Creativity & Collaboration in the Academy

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The Norman Lear Center

The Norman Lear Center is a nonpartisan research and public policy center that studies the social, political, economic and cultural impact of entertainment on the world. The Lear Center translates its findings into action through testimony, journalism, strategic research and innovative public outreach campaigns. On campus, from its base in the USC Annenberg School for Communication & Journalism, the Lear Center builds bridges between schools and disciplines whose faculty study aspects of entertainment, media and culture. Beyond campus, it bridges the gap between the entertainment industry and academia, and between them and the public. Through scholarship and research; through its conferences, public events and publications; and in its attempts to illuminate and repair the world, the Lear Center works to be at the forefront of discussion and practice in the field.

The Presentations

This publication represents a series of presentations in February and March 2010 at the University of Southern California by the Norman Lear Center and sponsored by the USC Office of Research Advancement/Office of the Provost. The Lear Center led five faculty workshops on the topic of Creativity & Collaboration in the Academy. Key findings from the sessions have been included in this publication.
In Spring 2010, the Office of Research Advancement at the University of Southern California asked the Norman Lear Center to lead a series of small faculty meetings on Creativity & Collaboration in the Academy. The purpose of these discussions was to ask faculty how to keep USC at the forefront of research, particularly in the use of new technology to enable collaborative research. Which innovative practices enable faculty to work together, both within and across disciplines?

There are obvious disincentives built into the system, among them, the emphasis on solo accomplishments in the tenure review process; the revenue models for schools, which are loath to share their students or faculty with other revenue silos on campus. But there is also a great excitement about the possibilities – even the necessity – of collaborative research, especially as new technologies enable us to peruse and process vast amounts of information in multiple media.

We believe that the challenge for academia is similar to the one faced by the music and publishing industries.

Will the academy find it as hard to adapt to new technology as these industries have? Or is it in a position to thrive?
Why the Norman Lear Center?

The Norman Lear Center is a research and public policy center based at the Annenberg School for Communication & Journalism. We study the impact of media and entertainment on society, and, unlike many other academic research centers we try to actively intervene, often using the mechanisms of entertainment in order to do some public or social good.

The Center defines entertainment very broadly and has a wide variety of projects.

The Creativity, Commerce & Culture project is one of the center’s longest running projects, and under its auspices two major research projects have been conducted that have led to the Center’s involvement in Creativity & Collaboration in the Academy.
Just as the Napster crisis was roiling the music industry – and USC and other universities around the country – the Lear Center held its first conference on this set of issues.

*Artists, Technology & the Ownership of Creative Content* brought together scholars, artists, legal experts and activists to discuss how we might reconcile new technology with old notions of IP in the music, publishing and film industries.
With a second conference, the Center decided to investigate an industry that had very little intellectual property protection: It turns out that the fashion industry has virtually no copyright or patent protection – only trademark protection. Every fashion design can be copied or remixed by other designers.

Did the fashion industry have lessons to teach to those industries that were dependent on enforcing copyright protection?

And how might these models for the ownership of creative content be applied to the work of the academy?
This raises the question: Do the creative industries that are studied by the Lear Center have anything to offer academics who are hoping to better understand evolving models for the ownership of creativity?

After all, isn’t academia also a creative industry? >>>
The Ecology of Creativity

For instance, in all of these creative industries there is an ecology of creativity within which people do their work. For instance, people in the fashion, film and music industries exchange ideas, respond to new trends and riff off of one another’s work.

Academics also respond to the environment around them and allow it to inform their work.
Interdisciplinarity

We tend to think of interdisciplinarity as something that only occurs within the academy, but of course this isn’t the case.

Genre-bending music, film and TV are interdisciplinary in their own way, and the kinds of institutional barriers that academics face...
Interdisciplinarity

... are similar to the ones that an opera singer might face ...

...if she decides to incorporate heavy metal elements into her work.
And when creative work falls into the public domain, as Jane Austen’s novels have, the opportunity for outrageous and innovative (and commercially successful) remixes are also possible.
Reputation

All creators are concerned to some degree with their reputation or their “brand.” Fashion designers, musicians and stars need to impress the people who review their work and the consumers who buy it.

Academics who are interested in gaining tenure also must impress their peers and keep track of the reputation of other scholars in their field so that they know who to collaborate with on future projects and conferences.
Whatever the size of your potential audience, all creators, inside the academy and out, have to worry about marketing.

Often handled on the institutional level, music labels and film studios must develop campaigns and strategies to promote the work of their own stable of creative professionals.
Marketing

So do universities. These campaigns are intended not only to sell product, but to lobby Congress, to lure students to campuses and to attract funding — whether it’s from venture capitalists, foundations or alumni.
Creators from all quadrants of the creative universe have to think about distribution.

For academics, too often they are confined to the narrowest imaginable distribution channels, which may seriously limit the potential impact of their work.

Artists in the film, TV and music industries are struggling with the new set of options for the distribution of their work. By releasing their material in digital form they realize they may lose control over their work and they may never see a profit from its digital distribution.

"Estimates of lost music sales range from $700 million to several billion dollars a year..."
Audience

In the music, film and publishing industries, it’s taken for granted that creators must find an audience willing to pay to experience the work.

For academics, the main audience is usually within the academy, and its professional associations, where peers review their work.
Product

Creators generate **product**:

Inside the academy, they may include pharmaceuticals, research monographs and semiconductors.

Outside the Academy, it could be best-selling books, CDs, fashion designs, magazines and TV shows.

**KNOWLEDGE**

For academics, the “product” that’s being generated might be called **knowledge**, something to be shared with other academics, something to be taught to students and something that ultimately should benefit society.

Of course we know that sharing knowledge is in tension with another goal: **making money**.

Whole industries have been created within the academy, including biotechnology and computer science and information technology. But patenting has had a troubled history within the academy since the 1920s, and ever since the 1970s and the biotech revolution, universities have sought corporate money more vigorously in order to fund expensive, cutting edge research. Because of the cost of development, and the tremendous profits that could be made, much of this knowledge was not made freely available to the world.
Digital technology has fueled these competing interests in the academy. But while technology has enabled efforts to generate profitable intellectual property, technology has also proven to be a countervailing force, allowing academics who used to be trapped in slow publication cycles to distribute their work more freely – to share their lesson plans and their insights with a potentially global audience online.

The Open Archives Initiative makes content visible wherever it resides in various digital archives, and the initiatives emerging from this movement may very well undermine the current structure of academic publishing, where libraries pay huge subscription fees for the peer-reviewed work of their own faculty.

Indeed, there are several movements afoot, such as the Creative Commons and the Science Commons, that promote the advantages of using new technology to share knowledge.
Harvard Professor Yochai Benkler has made compelling arguments about the tremendous economic value of large-scale cooperative efforts, both within universities and industrial sectors of the economy. (The open-source software movement is one of his prime examples.) In fact, Benkler has argued that industry has much to learn from the practice of scientists, who have a long history of working collaboratively toward goals too grand for even the most brilliant individual scientists.

As many management experts will tell you, like Warren Bennis in his book Organizing Genius, we don’t need Great Men so much as we need Great Groups. We’re inspired by the incredible things that have been accomplished by these great groups.
Success Stories

The academic and scientific community has many examples of successful collaborative projects, including:

**SETI@Home**: Currently the largest distributed computing effort with over 3 million users who run a free program that downloads and analyzes radio telescope data.

**PubMed Central**: Free digital archive of biomedical and life sciences journal literature.

**MIT’s Open Course Work platform**: Web-based publication of virtually all MIT course content.

**Rice’s Connexions Project**: A place to view and share educational material made of small knowledge chunks.
Barriers to Success

Of course there are plenty of barriers to collaboration within academic institutions like USC.

- Tenure guidelines that privilege individual work
- Difficulty of collaborative authoring
- Jargon
- Conflicting disciplinary priorities
- Difficulty of merging quantitative and qualitative data
- Steep learning curves
- Risk of losing control of your research
- Navigating the different standards for sharing & publishing data
- Lack of searchable, centralized datasets
- Incompatible metadata
- Disciplinary silos
- Strain of communicating with people in other physical locations
- Difficulty of synchronizing tasks across a team
- Getting grant funding for collaborative infrastructure
Solutions
But the Lear Center has identified various solutions to tackle the obstacles to collaboration:

**Training in interdisciplinarity & collaborative methods**
For instance, basic training in interdisciplinarity and collaborative methods could become a core piece of our curriculum and teacher training. We need people who can translate between technologists and researchers, as well as leaders who know how to intervene and how to get out of the way.

**Network mapping systems**
We’ve long needed an online searchable database that indicates who is working with whom on what at USC. It would help us track down the right collaborators on our own campus and allow us to tap into existing knowledge networks.

**Interoperability protocols**
Adding interoperable semantic layers to USC databases would make information more accessible to researchers from multiple fields.

**Incentives for collaborative student research**
The most important thing is to change the culture of the students. Get them accustomed to collaborative research early.

Many of the solutions are no doubt technological: digital tools act as scaffolding for collaborative research, so we should develop a taxonomy of tools that fits our needs at USC. >>>
Taxonomy of Collaborative Technologies

There are different sets of tools for collaboration that takes place in a different place at a different time, in a different place at the same time, or even at the same place at the same time:

### Communication Systems
- fax
- email
- voicemail
- video mail
- social media

### Information Sharing Systems
- RSS feeds
- document sharing systems
- message boards & blogs
- cloud computing
- websites & intranets

### Cooperation Systems
- document co-authoring tools

### Coordination Systems
- group calendars
- shared workflow management systems
- event managers

### Social Encounter Systems
- telepresence
- media spaces
- computer games
- virtual worlds

### Asynchronous communication (different place/different time)
- telephone/mobile/ audio systems
- video conferencing
- chat systems

### Synchronous electronic encounters (different place/different time)
- teleconsultation systems
- co-browsing software

### Synchronous face-to-face meetings (same place/same time)
- presentation systems
- group decision
- support systems

Source: Based on a taxonomy from Working with Groupware by J.H. Erik Andriessen
But we suspect that some of the solutions are very low-tech – they have to do with physical proximity, comfortable social gathering places where specialists from every silo in the university can enjoy serendipitous conversations with colleagues that they’ve never met before.

It’s not coincidental that this conversation is happening face-to-face, in a series of small groups . . . .
## Workshops

We held five workshops during the Spring of 2010.

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<td>March 3, 2010</td>
<td>Social Science Research, and Studying the Effects of Technology on Collaboration</td>
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<td>March 10, 2010</td>
<td>Engineering and Technology to Support Collaboration</td>
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<td>Collaboration in the Health Sciences</td>
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**Participants**

We spoke with 55 faculty members in 30 different disciplines representing 13 schools and five institutes at USC. [The word cloud on the cover of this document represents the relative mix.]

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<thead>
<tr>
<th>Name</th>
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<tr>
<td>Yigal Arens</td>
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<td>Peter Carnevale</td>
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<td>Xiaojiang Chen</td>
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<td>Elaine Chew</td>
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<td>Jeffrey Cole</td>
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<td>Tracy Fullerton</td>
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<td>Dana Goldman</td>
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<td>Sarah F. Hamm-Alvarez</td>
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<td>Mark C. Marino</td>
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<td>Maja J. Mataric’</td>
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<td>Carolee J. Winston</td>
<td>Biokinesiology &amp; Physical Therapy, USC School of Dentistry</td>
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<tr>
<td>Wendy Wood</td>
<td>USC Marshall School of Business &amp; USC College of Letters, Arts &amp; Sciences</td>
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Questions
We asked them three questions:

- What are the **best practices** in research collaboration that you know?
- What are the **barriers** to research collaboration at USC?
- How can USC further develop a **culture of innovation** that supports creative ways to conduct and collaborate on research?
Best Practices
What emerged from our discussion were several ideas for innovating and solving problems. Among best practices faculty mentioned:

- **Innovative funding programs, such as:**
  - Clinical Translational Science Institute: [www.labctsi.org/](http://www.labctsi.org/)
  - The National Cancer Institute’s Transdisciplinary Research on Energetics and Cancer (TREC) Centers: [cancercontrol.cancer.gov/trec/](http://cancercontrol.cancer.gov/trec/)

- **Interdisciplinary visiting scholar programs, such as:**
  - Radcliffe Institute for Advanced Study: [www.radcliffe.edu/academic/seminars.aspx](http://www.radcliffe.edu/academic/seminars.aspx)
  - Center for Advanced Study in the Behavioral Sciences at Stanford University: [www.casbs.org/](http://www.casbs.org/)

- **Universities that have embraced collaborative research, such as:**
  - University of Michigan
  - Syracuse University

- **Disciplines that have embraced new publishing models including:**
  - Biology
  - Engineering
  - Economics
  - Earth Sciences

- **And faculty offered several suggestions about what USC could do to support creative collaborative research:**
  - Informal interdisciplinary salons
  - Skunkworks
  - Revised tenure guidelines
  - Match.com for collaborative research
  - On-campus visitors center
  - Videoconferencing technology & facilities
  - Inter-generational collaboration
  - Innovative mentoring programs
  - Training to use digital libraries
  - Support for alternate models for scholarly publication
  - Interactive learning environments
  - Mini-grants for small projects
  - New criteria for selecting students
  - Promotion of best practices
Next Steps
These workshops marked the beginning of an ongoing dialogue. We continue to look for examples of innovation in how research is done in any of the following areas:

- Search
- Sharing and collaboration
- Review and feedback on research product
- Dissemination media
- Access and archives
- Measuring impact and significance

Please join the conversation by contacting the Office of Research Advancement at vproves@usc.edu or 213.740.6709.