apply for these bonuses because they're always looking for new ways to defraud the public at a level unknown to humankind. I don't know if you want to call that a discovery bonus.

Salit: Good point. I know this is a big question, but how does the development of postmodernism fit into, or connect to, the further development of science?

Newman: The question is not how it fits in. It's a question of does it fit in. That remains to be discovered. These things don't just fit in. So it's a question of what evolves from the postmodernists, in terms of positive, creative developments of dealing with these questions. There's nothing fixed about postmodernism. It's far less fixed than science is. I think that as we've looked at this, we've been very concerned to use postmodernism to further our creative capacity to discover things, not just for the sake of postmodernism, but for the sake of the world. There's nothing particularly significant about discovering abstractions for the sake of abstractions. The same thing is true of science.

So, postmodernism has to prove itself. It's not just one single idea. And nothing's going to happen off of it, except what it is that we make happen off of it. But to rule it out, in the manner in which some people like Sokal have tried, is, amongst other things, unscientific and not particularly helpful. If you want to write a critique of every postmodernist article that's ever been written, good, feel free. If it's a good critique, we should respect it. If it's a bad critique, we shouldn't. If it's halfway good, then it should get mixed reviews. But ruling out a whole modality of thought which, I think, has direct roots – it must – in the history of everything that has come before, including the history of science, is too McCarthy-esque for my taste. And we know something about this, first hand. Our overall work in this field, after all, which is very tiny – it's so tiny, it's almost insignificant, but nonetheless, real – has been systematically looked upon with nothing but prejudice. And that's not good. That shouldn't happen. If it's all wrong, show it to be all wrong. It shouldn't be so hard. But if it's not, it should be, in some manner, shape, or form, attended to. It has in some small ways. But there's obviously a bias against it. And, in my opinion, that's not good for the further advancement of the world.

Salit: Yes, Fred. Thank you.