

## 6 HASTAC: A Case Study of a Virtual Learning Institution as a Mobilizing Network

*Institutions are mobilizing networks.* This is a provocative definition. It is also highly abstract. Just as it is useful to imagine a specific course (e.g., FLIDA 101) in order to address both the pedagogical potentials and institutional obstacles of digital learning, it is helpful to think about a specific mobilizing network in order to see the ways in which it operates. The most obvious candidate for this conversation is HASTAC, the virtual learning network that the authors of this book cofounded with several colleagues in 2002–2003 (figures 6.1 and 6.2).

### What is HASTAC?

HASTAC is the Humanities, Arts, Science, and Technology Advanced Collaboratory, pronounced “haystack.” The point in such an unwieldy name is to avoid privileging one discipline, field, or institutional faculty over another. The academy, if indeed there is just one these days, is considerably messier, more amorphous, and more heterogeneous than its post-eighteenth century composition.

HASTAC is a collaboratory. The term *collaboratory*, according to Wikipedia, was coined in 1989 by engineer William Wulf



**Figure 6.1**

Screenshot of HASTAC home page from 2008 (<http://www.hastac.org>, accessed June 15, 2008).

and is defined as a “center without walls, in which the nation’s researchers can perform their research without regard to physical location, interacting with colleagues, accessing instrumentation, sharing data and computational resources, [and] accessing information in digital libraries.”<sup>11</sup> HASTAC takes that science-prompted definition and expands it to include the humanities, social sciences, and the arts as well. What would an expansive, transdisciplinary collaboratory driven by common interests in engaging digital media to expand the boundaries of collaboratively produced knowledge formation look like? HASTAC is our response, at least at this slice of knowledge-creating history.

Primarily focusing on higher education, HASTAC also supports affiliated efforts in youth learning and K–12 education. The network has members who operate outside and beyond any formal educational institutions yet who remain actively engaged in all forms of digital learning. All share (in many different

**HASTAC** Humanities, Arts, Science, and Technology Advanced Laboratory

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PROJECTS SCHOLARS COMPETITIONS BLOGS NEWS EVENTS

**HASTAC** / "haystack" / noun

1. A consortium of humanists, artists, social scientists, scientists, and engineers committed to new forms of collaboration across communities and disciplines fostered by creative uses of technology.
2. Future of Thinking in a Digital Age

Synonyms: New media, Participatory learning, Critical thinking

**MAC ARTHUR** COMPETITION

HASTAC SCHOLARS

NEWS & OPPORTUNITIES

**NEW & FEATURED BLOG ENTRIES**

Read All Member Blogs | Explore All Forums

**My So-Called Facebook Life**  
It is possible in this so-called fragmented, decontextualized, customizing ...  
Cally Jul 29 14 comments

**How To Crowdfund Grading**  
I loved returning to teaching last year after several years in administration ...  
Cally Jul 28 48 comments

**Getting started on the new HASTAC.org**  
Welcome to HASTAC's new web site. It's been in the works for some time ...  
Bobby Jul 09 20 comments

**Emerging Disciplines, September 18, 2009**  
This one-day symposium, free and open to the public, will feature prominent ...  
Seminole Aug 24 0 comments

**Andrew W. Mellon Postdoctoral Fellowships**  
Up to three two-year fellowships for promising scholars, starting July ...  
Seminole Aug 24 0 comments

**External Faculty Fellowships 2010-11**  
With generous funding from the Lynette S. Autrey Endowment and the National ...  
Seminole Aug 24 0 comments

**UPCOMING EVENTS**

SEP 22	One Web Day
SEP 24	Showing art in the age of new media

All Events >

**HASTAC TWEETS**

RT @pegaribaker: India's celebrated epic the Mahabharata is being tweeted one 140 character tweet at a time. <http://tinyurl.com/rtsp4c> 2 days ago

RT @ccornam: Great use of Google Maps to show local projects funded by the Recovery Act (Stimulus Bill) state-by-state. <http://bit.ly/239p7> 4 days ago

RT @bassett: IHE article re courses using iPhone app dev: students need interdisciplinary bg/grad, not just coding. <http://tinyurl.com/maat6p> 4 days ago

Follow HASTAC on Twitter.

**POPULAR DISCUSSIONS**

**The Future of the Digital Humanities**  
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HASTAC Scholars Discussions

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Christalyn Nov 02 57 comment(s)  
HASTAC Scholars Discussions

**Metaverses & Scholarly Collaboration**  
Aria Sep 21 55 comment(s)  
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**"What's Going On in Digital Humanities?"**  
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HASTAC Scholars Discussions

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posted in: Organizing a YouTube Tournament

Learning limits in new ways  
posted in: My So-Called Facebook Life

Bath and then Dinner? Or Dinner and then Bath?  
posted in: The Substance of Opposition

Last thought - my take on Your Brain in the Internet  
posted in: Crowdfunding Grading Follow-Up

**UPCOMING EVENTS**

**HASTAC'S YOUTUBE CHANNEL**

Patrick O'Shea of WITIE, one of our 2009 Digital Media & Learning awardees, used his FlipCam to capture Connie Yowell's talk on participatory learning during lunch at the Palmer House.

All Videos >

**Projects**

Click on each individual project to get more details.

View All Projects

24 Flowers Per Second Arts/Ventures Black Cloud Sound By Law Cellcraft CineGrid

Figure 6.2

Screenshot of HASTAC home page from 2009 (<http://www.hastac.org>, accessed on July 31, 2009).

ways) the common dedication to using and developing the most creative learning and research technologies while, at the same time, thinking critically about the role of technology in learning and in society as a whole.

HASTAC has taken a leadership role in developing an interactive network for scholars engaged in the technological, pedagogical, humanistic, and sociocultural explorations central to Web 2.0 learning. As an institution, HASTAC is unusual, but its form is becoming increasingly common as more and more educators become familiar with social networking sites and what educators can both contribute and learn simply by participating.

HASTAC is a voluntary organization. To become a member, one simply registers to the HASTAC Web site. More than 2700 individuals were registered HASTAC members as of summer 2009.

To become a HASTAC leader, one volunteers what one has to offer in collaborative and complementary engagements with others in leadership roles. Contributions are open ended, ranging from posting blog entries or creating an affiliated HASTAC social network dedicated to a particular topic, to something more tangible such as holding a HASTAC conference.

The HASTAC Web site (<http://www.hastac.org>) promotes access that is as open as the community standards of the site can support, so long as participants are clearly serving HASTAC's overarching mission. It is loosely moderated to protect the network from commercial spammers and irrelevant, inappropriate, or offensive material.

In short, HASTAC is an information commons, a social network, and a blog-hosting Web site, with various events announced throughout the year. It operates as a network of networks, reaching expansively across existing or emerging networks. And, as such, it is also a partnering—a social networking—matchmaker. Not unlike Craigslist (<http://www.craigslist.org>), it matches

researchers' interests, drawing into research partnerships humanistic content providers with high-level computer engineering or programming skills, students eager to learn collaboratively with experts thrilled to convey their knowledge interactively. The information commons is facilitated through an online bulletin board, called *Needle* (<http://www.hastac.org/needle>). *Needle* posts pertinent items as they become available, ranging from relevant news items to grants and fellowships, employment opportunities, book and research announcements, conferences, and workshops.

Examining what HASTAC is, how it operates, what ways it works to mobilize energies at and across institutions, and also the way it is supported by a variety of institutions adds specificity to the discussion of the future of learning institutions in a digital age. Like the peer-to-peer models of learning, social communication, publicity, and communitarian ranking, HASTAC provides a site and set of mechanisms where a loosely defined community of affiliates interacts through peer-to-peer connectivity. New offshoots (e.g., HASTAC teacher subgroup on Ning, "A Synergistic Symposium for the Cybernetic Age," which focuses mostly on K-12) emerge, organizing their own social networks as part of the larger HASTAC network.<sup>2</sup>

The HASTAC network often provides individuals who are isolated, marginalized, sometimes even underappreciated within their departments or institutions access to a distributed community. Of crucial importance, it is leading to the formative emergence of a complex interdisciplinary field within which present (and future) research can be assessed, evaluated, distributed, and utilized. HASTAC's partnering with the MacArthur Foundation has contributed to this catalyzing of a field which, for the academy, partly means forming cross-disciplinary networks of referees who can judge the quality of one another's

work (for hiring, tenure, promotion, or publication) while informing others (e.g., administrators) of the importance of this kind of research, teaching, and writing.

HASTAC embraces a range of diversities as part of its mission and encourages intellectuals at universities without adequate resources to provide leadership grounded in, quite precisely, the collaborative and community networking skills and ingenuities required by the lack of resources. At the same time, these institutions can partake, through webcasts and collaboration, in possibilities available at institutions with far greater financial and technological resources and expertise. HASTAC's goal is to establish the firm foundations for field-building by reaching out across an extraordinarily wide constituency. In disciplinary terms, this means drawing from humanities and arts institutes, social science organizations, supercomputing and grid computing institutes, and technology and engineering centers. This mix includes the leading institutions of their kind in the United States and abroad as well as minority-serving organizations designed to include less-advantaged learning institutions.

In its boldest vision, HASTAC aims to support an emerging generation of scholars equally at ease with current (which is also to say historical) knowledge in the humanities, arts, and social sciences, on the one hand, and with the technological, scientific, and engineering knowledge, on the other. By identifying a field, however loosely defined, HASTAC helps to certify a range of skills, interests, and specializations that might otherwise seem irrelevant to those in more traditional disciplines. Does it matter that an English teacher knows hypertext markup language and teaches hypertext markup to students interested in digital humanities? Does it count that a historian has created a worldwide research network building a multinational and multilingual archive for the comparative study of the laws pertain-

ing to slavery and abolitionism? Is a monograph not the point of these professions? In short, what is the relevant range of content and technological knowledge to be reproduced in and across disciplines today? These are the kinds of issues that HASTAC addresses. By addressing these issues, HASTAC helps to expand the criteria for rewards and recognition. In so doing, it helps develop the institutional credibility of the field. Without such credibility, younger scholars entering into digital learning fields have little chance of success.

HASTAC represents different genres of interdisciplinary humanistic technology projects, with some coming down much more on the humanistic than the technological side of that term and others weighted in the opposite direction. HASTAC leader Anne Balsamo notes that the HASTAC taxonomy includes (but is not limited to): electronic literature, humanities computing projects, Web portals, cultural informatics, and multimodal publishing.<sup>3</sup> It also includes Global Position Survey projects focusing on political geography, access grid communication projects, visualization and sonification projects, digital archiving, research and learning in virtual environments, multimedia exhibits and concerts, and a range of other endeavors across interdisciplinary spectrums as well as deep within disciplines and subdisciplines.

Finally, in terms of audience, Patricia Seed notes that HASTAC also serves two quite different audiences with different needs and skill levels. She notes that “the first audience consists of scholars and potential scholars who have or can acquire technological, scientific, and engineering skills. They need a support network where they can find a community that can critique their projects, inform them of related work occurring in their fields(s), and at best locate potential collaborators.” HASTAC has a second audience of academics and academics-in-training who do not have the skills to advance or create

technical, scientific, and engineering tools in a particular area but who are comfortable with the existing tools (e.g., blogging, distributed applications such as Google Maps). They are eager to incorporate these tools into college and general education. This audience needs user-friendly how-to directions with varied successful examples, online help sources, and discussion boards for solutions to problems.<sup>4</sup>

These characteristics exist at the level of ideas. This chapter focuses on the more material, infrastructural supports and costs to HASTAC. HASTAC could not exist without financial and technical support from the University of California and Duke University and without leadership and assistance of the staff at the interdisciplinary centers at those two institutions, UCHRI, physically located in Irvine, and the John Hope Franklin Humanities Institute within the larger John Hope Franklin Center for Interdisciplinary and International Studies at Duke.

### **A Web 2.0 Institution**

Tim O'Reilly's optimistic definitions of Web 2.0—*many-to-many collaborating* and *customizing together*—need to be reexamined. As corporations such as Google (the largest Web 2.0 corporation) control and data mine more and more of the world's personal, corporate, institutional, and national information, one must be concerned about unregulated sharing, and when user-generated content becomes someone else's source of profit. What happens the day Google buys Wikipedia, a colleague's digital archive of Ancient Rome 3D, or early Portuguese maps of West Africa?<sup>5</sup>

Yet even though the concept is vague or open to exploitative, monopolistic, or oligopolistic practices, Web 2.0 is a convenient way of signaling a new type of institution. It is one where contributions are distributed rather than coming from a single physi-



cal location and where ideas are shared outside the normal rules of tenure, credentialing, and professional peer review. HASTAC is an institution where the knowledge sharing is based on peer-to-peer interactivity rather than hierarchical peer certification.

These new learning communities embody a range of distributed diversities—in networking skills, ingenuities, and facilities, as well as in resources and background experience. They represent robust interdisciplinarity and expansive virtual heterogeneity, as well as an equal ease with their more or less specialized fields of knowledge and with their knowledge of technology.

The challenge is to devise institutional learning structures to facilitate, accommodate, and accredit these new learning forms and their outcomes. The other challenge is to use HASTAC's success and its remarkable global reach to be precisely that institution (however virtual) that is also a mobilizing network.

If we do, indeed, live on the long tail, then virtual institutions such as HASTAC may be the long virtual tail that wags the dog of the traditional educational institutions without which it could not exist.

### **HASTAC: A History**

In 2001, the Mellon Foundation held a workshop to help invigorate leadership at humanities centers. In the course of the meeting, it became clear that the group at the very least had not yet awakened to the pull of new digital media, perhaps implicitly even seeing it as a (potential) threat to the humanities. By contrast, a small minority understood new media not as threat but as an affirmation and reinvigoration of the oldest traditions of the humanities. In particular, new digital media were seen to raise anew concerns with human life, human rights, human ideas, and human communication. Notions of property and

privacy, identity and community, long key concerns of humanistic inquiry and commentary across human history, take on new resonance when considered as newly applicable to the present social and academic arrangements.

The repeated lament about the “crisis in the humanities” is a tiresome and outmoded approach. *If the humanities themselves understood their full power*, they would reassume a central place not only in the academy but in a society confused over these myriad new developments. In the wake of these developments, other like-minded humanists, artists, social scientists, scientists, and engineers with a similarly broad and complementary vision were identified.<sup>6</sup> Some were new to thinking about the application of digital technology to the humanities; others had been long at work on the movement that had started out as humanities *and* computing. A network of fellow practitioners quickly materialized, drawing into the fold a newly emergent paradigm of those concerned with analyzing and utilizing the new possibilities of the digital era. Thus began HASTAC.

HASTAC is not traditional humanities computing or even traditional digital humanities. While supportive of traditional humanities computing (at least initially largely text-based digitization projects), HASTAC’s mission is in the codevelopment and analysis of new learning and research technologies and their implications for individuals and societies. The focus has been on novel and inventive ways of learning with, through, and about new media.

HASTAC is *not* an organization in any traditional sense. It is a voluntary networked consortium of individuals and the institutions represented—a mobilizing network or peer-to-peer institution. It is committed to a different, interdisciplinary, collaborative view of higher education and, by extension, of education more generally in the digital world. It is as committed to

issues of social equity as to technological innovation and as committed to theory as practice (and vice versa). At present, social credit (not capital) is the main cost of admission to HASTAC. Those who do the work, who produce, and who contribute effectively lead the network.<sup>7</sup>

While HASTAC has completed many projects to date (e.g., a toolkit of software and other resources created collaboratively), one of its most dramatic public outcomes is the shared, distributed, coordinated In|Formation Year (2006–2007) (figure 6.3). This field-building year offered one public conference or mediated event per month, sponsored by several centers or institutes at one geographical location, then offered up to a global public via webcasts, podcasts, vodcasts, and even cell phone distribution. At the individual sites, courses, programs, seminars, and workshops focused on the site's particular In|Formation theme. In aggregate, the In|Formation Year was a way of gathering together those scholars and students dedicated to rethinking what constitutes learning in a digital age.

The In|Formation Year began with a graduate-student conference, "Thinking Through New Media" in June 2006. The conference was cosponsored by the Information Studies+Information Science (ISIS) program at Duke University and the Renaissance Computing Institute (a high-performance supercomputing organization based at the University of North Carolina and serving the entire state). This graduate-student conference had a limited registration of 65 (because of space restrictions). Many who would have liked to participate had to be turned away.

Starting in September 2006 and ending in May 2007, HASTAC hosted a full academic year of collaborative productions of face-to-face events at the host site and then webcast to a larger audience. For the hosting site, the events required new intellectual

**HASTAC**  
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blog, message, post to forum ...

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share with your colleagues, students, visitors ...

**DEBATE & DISCUSS //**  
hold your own town meetings, seminars ...

**TEACH IT //**  
build into your syllabi ...

**KEEP IT //**  
download for future courses and events ...

<p><b>SEPTEMBER 29-30   06</b> University of Illinois Urbana-Champaign</p>	<p><b>INCOMMON</b> "Written After the Storm" Poetics and performances on class, engagements and use of justice, teaching Ann Buckley, Rachel Conner, John Jennings, David Bord, Gerri Williams</p>
<p><b>OCTOBER 27   06</b> University of California, San Diego</p>	<p><b>INTERPLAY</b> Performance by Leland Robinson Performance by John Anagnostopoulos</p>
<p><b>NOVEMBER 9-11   06</b> Portland Community College</p>	<p><b>INCOMMUNITY</b> "Toward a New Ethic: Culture, Learning and Custom (Continuity Building)" Panel discussion on community and learning and performance by David Bord, Ann Buckley, John Jennings, David Bord, Gerri Williams</p>
<p><b>DECEMBER 8 &amp; 9   06</b> University of California, Santa Cruz University of Illinois, Urbana-Champaign Ohio State University</p>	<p><b>INTERACTION</b> "The Network as Interface for the Resonance Project" Panel discussion on community and learning and performance by David Bord, Ann Buckley, John Jennings, David Bord, Gerri Williams</p>
<p><b>DECEMBER 18   06</b> Portland Community College</p>	<p><b>INJUSTICE</b> "The Politics of Presence" Performance by University of Utah, March 2006</p>
<p><b>JANUARY 23   07</b> University of Michigan</p>	<p><b>INTEGRATION</b> "Making Change in the Classroom" Panel discussion on community and learning and performance by David Bord, Ann Buckley, John Jennings, David Bord, Gerri Williams</p>
<p><b>FEBRUARY 22   07</b> Wayne State University</p>	<p><b>INVITATION</b> "Digital Technologies, Learning, Museums, and the Democratization of Culture" Address by John Wills on the Google Book, Amazon, and a panel on the future of English studies</p>
<p><b>MARCH 1   07</b> University of Washington</p>	<p><b>INVITATION</b> "The Art and Science of Social Fabric" Address by Cynthia Breazeal</p>
<p><b>MAY   07</b> University of California, Humanities Research Institute</p>	<p><b>INNOVATION</b> "Collaboration: Teaching California's Tech-Wave Wave" Conferences across the disciplines at UCSD, UCSD</p>

**INTERFACE**  
HASTAC INTERNATIONAL CONFERENCE  
APRIL 19-21, 2007  
DUKE UNIVERSITY  
DURHAM, NC

**ELECTRONIC TECHNOLOGIES: THINKING AT THE INTERFACE**  
Panel discussion on community and learning and performance by David Bord, Ann Buckley, John Jennings, David Bord, Gerri Williams

LEAD BY  
Rachael Allen, James Boyle, John Swartz, David Bord, John Jennings

Figure 6.3

HASTAC In|Formation Year poster (<http://hastac-new.aas.duke.edu/events/information-year-integration>, accessed July 29, 2009).

boundary crossing, administrative buy-in to a new concept of what *technology* is and means, and an expansive sense of the arts, humanities, and social sciences assuming a leadership role in the production of novel kinds of content and innovative technologies for both the larger community and for an international virtual audience. Each site bore the cost of its own event, and each decided upon its own level of involvement and institutional commitment. This ranged from a simple webcast or podcast panel discussion to a full-out conference with elaborate technological innovation.

All of the events centered on In|Formation themes. The point was that information is not just about hardware and software, nor just about data in a narrow reductive sense. In|Formation indicates the complex ways in which information is produced at the interface of conceptual ordering and technological production, between data, its conceptual layering, instrumentation, and effective use. Information, in short, is always complexly in formation. Learning is in good part coming to an understanding of the intricate and interactive processes by which information is always in formation, today not least as a result of the overdetermining applications of new information technologies, of new media. With this comprehensive understanding of information in mind, the themes selected for the year were: In|Common, Interplay, In|Community, Interaction, Integration, Injustice, Invitation, Interface, and Innovation. The In|Formation Year was designed as a field-building enterprise that demonstrated the power of peer-to-peer institution-building on local and global levels.

This year of exciting, collaborative events, taken together, illustrated the possibilities for e-enabled interactive collaborative learning across traditional institutions. At once structured and improvisational, fueled by sustained knowledge of deep

structures and by innovative experimentation, this form of networked learning required trust and risk-taking, individual and interactive effort, shared knowledge and committed resources, and recourse to the tried and tested plus openness to the new, no matter the source. It required the recognition that theory without embodiment can be alienating, but that data or content or embodiment without the structuring of theoretical principle can be simplistic, ungrounded, and confusing. It involved the drive to succeed and a willingness to learn from failure and knowing when to push and when the game is up. And it meant being open to the fact that no matter how tough the going gets, learning and teaching should be fun all around.

The first HASTAC conference took place at Duke in April 2007 as part of the Interface events. “Electronic Techtonics: Thinking at the Interface” welcomed 150 participants and consisted of plenary sessions by visionary engineer and self-styled “Chief of Confusion,” John Seely Brown; by legal scholar (a cofounder of Creative Commons and the Center for the Study of the Public Domain) James Boyle; by new media artist Rebecca Allen; and by humanities computing pioneer and leader of the American Council of Learned Society’s Commission on Cyberinfrastructure for the Humanities and Social Sciences, John Unsworth. “Electronic Techtonics” also held a digital poster hall, virtual reality exhibits and a sensor-space interactive museum of the history of the Information Age, a multimedia dance concert, and numerous panels of refereed papers and public forums. The conference was videotaped and is viewable on the HASTAC Web site; the papers from the refereed panels have been published in a volume issued under Creative Commons by Lulu, the open-source press.<sup>8</sup>

An important component of “Electronic Techtonics” was a forum on “The Future of Learning” addressed to the general public, to schoolteachers, and to academics (figure 6.4). The

**THE FUTURE of LEARNING**  
 FIND OUT WHAT THE DIGITAL FUTURE HOLDS FOR LEARNING AND EDUCATION

**3** free public events at Duke University

**APRIL 19+21**

**THURSDAY • APRIL 19 • NASHER MUSEUM OF ART**

8:00 PM KEYNOTE ADDRESS  
 John Seely Brown, Senior Lecturer, UC Berkeley  
 "The Social Life of Learning in the Real Age"  
 Address in conjunction with "The Social Life of Learning in the Real Age" symposium, 8:00-10:00 PM, Nasher Museum of Art, 210 South Main Street, Durham, NC 27708. Free admission. Free parking. Free food and beverage. Free admission. Free parking. Free food and beverage. Free admission. Free parking. Free food and beverage.

**INTRODUCTORY REMARKS:**  
 Peter Hodge, Director, Duke University, Duke Chapel

**PANELISTS:**  
 John Seely Brown, Senior Lecturer, UC Berkeley  
 Cathy N Davidson, Director, Center for History and Heritage, Duke University  
 David Foray, Director, Center for History and Heritage, Duke University

**SATURDAY • APRIL 21 • DUKE UNIVERSITY SCHOOL OF NURSING**

10:45 AM - 12:00 PM PANEL  
 "The Architecture of Everything"  
 A panel discussion on the future of learning and education, moderated by Cathy N Davidson, featuring speakers from the fields of education, technology, and the arts.

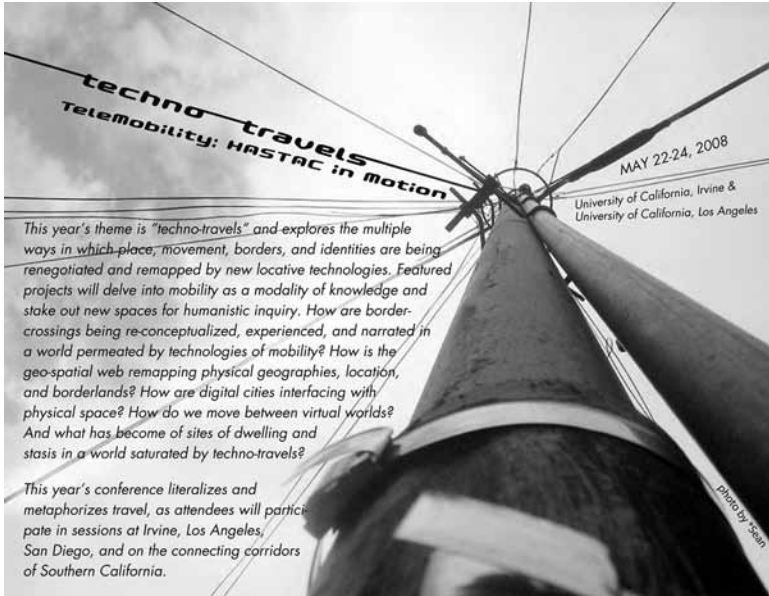
11:00 AM - 12:30 AM KEYNOTE  
 "The Future of Learning: State Perspectives"

Duke University, Center for History and Heritage, 210 South Main Street, Durham, NC 27708. Free admission. Free parking. Free food and beverage. Free admission. Free parking. Free food and beverage.

**Figure 6.4**  
 The Future of Learning Poster (<http://www.hastac.org/blogs/cathy-davidson/who-our-role-model-future-learning>, accessed July 29, 2009).

focus was on “what the digital future holds for learning and education,” and thus provided an explicitly pedagogical imperative to the experimental, technical, legal, social, artistic, and critical issues raised by the other sessions.

The final event of the HASTAC In]Formation Year ended, appropriately, with Innovation. This closing event of the series, held at Calit2 at the University of California at San Diego in conjunction with UCHRI, included state-of-the-art demo projects at the interface of humanities–arts–social sciences, and the digital presentation of work across the University of California. The afternoon consisted of demonstrations of innovative arts-related projects, designed to inspire new projects, not close off



**Figure 6.5**

Poster for the 2008 HASTAC Conference in California (<http://www.hastac.org/forums/conference-announcements-and-calls-papers/cfp-fourth-international-conference-foundations-dig>, accessed July 29, 2009).

the activity of the year. These included SPECFLIC, artist Adriene Jenik's new-media project, and the use of multispectral imaging and analytical tools to reveal hidden histories in major artworks, with potentially revolutionary implications for their interpretation and understanding. The latter is innovative work being conducted by Calit2's new Center of Interdisciplinary Science for Art, Architecture and Archaeology (CISA3), directed by Maurizio Serracini (figure 6.5).<sup>9</sup>



HASTAC has been actively engaged in training activities for graduate students and faculty across the digital humanities. As part of the In|Formation Year activities, UCHRI, the San Diego Supercomputing Center, and the educational division of the national TeraGrid initiative funded by the National Science Foundation offered a one-week skills-building, hands-on workshop, “Cyberinfrastructure for the Humanities, Arts, and Social Sciences” in July 2006. The workshop, repeated in summer 2007, introduced scholars to an array of learning technologies from global positioning system and various visualization technologies to semantic Web, database conception, construction, searches, gaming, and other applications widely used in the sciences and beneficial to educators and learners across all domains as well.

In August 2006, UCHRI ran a visionary and ambitious two-week-long intensive workshop, “technoSpheres: futureS of Thinking.” Coconvened by David Theo Goldberg and University of Southern California professor (and HASTAC coleader) Anne Balsamo, the event was part of UCHRI’s annual Seminar in Experimental Critical Theory (SECT). It was attended by approximately 65 people, along with the almost 40 instructing participants. There were backchannel conversation and daily blogging on the HASTAC Web site, as well as on an even more ambitious UCHRI gaming site that was finalized, collaboratively, and put to hard use by the sophisticated SECT fellows during the two-week workshop. Most of the fellows were graduate students or young professionals, although several full professors also participated as “students.”

Through the two weeks, word got around and some notable names in the field—John Seely Brown, Lev Manovich, Katherine Hayles, George Lewis, Craig Calhoun, Saskia Sassen, Larry Smarr, Geert Lovink, Lynn Hershman, and Guillermo Gomez-Pena—stayed around or dropped in to feel the pulse of an extraordinary

set of events. As with the previous activities, nearly all participants in the SECT group self-identified as loners within their home institutions. Many joked that they were scholars in search of a field. SECT provided a cohort for most of its multidisciplinary and multitasking fellows. It was an exhilarating two weeks of ideas and interchange; it was, in short, both a glimpse of and planning for the future. Each day began with a panel of paired thinkers from different fields: technology leaders, media artists, game designers, electronic publishers, social scientists, and humanists, all dedicated to and with significant experience in practicing new ways of thinking. Afternoons were spent with hands-on project development and breakout groups. Evenings (usually lasting until late at night—organizers sent participants home at 11:00 p.m.) were dedicated to demonstrations, media projects, screenings, and other multimedia events.<sup>10</sup>

Since he started running the Institute for Computing in the Humanities, Arts, and Social Sciences for the National Center for Supercomputing Applications at the University of Illinois in 2007, Kevin Franklin has expanded the number of training workshops in cyberinfrastructure for humanities, arts, and social sciences. He has also worked to encourage the adoption by HASTAC scholars of high-performance computing facilities at major national computing laboratories to advance research in humanities, arts, and social sciences.

Separately, HASTAC has also initiated a HASTAC Scholars Program (<http://www.hastac.org/scholars>). The program, begun in 2008, recognizes graduate and undergraduate students engaged in innovative work across the areas of technology, the arts, the humanities, and the social sciences. This group of HASTAC Scholars from institutions across the nation form a virtual network, bringing the work happening on their campuses and in their regions into interactive engagement and to

international attention. The Scholars spend the year as part of a virtual community of 50–100 students creating, reporting on, blogging, vlogging, and podcasting events related to digital media and learning for an international audience. The HASTAC Scholars also orchestrate a regular discussion forum on the HASTAC Web site featuring their own ground-breaking research and interests alongside those of leaders and innovators in the digital humanities, such as social networking pioneer Howard Rheingold or Brett Bobley, the director of the Office of Digital Humanities for the National Endowment for the Humanities.

### **HASTAC/MacArthur Foundation Digital Media and Learning Competition**

After completing the In|Formation Year, HASTAC embarked on a partnership with the John D. and Catherine T. MacArthur Foundation to run the Digital Media and Learning Competition (<http://www.dmlcompetition.net>). The MacArthur Foundation established a \$2 million prize to be distributed among 15 to 20 winning projects to reward innovative work in digital media and learning. The competition serves to surface the extraordinary activity taking place in these areas that neither the MacArthur Foundation nor HASTAC might have identified previously, to network winning projects, and to share solutions and best practices in the most open-source environment possible.

Since the opening of the competition's first round in August 2007, the interest has been intense. Web site activity for the first year of the competition received nearly 60,000 visits, approximately 30,000 occurring in the "absolute unique visitor" category. The average visitor clicked through 6.24 pages, indicating serious interest. Visitors came from 139 countries and used 55 languages, even though the first year's competition

required a U.S.-based principal investigator. But even with so much activity, no one expected the final tally. When the competition closed in mid-October 2007, 1,010 applications had been filed. The second year of the competition accordingly narrowed its focus to participatory learning prompted and enabled by digital media. Eligible participation was expanded to include 10 countries in addition to the United States, where the MacArthur Foundation and HASTAC had working relations. A unique category was added aimed at youth innovators, specifically 18- to 25-year-olds, interested in facilitating the development of innovative digital media learning projects from the garage to a broader theater of adoptability. In the second year, almost 700 applications were filed, 33 in the youth category and 133 from countries outside the United States. The third year will open the competition internationally, with no geographic restrictions.

Clay Shirky writes of the common Internet experience of the “crisis of success.”<sup>11</sup> He describes numerous stories of stunning victories that went bust, precisely because the virtual can be built on so little with so little and then, in a heartbeat, be called upon to deliver so much. There are many such allegories in other fields (publishing best sellers at small presses can similarly spell disaster), but the Internet seems to spawn such stories daily. A couple of street dancers create a dance and a song and upload it to YouTube. Suddenly, Soulja Boy is everyone, everywhere. Prisoners in the Philippines are doing the dance (and uploading their video to YouTube). Television appearances, a record deal, a release, and, by their second single, the kids from Atlanta are moaning about paparazzi and con men and lack of privacy. Who knows what the end of this story will be? In the virtual city, fame and fortune comes, and just as fleetingly goes. And sometimes it comes again.

Because so much of what happens on the Internet happens for the first time and without expectation or preparation, because there are so many new things to try and so many complex viral ways of communicating them, one never knows if 10 people or 10,000 or 1 million will show up at the flash mob experience or for the virtual party. Many an Internet business has collapsed because too many people appeared at the door. There were too many visitors for the hardware, software, and, most important, the human support could not keep up with demand.

HASTAC is in something of this situation now. With pride at its accomplishments in helping to create the architecture for and administering the Digital Media and Learning Competition, HASTAC is also now attempting to manage the “crisis of success.” With HASTAC team members focusing on running the Digital Media and Learning Competition, there is little time for actual fundraising to support HASTAC’s other operations or to expand its staff so that future competitions are not overwhelmed by so much success. More to the point, networks rarely perpetuate themselves. Unless they are populated, active, and exciting, fickle participants move on. That has not yet happened at HASTAC, which continues to grow, but it is a source of anxiety.

This is, after all, the parable and peril of every virtual organization. Many-to-many can be a gold rush or an avalanche. Choose your metaphor! In either case, it is easy to overwhelm a small, dedicated team, comprised mostly of volunteers. It is easy for a virtual institution’s goals to be swamped by its own success.<sup>12</sup>

One more consideration: HASTAC is not just a virtual network but a network of networks. That compounds both the possibilities and the challenges of sustainability. The possibilities

are fueled by the inputs from the individual networks that make up its membership, most if not all of them institutionally based. The activities of local networks become aggregated into the network of networks, fueling the latter in and through their own activities. The activities of local networks get added to the network of networks, while drawing on resources available from the super-aggregation of effort, people, and resources. But where the benefits to local networks are seen to lag, where local networks are absorbed in their own activities without perpetual prompt or pull into the larger network, the likelihood of continued engagement or contribution will lag, if not recede. A network of networks like HASTAC, a mobilizing network, accordingly requires constant attendance and attention, investment, encouragement, and publicity as reminders of the benefits of continued effort and engagement. But absent continued effort and engagement, the benefits are likely to dissipate. Once again, this is the challenge of the commons.<sup>13</sup>

### **HASTAC as a Trust Network**

Unlike most organizations, HASTAC has no formal rules—only action items. Loyalty is based on a shared mission, passion for the play of ideas and practices, and on clear, observable follow-through and deliverables.<sup>14</sup> As many commentators have noted, “developing a high-trust virtual community is no easy task.”<sup>15</sup> HASTAC has succeeded where many more formal organizations have failed, at least partly through what Hassan Masum and Yi-Cheng Zhang call the “interconnected ecology of socially beneficial reputation systems.”<sup>16</sup> And yet HASTAC is a tiny mobilizing network in a vast system of higher learning, which, in too many instances, is characterized by lockbox knowledge, competitive Internet protocol interests, disciplinary silos, and

other subtle and explicit ways of keeping learning local. Sadly, this is as true of public institutions as it is of private institutions; in any case, it is a distinction increasingly breaking down today (many large public institutions, such as the University of California and the University of Michigan, receive significantly less than 25 percent of their annual budgets from local state treasuries, and this percentage is declining).

The challenge is how to move to a more “open” idea of learning. It is a challenge, too, to move to a new definition of *institution* that both recognizes the constituencies that every university needs to address and offers its constituencies the best possibilities for collaborative learning suitable to the Net Age. The In|Formation Year was intended to form new networks and to inform the public, educators, administrators, and students about potentials for cross-institutional and cross-interdisciplinary e-learning in an In|Formation Age that is as much about injustice as it is about innovation.

HASTAC has existed as something like an emergent institution, and its constituents and its mission are far from monolithic. HASTAC leaders at the distributed sites learn with and from each other. They determine in practice and in situ what works and what does not. Each is a mobilizing network and distributed center of learning. HASTAC’s events are inherently collaborative undertakings; they are experimental ventures, with shared failures *and* productive outcomes (e.g., see figures 6.2 and 6.3).

New models for peer-to-peer institutions and mobilizing networks are needed. At present, there are many routes to stabilization: individual memberships, collective memberships, external grant funding, commercialization, or absorption into a larger, commercially-viable nonprofit organization such as EDUCAUSE. None of these models on its own is a sufficient condition for the creation of a field. It is possible that a hybrid model

will prove productive in cementing and sustaining a field with sufficient flexibility to accommodate the rapidly transforming conditions of digital learning. This book seeks to help discover what other models exist, which are the most feasible, and what are the true potentialities for the institution as a mobilizing network.

### **Other Models, Other Possibilities**

What other models are there? That is not a rhetorical question but an actual one. When this question was posed to readers of the draft of this book on the Institute for the Future of the Book Web site, numerous responses were received, several of which have been incorporated into this chapter. Steve Jones noted that one element is missing in this discussion of institutions: the personal element. “Where are the people?” he asks, “They seem implicit in this discussion but oddly removed.”<sup>17</sup>

This is a completely valid point. In fact, it is actual people—whether face-to-face or in virtual environments—who are responsible for mobilizing networks. And one issue that HAS-TAC has not yet confronted is what happens when there is a change in leadership? What happens when the current enthusiasm of the leaders wanes? In business, there is much discussion of “the crisis of the third generation.” Those in the first generation—those who found a business—give it all of their attention. Even the second generation, who typically were there at the founding, continue to be invested. However, by the third generation, there is enough distance between the zealous or enthusiastic founding vision—the mobilizing energy of mobilizing networks—and the everyday life of cranking out a productive operation. As a result, enthusiasm if not attention often flags. For many in the third generation, the business is no lon-



ger a point of personal pride and identification but is, basically, a cash cow. Often the business runs aground because of infighting among too many heirs, disputes in how the company should be run, lack of energy by the new directors, or a cultural conflict in the day-to-day sensibilities of the place as it has come to be and how it is thought it ought to be by new management. Virtual institutions, like actual businesses, face the same issues of leadership and succession. And, as Clay Shirky notes, for virtual businesses—especially those that have no profit to offer to those who work hard on their behalf—the human failures are far more catastrophic and the potential for failure even greater than in the so-called real world.

### **HASTAC as a 501(c)(3)**

One reason for the difference is, precisely, institutional grounding. Without that real institutional identity, the role of individuals—even networked individuals—is far more important than it probably should be to ensure long-term survival. As Mike Roy notes in this regard, it is “hard to underestimate the force of the support provided by the traditional institutions involved in this work. While clearly we don’t here propose the disbanding of all institutions of higher education in favor of these informal, ad hoc, emergent entities, the faculty who do this work are (we assume) largely paid their salaries and medical benefits and retirement contributions by these old-fashioned bricks and mortar (or bricks and clicks) schools that charge tuition, have endowments, etc. and therefore are powerful enablers of this work. The money matters.”<sup>18</sup>

This statement could not be more true. HASTAC’s support comes from universities, foundations, and government grant-making institutions. Costs for events by individual organizations

are borne by those organizations. Infrastructure is largely born by the two pillar institutions, Duke University and the University of California. How long can this last? How long will it hold? Those are questions that can not be answered for a variety of reasons. Perhaps most important and least tangible is the idea of respect, reputation, and credit. Why should a traditional institution support a virtual institution, however successful, whose credit is dispersed? Traditional institutions do not always like to support that which does not prominently bear their name; a network cannot hold and gain members if some institutions are more prominently advertised than others. Altruism is not the best business practice for ensuring sustainability.

Yet all of the normal roads to sustainability point up the significance of actual institutions for supporting virtual ones. For example, in exploring the possibility of pursuing 501(c)(3) status<sup>19</sup> for HASTAC, it became clear just how much HASTAC owes its supporting institutions, Duke University and the University of California. For example, the infrastructural and especially technological support for HASTAC is all located at one of those two institutions. Although a number of staff are paid solely or partly on grants, others are not. All staff, even those on grant funding, receive pension, health care, and other benefits from one of those two institutions. As a 501(c)(3), HASTAC would not be eligible to be part of these pension programs. It would have to find other ways to pay benefits, outside the umbrella, shield, and collective pools of Duke University and the University of California.

Other factors would also come into play. If HASTAC were a totally separate corporation, it would have to pay rent for office space. It would have to hire technology support. It would, in other words, have to pay for all that Duke University and the

University of California now give as in-kind support to HASTAC. HASTAC would have to purchase insurance against possible liabilities that are now assumed by the universities that employ and certify HASTAC's staff.

By the rules of Duke University and the University of California, if HASTAC were an independent 501(c)(3), the amount of time its staff spent contributing to HASTAC would be limited. The salaries of its staff are paid by the institutions, and the staff members are paid to do primary work on behalf of and representing those institutions. Even though the University of California and Duke University are not part of the HASTAC brand name, the names of those respective institutions supporting this innovative virtual one are evident (<http://www.hastac.org>). There is a luster to innovation, and presumably HASTAC sheds some of that back on the universities. As a 501(c)(3), everyone would have to be careful to keep HASTAC at arms' length from the two universities, and the universities would do the same. There would be limits on how much of the staff's time could be spent consulting for this private nonprofit. Although it would only cost about \$3,000 or \$4,000 to incorporate in one state, to do this across states is difficult. The taxation rules for independent nonprofits are notably tricky. In any state, filing for this status and working it through all the state approval processes can take a lot of time and attention.

Nor are the legal matters over once such status is granted. One next needs to apply for 501(c)(3) status with the Internal Revenue Service, which requires more forms and more legal bills, which can run in the thousands if not tens of thousands of dollars for the entire process. Again, operating between two states has specific complications. Factoring in 80 or more centers and institutes across many states and in different countries would add to the complications.

Added to the other duties of overseeing a social network and a communications node in a network of networks, HASTAC's administrators suddenly would be responsible for an array of bureaucratic tasks such as running the payroll and obtaining support from local civic authorities (which would need a plan for appropriate management systems for payroll, health, and retirement benefits). These various forms of approval would be required, as would the creation of bylaws, a formal corporate board, a dues structure, liability and fiduciary legal structures, and the kinds of structures and governance of such major professional associations as the Modern Language Association or the Anthropological Association of America.

### **The Bottom Line Is Not Just the Bottom Line**

Institutions are not just about economic supports, nor are the seemingly free worlds of the Internet beyond institutions or beyond economics. The bottom line is that, like many virtual institutions, HASTAC is supported by its institutional homes in myriad ways. The actual financial support to HASTAC (which is modest, since most of HASTAC is accomplished by voluntary, pro bono, and distributed labor) may well be less significant than the infrastructural supports these institutional homes provide to a virtual network of networks. HASTAC's independence as a virtual network would, ironically, be more limited were we to try to be institutionally separate and *independent*.

The emphasis on the word *independent* is meant to signal a larger point: The virtual and the real, the digital institution and the traditional one, are entwined in innumerable and complex ways. It is one role of a virtual learning network such as HASTAC to make those ways as visible and as productive as possible.

As Yochai Benkler emphasizes in *The Wealth of Networks: How Social Production Transforms Markets and Freedom*, there are many economic forms that are not strictly about proprietary motivations, profit, or market appropriations, and yet they are economic nonetheless.<sup>20</sup> Such things as reputation and credit are the intangibles exchanged between major, traditional institutions and upstart and start-up virtual ones such as HASTAC. Each institutional form has something to offer, something to gain from, and something that counterbalances the other. It is certainly not an equal exchange, but it is one that needs to be factored into the definition of *institution*. The institution as a stable social establishment and the institution as an organizing and mobilizing social network are both key now. As Benkler notes, “It is a mistake to think that we have only two basic free transactional forms—property-based markets and hierarchically organized firms. We have three, and the third is social sharing and exchange. It is a widespread phenomenon—we live and practice it every day with our household members, coworkers, and neighbors. We coproduce and exchange economic goods and services. But we do not count these in the economic senses. Worse, we do not count them in our institutional design.”<sup>21</sup>

These transactional forms need to be counted in institutional design, because, in every way, these nonmaterial forms of exchange need to count.

