

Here Richard Milne, Head of Infection and Immunity Teaching at UCL, discusses art and science, and their collaboration, with John and Greg. Richard is in blue, John in green and Greg in red.

Greg, you're a successful investigator. This isn't going to change your career trajectory. Why Art? Science is often a very visual business ie explaining what you're working on visually is very helpful. And obviously science is a very creative business. So the link with art is pretty straight forward I think.

Was that the case in the beginning? Well no actually I started working with John because he is very compelling and it seemed like it would be fun, which it is.

John, Why science and why viruses. Being part of the lab provides me subject matter for the work I make. It's a context within which to play.

But why viruses? The work that Greg is doing considering host-virus interactions is allowing me to rethink my interests in hospitality. There's also an underlying interest in HIV in my work and that was what led me to collaborate with Greg. My work is about taking what I know and placing it within a new context, in this case science, in order to innovate my artistic practice. I'm also interested in conjoining disciplines, - my being a non native to science allows me to cut through and establish different relationships between different aspects of the scientific hierarchy.

Greg, what do you think of John's art? I think its great. Its great fun to see our scientific imagery and language being used as a source material for art in this way. It puts our work in a different context.

John, what do you think about the science. I find it fascinating that people work in such specific zones. I can see that discovery is about opening new space and I think that's a shared concern in art and science. Working with Greg encourages me to think more ambitiously and take bigger risks with my art. It's energizing. Science is far enough away from what I do to really highlight and contrast what I'm doing as an artist.

John, what have you learned about your art practice? I've learned much more about my interest about jargon. I've learned more about my serial approach to making art work. I've learned about the performative element of being a jester and how important being an outsider is. If I'm too native there is no charge. Therefore enacting the outsider is critical to my creative approach as an artist.

Greg, what do you get from the artist. I've found that it is very instructive to sit down and explain to interested non-experts what we work on. This highlights areas we don't fully understand, it raises new questions we haven't thought of and it makes us think of things in a new way. As a lab we all find that explaining our work to John clarifies our own thoughts on our projects. It's a process of licensing asking questions and licensing creativity from a different perspective.

John, what do you think the scientists get from you? My presence in the lab is a form of institutional critique. My distance from science discipline allows me to make observations upon how things are organized that allows a more self-reflexive position to develop in the lab. My presence has the effect of shaking everything up a bit, but in a friendly and constructive way. By playing the jester I license asking questions in both directions.

John, what is the point of this collaboration? I believe in the polymath, I'm working from the position of the idea of the Renaissance man in which the distinction between art and science does not exist. Inevitably, there's a certain point where art and science overlap

in their creative ambitions. The common strand is creativity. In the end it's the same thing, it's the deployment of imagination without shackles or rules.

Greg, what have you learned? I've learned that, as a lab, we don't always fully understand what our scientific questions are, at least as not as well as we thought. Getting awkward questions from John reveals this. And this is a good thing that helps us redefine our questions and goals in a way that is clearer and frankly more likely to succeed.

What's the long term impact of the collaboration on the lab? There are a series of interventions that I'm making that accumulate over time. For example, I'm leading a workshop with undergrads teaching them how to talk about their work. I gave a departmental seminar on the history of art and AIDS in relationship to my work. I created a series of posters for the lab focusing on safety. The next part of the project is the filming of "a virus walks into a bar". Also there is a series of images and subject matter that are being transformed into art. All of these things build trust and conversations that go beyond the initial starting point of the collaboration with Greg. This is a big difference. I am an artist in residence. We think, what are we going to do next?

Do you think art science is a genre on its own. Yes this is another genre. However, I think that art-science collaborations can be boring when they are just illustrative. The scientist doesn't get anything out of it and the artist is represented as the crafts person. We're taking art-science to the next level. We are translating multiple ideas between disciplines. We're not doing the expected and our 3 year Wellcome funding gives us long enough to work together for surprises to happen. My art has massively shifted during the collaboration and the variety of forms that I've invented specifically for the capsid project has expanded my artistic repertoire.

Has this changed what you think about art? Yes, this has changed what I think about art certainly. I now understand a lot more about the development of artistic ideas and how art is practiced. This is very instructive with many parallels with effective practice of science. I appreciate how art is a rigorous professional activity, very much like science. Also, like science there is good and bad art and this project is helping me develop my critical thinking generally.

Greg, what is the long-term impact on the lab? Do you think there's any broader tangible benefit to the participants of this collaboration? Yes, certainly. The long-term impact for the lab a willingness to get outside of ones comfort zone and to talk to people from a different discipline, in fact to embrace that as a way to find scientific clarity. I think that the whole procedure encourages us all to ask questions about what we do and how we do it. We are also encouraged to ask the same questions we ask internally to people outside of our discipline. We have learned that we're generally quite conventional in our thinking. We have encouraged each other to expand the space in which we ask questions and open ourselves to other perspectives. Perhaps we are inventing a new way to do science and a new way to do art. We're certainly aiming for a new level of art science collaboration.