Colleagues,
I have so many concerns about a merger, I am not really sure where to start this discussion. I apologize in advance for my chemistry-centric discussion below, but it is my frame of reference. Also I read in the Post and Courier that a PhD in chemistry is one of the desired goals, so I have been doing a lot of thinking about how one could create such a program out of thin air in a state with historically sad support of education.

First, I am bothered by the rationales given for the merger. One argument has been that we need more high tech savvy PhDs in order to develop a thriving economy in Charleston area. While it may be true that we need more computer science type graduates to meet the needs of a growing tech corridor (I’ve seen some of that data), I don’t see the rationale for expanding this argument to other disciplines. At least in my field, there is only a very small industrial base for PhD chemists in this area. The gamble of a “build it and they will come” scenario is too high for my taste. (How do I know there is no job market for PhD chemists in Charleston? From the number of Clemson and USC PhDs that apply for Masters level jobs in my department and the inherent difficulty in solving two-body problems when we hire.) In general, companies that hire PhD chemists and biochemists don’t have to worry about “local” talent. If they want to hire someone, they place an ad and get 100s of applications from desperate PhDs looking for work from all over the country. If there is a need for more computer science folks or for engineers to support Boeing, then why don’t we start by building or expanding those programs here, rather than change the whole institution in such a drastic way.

The second argument I have heard is that merging with MUSC is the lesser of 3 evils: we either become USC-Charleston, Clemson-Charleston, or MUSC-Charleston. I haven’t seen any real solid evidence that this is a threat. Of course like all of us, I am very uninformed, but at the moment, without data, this strikes me as a scare tactic to get us to plow ahead. I also find it unlikely that the legislature would dissolve a 200+ year-old institution and it’s brand in this manner. Also, is an MUSC-Charleston really much more appealing than the other options, if this threat is real? Their mission is so
different than ours. Where will resources naturally flow in such a merged institution with such disparate missions? This is a real concern to me, because I suspect I know the answer. Also, what will our alumni and donor base think of any of these merging options? Dissolving their alma mater’s brand does not seem like a way to encourage a philanthropy tradition and we should carefully consider this. Isn’t that part of our new financial model? Building an endowment? What happens to our ability to do this when we no longer exist (at least from our alumni’s perspective)?

Destroying the nature of a 200 year-old campus in a turf battle for Charleston area students seems shortsighted to me. If Clemson wants to start an engineering program here in Charleston because Boeing wants this, I don’t see how this threatens us. Last time I checked, we weren’t interested in doing this. At some point, I would think that CHE would do their job and ensure no unnecessary duplication in the Lowcountry. In theory, I would think this would limit what USC or Clemson can do here. If branch campuses are inferior, underfunded and sub-par (this is part of the argument for rationale #2 and a preemptive, lesser-of-three-evils MUSC merger) then I think this would also naturally limit what USC or Clemson could do here, even if politicians arranged it so USC and Clemson could freely compete here in some sort of branch undergraduate campus. We have advantages that they would not----a beautiful historic campus and 200 years of history and tradition. That will be hard to replicate in any shop USC or Clemson sets up on I-26. Besides, I thought our goal as outlined in our strategic plan was to become a nationally known liberal arts and sciences university. Shouldn’t we be focusing on students from all over, not just Charleston to achieve this goal? Are Charleston area students really the key to developing a healthy financial model or key to our goal of becoming nationally preeminent? If so, what is this financial model and how does offering PhDs help achieve it?

The third argument that seems to be driving this discussion is that MUSC is in need of capital and is therefore looking to expand into our undergraduate world. Also, we are constantly looking for new financial models to sustain a healthy institution in the face of decreasing state support. It is worth
contemplating why MUSC is in financial trouble. Their basic science PhD program has been sustained by hospital revenue, and suddenly that equation is changing. If we are in a state that refuses to step in and save the existing PhD program at MUSC (especially with all this evidence that businesses want more PhDs), why do we think that the state will pump money into new PhD programs if some merger takes place? Are we jumping into this to solve MUSC’s fiscal problems? What about our financial problems? I don’t see how it fixes any of our financial problems, so I am hoping someone can explain to me how it will.

If we assume that we will get no significant new revenue from the state to build this enterprise (and I think that is a safe bet), then are we thinking that we will generate more revenue by having these new graduate programs? To build a PhD program in the sciences, it will cost millions---as in the 10s if not 100s of millions. If we just declare one day that we now grant PhDs without the associated upgrade in infrastructure in the sciences, we will go overnight from being an excellent undergraduate institution with a developing national reputation to a marginal PhD granting institution. I just don’t see our state ever investing the type of capital necessary to pull this off. I also don’t see a lot of evidence that the state adequately supports its current PhD programs.

Who is going to give us this needed capital then? Maybe the mayor will give us some money since he is very keen on this. Let’s ask him! Maybe the businesses clamoring for these 100s of PhDs? Let’s get their contributions to get us started. Or is it that we are expecting an influx of all the great grant money that PhD programs generate? I suspect there are people that believe this will happen. It won’t. As a whole, the current science faculty members here are not competitive for the types of Research-1 grants that bring in the really large overhead from the federal government. A sudden declaration that we now are a PhD granting institution does not make us suddenly competitive for these grants. On the contrary, we will be a PhD institution that no one has ever heard of. Grant funding is very tenuous now. Who are you going to give a grant to? Someone in a top 25 graduate program from an established program or a faculty member from this new
school no one has heard of? Our competitors for grants would now be Harvard, MIT, and Caltech. Not Oberlin, Swarthmore, and Furman, which is tough enough. In my own discipline, Clemson and USC are not even top 50 programs (side note: it’s worth contemplating why that is here). While a few of us maybe could be stars in this new funding arena, I do not count myself, or anyone in chemistry, in that group. I mean no offense to my colleagues, but our careers have been too slow here. You need a dozen papers a year to be competitive for grants like this, not 1 per year. It will be a long ramp-up time of being mediocre before we get to that stage. Equally bothersome, we will lose our eligibility for grant funding through many of the programs we currently use. In the sciences, this is NIH-AREA, NSF-RUI, smaller foundations, HHMI, etc. All of that is in jeopardy as soon as the institution’s Carnegie classification is changed or when a certain number of PhDs or grant dollars are earned. One big grant-earner who wants to retire here with his (or her!) last big grant and suddenly the rest of us are out of funding options. We will be ineligible for prior programs and uncompetitive for R-1 type grants.

What type of revenue are we talking about to build a PhD program? I haven’t seen any numbers on this (which also alarms me), but I can offer some back of the envelope musings. New faculty would be needed. And not at the salaries we are paid, of course. PhD-institution faculty will need a 1-1 teaching load, MAX. We will need LOTS of new bodies to cover our classes. We could try to cover it all ourselves by doing what PhD schools do everywhere---building some 500 person lecture halls or, nowadays, teaching via MOOCs. (But that is in contradiction to our strategic plan---so we wouldn’t do that, right?) Even with those cost-saving measures that would allow us to focus on research and minimize teaching burden, we would still need to recruit new people who will be competitive for grants, so estimate 5 new lines per science department to get the cash coming in. Each new faculty member in the sciences will need a big lab and a big startup package. Our current startup packages are typically 50-100k, depending on needs. A PhD school, to be competitive in drawing in people capable of bringing in big grants, will need 300k-500k typically, maybe more if we are trying to get serious---getting serious means post-doc salaries in startup and
that is 100k right there. They also need big labs, not the teeny ones we have now. I love my lab, but it would be entirely inadequate for a PhD lab. We have a biochemistry lab “suite” that currently houses 4 faculty members and their undergraduates and the undergraduate biochemistry lab. That space would be adequate for one, maybe two faculty members if we want to be competitive and serious in this business of generating more science PhDs and big grants.

To open a PhD school, we will need instruments and infrastructure. We need NMRs, autoclaves, microscopy setups, x-ray crystallography, etc. Maybe 10 million would get us started. Many thousands in annual repairs and maintenance, and service contracts that are 10k a year for each instrument. We would also need a lot of support staff to help run these instruments---also a glass blower, a machine shop, an expanded electronic shop, a graduate program director, etc. Maybe MUSC has some of this stuff, and maybe they would share. But, since they don’t currently have a chemistry department, I doubt they have what we would need. I am guessing the current SSM building would be needed to house just the chemistry department if we wanted to be a competitive PhD program. Too bad the current building would be inadequate---PhD chemistry schools would have more fume hoods than we have in our beautiful new building. Double what we have currently as a first guess. Where are we going to put our new PhD-generating Chemistry Building? Where are we going to put any new buildings? They would all need to be big buildings and without ARB restrictions making us keep green space and height restrictions. Maybe MUSC has a ton of space they will let us have? Or maybe the mayor who is historically so supportive of our quest for space downtown will help us here. And maybe the ARB will understand and look the other way when we ask for a five or six story Biology building.

Let’s talk students, in case the argument arises that PhD programs will generate revenue in tuition. Not in the sciences, anyway. Each new student would need tuition waived and a $25,000 per year stipend x 5 year average PhD time x 5-10 students per year x 5 science departments. Competitive programs provide health insurance for graduate students, too. Some of this
cost is regenerated of course because the graduate students will be teaching all the lower level labs as TAs, like they do at all PhD schools. But these new PhD students will definitively not generate tuition revenue.

It is worth it at this juncture to contemplate why MUSC is at the table here---they need revenue and they do NOT get it from their PhD programs. Also, they are not getting the revenue they need from the state to support their current PhD program. Again, why do we think the state is going to treat this venture any differently? We should not accept a revenue argument as a reason to do this merger. And, we should not agree to a merger that does not come with adequate revenue. A PhD program may create revenue for the city from increased tax base as these jobs and industry supposedly come flooding in, but it will not be increased revenue for us. I mention this because the forces outside academia that seem to be driving this discussion don’t seem to be aware of the cost of these types of programs. In fact, I am pretty sure some see it as revenue generating or, minimally, revenue saving. Sorry for being science-centric here, but the supposed need for PhDs in STEM seems to be behind the economic development argument for the merger and these programs cost big money. I am not sure the right people understand this. My biggest fear is that we will just suddenly be anointed PhD-granting status without ANY of the necessary resources to pull it off.

Lastly, when I left my post-Doc at MIT, I specifically applied to non-PhD granting schools. The smaller the better; CofC was the biggest one I applied to and I did not predict having much interest in it because of that. I could have applied to R-1 schools and I was encouraged to do so by all of my mentors. When you are at a big school like that, you are viewed as a failure if you do not go get an R-1 job. I was told “you are flushing your career down the toilet” (nice, huh?) Maybe in their view I did do that, but I don’t view it this way. I had been at schools for 8 years at that point where undergraduates are an afterthought, if they are thought of at all. There is a reason why CofC generates more chemistry majors than both USC and Clemson. The reason for that is that we care and nurture our students to success. If the state of SC needs more PhDs, then let me do the job I came
here to do, because half of all the students I have mentored in my lab have gone on to earn a PhD (and they would all love to come back). The same can be said for all of my colleagues who mentor science students in their labs. If we had a small PhD program that graduated 5 students a year (a number I have heard thrown around), that number is less than the number of UG students we send off to PhD programs each year in our department. Since 2000, about 100 chem/biochem majors have left here to pursue a PhD. 85% of those students did research at CofC with faculty. If Charleston wants more PhDs in the sciences, then get these businesses or the state or the Board to double or triple the URCA budget. That single small investment would have a huge impact. We have the right formula here to make a big impact in the “pipeline”---we are a big enough school to do meaningful work, but small enough that we can still take the time to nurture students and include those students in our work. That is why I love it here and that is what will disappear if we start PhD programs. I predict that I will not love it here then. I suspect that I am not the only one.

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