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<https://www.linkedin.com/pulse/article/20140930004656-1391-antidisciplinary>=

One of the first words that I learned when I joined the Media Lab was =antidisciplinary." It was listed an a requirement in an ad seeking =pplicants for a new faculty position. The word defies easy definition. =ut what it means to me is someone or something that doesn't fit within =traditional academic discipline---a field of study with its own =particular words, frameworks, and methods. Most academics are judged by =ow many times they have published in prestigious, peer-reviewed =ournals. Peer review usually consists of the influential members of =our field reviewing your work and deciding whether it is important and =nique. This architecture often leads to a dynamic where researchers =ocus more on impressing a small number of experts in their own field =han on taking the high risk of an unconventional approach. This dynamic =enforces the cliché of academics=learning more and more about less =nd less. It causes a hyper-specialization where people in different =reas have a very difficult time collaborating—or even =communicating—with people in different fields. For me, =ntidisciplinary research is akin to mathematician Stanislaw Ulam's =amous observation that the study of non-linear physics is like the =study of "non-elephant animals." Antidisciplinary is all about the =on-elephant animals.

The Media Lab focuses on "uniqueness, impact and magic." What our =tudents and faculty do should be unique. We shouldn't be doing =omething that someone else is doing. If someone else starts doing it, =e should stop. Everything we do should have impact. Lastly, things =hould induce us to be passionate and should go beyond incremental =hinking. "Magic" means that we take on projects that inspire us. In =heLifelong Kindergarten group, researchers often describe the "Four Ps =f Creative Learning" as Projects, Peers, Passion and Play. Play is =xtremely important for creative learning. There is a great deal of =esearch showing that rewards and pressure can motivate people to =produce," but creative learning and thinking requires the "space" that =lay creates. Pressure and rewards can often diminish that space, and =hus, squash creative thinking.

The kind of scholars we are looking for at the Media Lab are people who =on't fit in any existing discipline either because they are between—or =imply beyond—disciplines. I often say that if you can do what you =ant to do in any other lab or department, you should go do it there. =nly come to the Media Lab if there is nowhere else where you could do =hat you want to do. We are the home of the misfits—the =ntidisciplinarians.

When I think about the "space" that we've created, I like to think =bout a huge piece of paper that represents "all science." The =disciplines are little black dots on this paper. The massive amounts of =hite space between the dots represent antidisciplinary space. Many =people would like to play in this white space, but there is very little =unding for this, and it's even harder to get a tenured positions =ithout some sort of disciplinary anchor in one of the black dots.

As we engage in tackling harder and harder problems that require many =ields and perspectives, the separation of disciplines appears to be =ausing more and more damage. The complex system that is the human body =as become impossibly multi-disciplinary. We should really be working on =One Science," but instead we are a mosaic of different disciplines =ometimes not even recognizing when we are looking at the same problem =ecause our language is so different and microscopes are set so =ifferently. The Center for Extreme Bionics at the Media Lab lead by =ugh Herr, Ed Boyden and Bob Langer is working on eliminating a variety =f human disabilities involving mechanical engineering, computational =ptics, tissue science, genetic engineering, robotics, neuroscience and =undreds of other sciences and technologies that would never fit in any =traditional department or lab.

Media Lab co-founder Nicholas Negroponte famously coined a twist on the =academic dictum that faculty must “publish or perish.” Media Lab =faculty, he said, must “demo or die.” I have made a modification– =Deploy or die.” I’d like all of the Lab’s faculty and students =hinking about how their work ultimately deploys in the world, and if =hey can deploy it themselves, even better.

I think this philosophy of working together on big projects will help =ring researchers together across disciplines – creating a single =science instead of fragmented disciplines. We will still need =disciplines, but I think that it’s time we focus on a higher mission and =he changes needed in academia and research funding to allow more people =o work in the wide-open white space between disciplines – the =ntidisciplinary space.