When CUR asked me to address you today, I eagerly accepted the honor. But as I dove in to prepare these remarks on the power of undergraduate research in the arts, my inner critic, that strange chimera of insecurity and perfectionism, kept poking me on the shoulder: “Why YOU?” she whispered. Usually I’m pretty good at sending my inner critic out for coffee while I work, but this time she had a point. Why ME? Why on earth do they want a theatre artist, a playwright, to address the CUR conference? What can I bring to the table that hasn’t already been discussed?

The short answer belongs to fifteen undergraduate students with whom I had the pleasure to work during spring semester 2006 at the Virginia B. Ball Center for Creative Inquiry. These students, from a variety of backgrounds and majors, came together to research and write The Human Faustus Project, a play about the ethics of genetic engineering. Together we created a contemporary Faust story set inside a genetics laboratory; Dr. John Faust wrestles with demons inside and out as he negotiates the slippery issues of human genetic identity. The play was presented first as a staged reading at the Indiana Repertory Theatre, and then as the opening presentation of CUR’s Dialogues conference in Alexandria, Virginia. The first full production of the play was at Ball State University in November 2007, and the play is now under consideration for publication by a major play publisher.

The Human Faustus Project is an excellent example of productive undergraduate research. More importantly, however, it illuminates aspects of the creative process that can be employed in any research project in any field. And these aspects are what our twenty-first century students, the soon-to-be members of the much-touted “creative class”, will respond to.

The Big Morph

Richard Florida’s The Rise of the Creative Class (2002) argues that a new social class, the Creative Class, is driving significant changes in the nation’s economy. He defines the core of the Creative Class as people whose economic function is to create new ideas, technology and creative content. These creative people drive a “big morph,” where the Protestant work ethic and the bohemian temperament merge, defining a world order in which the markers distinguishing us from one another blur and fade. While Florida’s assertions have been scrutinized both in and out of the academy, there is little doubt that the possibility of a future in the knowledge-based economy drives many of our undergraduates. They inhabit a powerful group that melds BOTH the arts and the “hard” disciplines like science and engineering; work and play are now equally important.

Vanderbilt sociologist Steven J. Tepper suggests that American society is becoming a “participatory culture of art-making made possible by new technologies” and a mingling of high and popular art (Tepper 2006). He cites surveys of incoming college freshmen, and significantly more students today than a decade ago report a life’s ambition to produce a piece of art, or become accomplished in performing arts or writing. Domains such as You Tube, mySpace and Facebook, encourage anyone, anywhere to make art and share it. Our students don’t want to learn about meaning, they want to make it, and they no longer abide by the rules that divide disciplines. Yet these same undergraduates have just endured the most linear experience of all – the results oriented, teaching-to-the-test K-12 education track. They come to college seeking to merge these two distinct worlds and they will, whether we’re on board with them or not. During The Human Faustus Project, my students practically forced me to join Facebook, where I found independent research, links to Websites, graphic designs – all instigated by them, not me. I was fascinated by the performa-

1 For more information, including the students’ videography, please see the link to these materials published in this edition of CURQ on the Web, at www.cur.org/quarterly/webedition.html

Identity freezes the gesture of thinking. It pays homage to an order. To think, on the contrary, is to pass through; it is to question that order, to marvel that it exists, to wonder what made it possible, to seek, in passing over its landscape, traces of the movement that formed it, to discover in these histories supposedly laid to rest how and to what extent it would be possible to think otherwise.

-Michel DeCerteau
tivity of their online identities – posted attributes carefully chosen to convey information about them that shifted, sometimes on an hourly basis. The academy as a whole shuns this, but our students live in this world where they’re all performers, whether they realize it or not.

It’s About the “And”
Webster’s defines “research” as studious inquiry or examination: investigation or experimentation aimed at the discovery and interpretation of facts. Certainly in the performing arts there are researchers in the traditional sense, critics and historians who investigate theatrical arts and publish in scholarly journals. But it doesn’t end there – in the performing arts, the process of creation is also research, our “experimentation aimed at the discovery and interpretation of facts.” It’s no accident that we call our smaller theatres “laboratory” spaces, and that the creation of new pieces of performing art is called “experimental” theatre. The process we undergo is remarkably similar to scientific research: the artist has an idea that she wishes to explore, and asks a question: “How can I evoke a visceral response to the horrors of war?” or “How can I visually represent the ethical gray spaces of genetic engineering?” The artist works with tools such as text, space and bodies on stage to test hypotheses: “How would the audience respond if I made this choice?” The artist revisits her choices as the process evolves, and just as the scientific process culminates in publication, the artistic process culminates when the work is presented for a different group of collaborators, the audience. Contrast the popular notion that everything in the theatre focuses on opening night, opening is really just another part of that process. And the performance itself is steeped in time. It cannot be fixed, but remains a gesture – a gesture of thinking. Examples from professional theatre abound; from a new play about a lost South American tribe, to a dance piece that seeks to translate string theory into movement, artists seek truth, and translate that meaning to audiences.

So how do artists do this? It’s tempting to throw around buzzwords such as collaboration and interdisciplinarity, but what do they MEAN? And, more importantly, how are they relevant? Several aspects to the creative process can serve as important tools for research, focusing special attention on AND rather than OR.

• The Self AND the Group - Designer Michael Devine says, “In my experience, some of the most successful and creative workers were performing arts majors in college ... The performing arts major’s training involves intense individual study (role memorization, dance steps, technique) combined with the interdependence of rehearsal and performance as part of an ensemble effort – in other words, training in self-sufficiency and group dynamics. Forming small groups to solve complex problems is the best ‘real world’ training you can give.” (Devine 2006) Performing arts research maintains a unique tension between the self and the group, and successful performing arts students learn early how to manage this tension. The actor or designer completes individual work to bring into group rehearsals. Rehearsals then create more individual work. The whole informs the parts; the parts inform the whole. In other fields, the work is divvied up at the beginning of the process; students work on project components on their own, or in small groups, uniting only at the end to put it all together. Performing artists cannot work this way – we must take ownership of our piece AND the whole from the very beginning, at the same time.

• Collaboration - Our processes are essentially collaborative—they won’t work without collaboration. The myth of the singular creative genius is exactly that ... a myth. Margaret Boden suggests, “Monolithic notions of creativity, talent or intelligence are discouraging. Either one has got it or one hasn’t. Why bother to try if one’s efforts can lead only to a slightly less dispiriting level of mediocrity? A very different attitude is possible for someone who sees creativity as based in ordinary abilities we all share.” (Boden 1990) Collaboration drives creativity – debate around the table, the give and take between all of the artists in the rehearsal hall, the discussions...
among researchers trying to understand the significance of a set of observations—the sharing and exchange of knowledge throughout the process allow the project to develop into something larger than one singular vision.

• **Interdisciplinarity** — Collaboration necessarily forces interdisciplinarity. Theatre and art connect to bodies of knowledge outside the field; they become platforms for investigation. An issue raised in a sociology class, for example, could easily become the subject for a great play. But what might happen if all fields worked from an interdisciplinary perspective? A recent article in *The New York Times* describes Binghamton University's New Humanities Initiative, a program under development by biology professor David Sloan Wilson and English professor Leslie Haywood as a cross-disciplinary “fusion thinking” experience. Courses in the New Humanities rubric include history, literature, philosophy, sociology, law and business. Students use basic scientific tools like statistics and experimental design, and liberal arts staples like close analysis of texts, to identify animating ideas and compare them with other texts or historical artifacts. Rutgers emeritus professor of English George Levine states: “I was struck by how [the New Humanities proposal] absolutely refused simple dichotomy. There is a kind of basic literacy on both sides, and I find it a thrilling idea that people might be made to take pleasure in crossing the border.” (Angier 2008)

• **Process and Product** — Another “and” suggests that the act of creation is just as vital as the creation itself, and often more so. A results-oriented focus on the product of opening night is actually counter-productive; it lessens the impact of the performance. An actor too focused on being “good” for the audience misses the day-to-day work required in order to actually be “good.” In *The Human Faustus Project*, my students sometimes focused too much on the performance, grinding the work to a halt. I’d remind them that the performance was simply one more step in the process, “We will present what we will present, and the conversation will continue long after the performance ends.” If the students lost focus, I’d remind them of the importance of the product: “There WILL be an opening, and you’d better have your lines and blocking learned! The research is never complete until the audience has a chance to weigh in.” The balance swayed, back and forth—process and product—each informing the other. Focusing on product gives the process direction; focusing on process allows room for growth and time to re-examine the central idea, a circular way of working that our digital native, web- and wiki-savvy students respond to.

• **Rebellion** — An interesting thing happens when artists are incorporated into the mainstream. As I consider Florida’s thesis concerning the rise of the creative class, I wonder what new creative elements will emerge once fringe artists are incorporated into society’s mainstream. Theatre history is a tug of war between the mainstream, the “anointed,” and the avant-garde, the renegades who challenge the status quo, only to become the new status quo once they’re “discovered.” The artist is necessarily an outsider, and the research process should celebrate and respect that. But we’re faced with a contradiction— isn’t celebrating the renegade giving him the credibility he disdains? Perhaps—but what many artists crave more than anything is simple—space and time to create. Unfortunately, we’re also saddled with a rigid credit system and puritan work ethic that’s hard to overcome—space to play is considered to be a “waste of time.” The greatest innovators—Einstein, Jane Goodall, Watson and Crick, Marie Curie, Bill Gates—took the time (it was rarely given to them) to create new ways of understanding. What would happen if we gave our students space, threw them in a room outfitted with the latest toys and gadgets and let them play together? What would happen if we allowed more of our students to rebel?

Collaborative, interdisciplinary process-oriented rebellion; the great artists and the great scientists of our time have much in common. We are not two cultures; we are one and the same, in both product AND process. But how do we TEACH? Most undergraduate curricula are so results oriented that the outcomes of any research projects are determined long before the process even begins. Students must master years’ worth of fundamentals before they’re allowed to set foot in a lab or go out into the field. But performing arts students dive head first into collaboration, interdisciplinary, and rebellion from their first moment because we cannot teach any other way. In order to act a role or design a set, the student must do it, and learn from each attempt. So why, if the processes of discovery in the sciences, humanities and arts are so similar, do our teaching methods differ so fundamentally? What would happen if teachers in all disciplines allowed their students to seize the creative work right from the beginning, trusting that the important fundamentals would emerge? What would change for us, and for our students?
The Great Work Begins

Incorporating truly creative undergraduate research projects into our curriculum will have deep ramifications for the academy. In this new landscape the categories of teaching, research and service merge; good undergraduate research projects mesh teaching with research in the teacher/scholar model, and service, too, mixes in, as many of these projects create tangible, beneficial outcomes. One project can satisfy all three areas, but in the traditional tenure review this has a name, “double dipping,” and it’s frowned upon. So the very categories we’re trying to dismantle are the basis for our evaluation as faculty members. Until traditional, linear models of faculty evaluation change on a wider scale, I fear that fundamental academy-wide commitment to undergraduate research will likely remain at the perimeter of the system, undertaken only by those faculty members who are lucky enough to work in creative and supportive departments.

Engaging in creative projects also changes the natural academic hierarchy – students work with us, and the model of top-down education dissolves. True collaboration requires co-authorship, which can be scary to young faculty. Joe Trimmer, director of the Virginia B. Ball Center, says “Our faculty see the invitation to participate in such programs as the VBC or the Honors College as a dangerous diversion from the research agenda that drives their career. The thing that’s interesting to hear as you talk with faculty on campus is the pronoun “my” — MY work, MY project, MY, MY, MY. By contrast, at the Virginia Ball Center the pronoun is “our,” as in “our” seminar, “our” project.” (Trimmer, J. interview with Nancy Grace 2007) A commitment to undergraduate research requires a new definition of ownership. My students created the play with me — it has sixteen authors. That doesn’t lessen my work as an artist at all — in fact, I feel that the success of this project speaks volumes about me both as an artist, and as a teacher of art. Mix in pride in the accomplishments of these great students and the pedagogical and artistic experience is utterly complete.

The benefits of these relationships with our students go far beyond the classroom. The most important gift we can give our students is assurance that their college experiences are relevant to who they are as human beings, and who they will become, those fluctuating and growing identities. In working with our students we should allow them to witness:

- **Passion** – Our students need to understand WHY we do what we do, what drives us and what motivates us. No longer the domain of the graduate student, it’s more important than ever for undergraduates to have not just face time with a professor, but rewarding interactions with real, human, committed and driven role models.

- **The Intellectual Process** – We should model real critical thinking for our students at every level, and encourage them to ask questions not just of us, but also of each other, and of themselves. We should expect them to bring their absolute best to every encounter, to practice group interactions and take the messy intellectual risks that will benefit them the most.

- **Humanity and Uncertainty** – Our students should see us in moments of crisis, when the supposed expert doesn’t know either, where we’re forced to confront a problem and find creative solutions to it. Showing this side of ourselves to our students doesn’t diminish our impact as experts, rather, it lets them know that part of being an expert is to take risks and adapt when things don’t come out as intended.

- **Something Real** – We should take on projects with real ramifications that students can see and experience, not just...
hypothetical problems on an exam. Real-world applications heighten the experience, giving them something real to work for.

So how can we refresh our commitment to our students and ourselves? Regardless of discipline, we should resist those boxes that categorize us and instead work in that messy, shifting, undefined space of becoming. We should recognize that knowledge and its pursuit is collaborative and creative. We should resist the easy, linear model of thought and design experiences for our students that embody process and allow them to expand their ideas of self. The world is certainly changing, our identities as teachers, scholars and mentors are changing. We in the academy can drive that change, which will demonstrate that we’re responding to the needs of real students, students who have grown up as digital natives, who have new ways of understanding that will shape the society they’re about to enter. The performing arts and the weird, creative people that populate them offer new models of research and learning to any field, and any student of life willing to look deeply into that gesture of thinking and embrace it.

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Jennifer Blackmer
Assistant Professor of Theatre
Ball State University
Muncie, IN 47306
Email: jsblackmer@bsu.edu

Jennifer Blackmer is a freelance playwright and director, and an assistant professor of theatre at Ball State University. Her most recent play, The Human Faustus Project, written with fifteen undergraduates at the Virginia B. Ball Center for Creative Inquiry, premiered at Ball State in November 2007 and was also seen at the opening session of the Council on Undergraduate Research Dialogues conference in Washington, D.C. Her current projects include On Again with Fresh Courage, a new play about Anne Frank that also premiered in November 2007 at the Children’s Museum of Indianapolis; a new English translation of Morimoto Kaoru’s A Woman’s Life (with Guohe Zheng); and Delicate Particle Logic, a play about physicist Lise Meitner, for which Jennifer won a creative arts grant from Ball State University.