Applied Humanities

SCHOLARSHIP AND TEACHING in the humanities can sometimes be overly self-referential. Rather than foster citizenship and social engagement, undergraduate literature classes are often limited to exercises in textual interpretation as students learn to compare and contrast formal devices and thematic motifs. How do we measure the student's mastery of Dostoyevsky's *Crime and Punishment*, for example? Is it by his or her ability to retain the plot and character actions? Is it by the number of different motifs the student is able to identify? Is it by his or her ability to recognize verbal polyphony? Or, rather, is it by the student's refusal to hurt another person regardless of how miserable and despicable that person may be? Is it by his or her decision to volunteer at a homeless shelter because poverty, as Dostoyevsky depicts, corrodes humanity? The step from analyzing verbal polyphony to fighting poverty is not a short one, and only rarely does teaching and scholarship in the humanities help students make that step.

Ultimately, fostering the ability to own (enact and embody) a literary or philosophical insight should be central to humanities learning in college. Withdrawal into information transfer without a view of tangible action or application is a serious failure of education. "We know we can teach [students] Keynesian economics and the history of the Italian Renaissance," Richard Hersh and Carol Geary Schneider explain (2005, 10). "But if that is all we do, then we have failed them. If, in the process, we don't also teach students about passion and the relationship between passion and responsible action, then we leave them dulled."

If this insight is true of science, it is doubly true of the humanities. Science students at least have the advantage of practicing the application of scientific concepts to phenomena

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Bridging the Gap between Building Theory & Fostering Citizenship

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through projects, practica, and labs. For humanities students, however, the transfer of knowledge from concept to action often goes untested and unrealized. Yet, the stakes in the humanities are just as high as in science, if not higher. If we cannot afford to have students fail in the application of trigonometry concepts, we definitely cannot afford to have them read Robert Graves and easily justify a war, or to have them read Daniel Quinn's *Ishmael* and remain indifferent to animal extinction. Embodied and enacted humanism is more powerful than its theoretical counterpart, and it results in better conceptual learning as well.
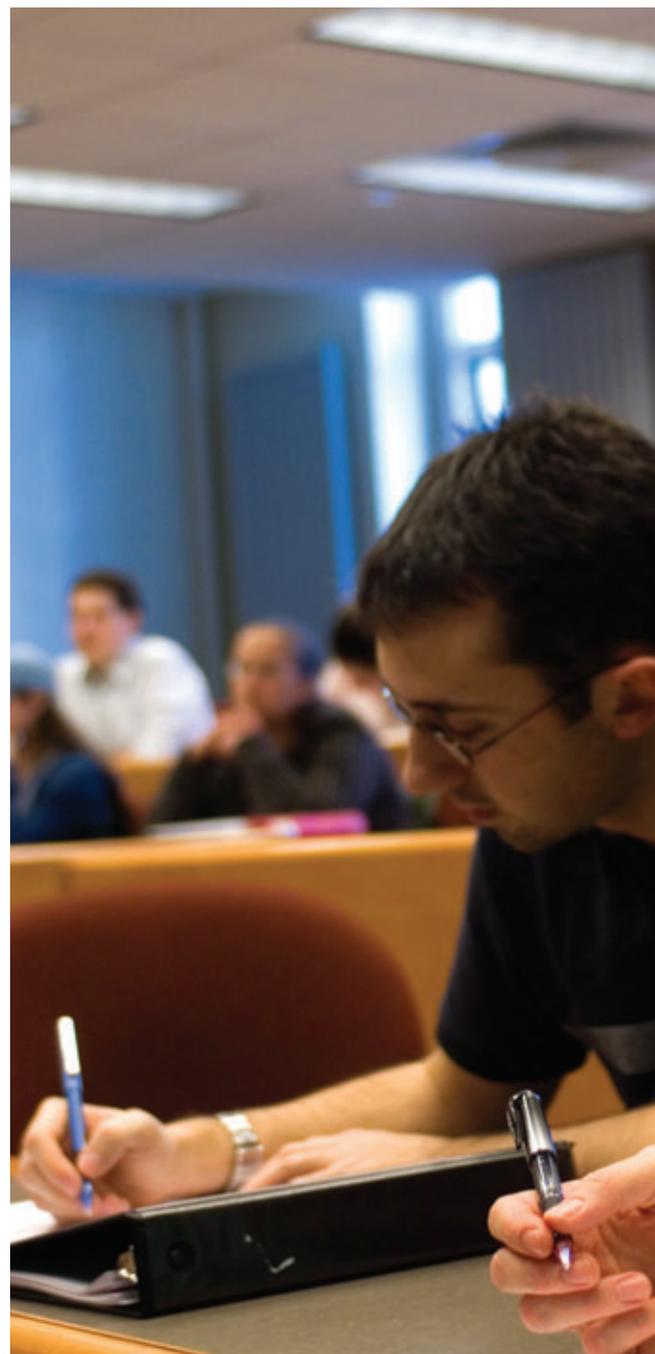
Strategies for making concepts tangible

How can we foster this type of learning in the humanities classroom? In attempting to answer this question here, I propose five strategies for making concepts tangible: through media and the arts, through activism, through cocreation, through contemporizing, and through cross-pollination. Underlying these strategies are three interconnected ideas that have been suggested in the literature on the crisis of the humanities. These ideas are centered on overcoming extreme specialization and formalism (Spellmeyer 2003), opening a wider frame of reference through interdisciplinary crossover (Klein 2005; Gallagher and Greenblatt 2000), and reattaching the humanities to the arts (Scholes 1998; Spellmeyer 2003; McBride 2004).

The five strategies derive from my own personal teaching experience at two colleges as well as from the observation of countless classrooms across the country in the course of a nationwide study of interdisciplinary education conducted by the Harvard Graduate School of Education. The course examples discussed below are composite portraits of courses either observed or personally delivered. The idea behind proposing specific strategies is not to foreclose further experimentation, but rather to open doors wide for building upon these pedagogies by way of extension, critical development, and adaptation to individual instructional needs.

1. Embodiment through media and the arts. The media and the arts strategy calls upon students to embody abstract concepts through the creation of artifacts. Literary styles or philosophical ideas are transformed into objects (masques, models, designs, drawings) executed in a medium of the student's choice (clay,

charcoal, wood, computer animation, poetry, music). Students have to capture—and be able to articulate—the essential aspect(s) of the humanistic concept studied. As a result, reading the textbook description of the concept becomes not an end in itself but an idea generator for the creative project. The physical expression of an abstract idea through art makes the concept more real and personally meaningful for students. Through creative embodiment, students acquire ownership of ideas.

The application of this strategy transforms the teaching of Introduction to Humanities from a dates-and-names course into a studio environment. Instead of overloading students with reams of data, the instructor identifies core themes and categories of the topic (e.g., the Renaissance, linearity, the mechanical universe of the Enlightenment) and then asks students to represent them in an artistic medium of their choice. The creative process may take place inside or outside the classroom, depending on time and material constraints. The critique session takes place in class and involves both the presentation of the artifacts by students and their justification of creative choices by the content of the explored concept.

2. Activism. The activism strategy provides opportunities for students to act upon insights developed through conceptual learning in the humanities classroom. Not all humanities courses lend themselves equally well to an activist extension (interdisciplinary or problem-based

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courses are the best candidates), and it takes both instructional and institutional effort to make this work. But when established, on however limited a scale, these opportunities offer the most direct way to experience humanistic concepts in action.

In the course Literature and the Environment, for example, the discussion and interpretation of texts (e.g., Daniel Quinn's *Ishmael*, Aldo Leopold's *Sand County Almanac*, Annie Dillard's *Pilgrim at Tinker Creek*) is reinforced by real-life opportunities to act upon newly forged beliefs through limited service at a local environmental organization. To make a transition from understanding biocentrism to practicing it, students may engage in investigative reporting on industrial pollution, participate in tracking a compromised species, or address K–12 audiences on a particular environmental issue. They also write a "call-to-arms" term paper documenting their experiential learning and calling attention to an urgent civic issue. Students in such a class develop a new approach to the environment and to the humanities as they begin to see the world-changing potential of the texts they read. Their writing style matures through better argumentation, increased social engagement, and the development of a distinctive personal voice. Students emerge from this course as concerned citizens—asking why before they ask how, and driven to translate humanistic insight into social practice.

3. Cocreation. The cocreation strategy transforms a student of literature from an admiring reader into an involved cocreator. Students read texts with a view to their potential transformation, extension, or critical development. They see in "Great Books" the act of great creativity and craftsmanship in which they, too, can take part. Such creative participation tends to foster deeper understanding and appreciation of literature, while also developing in students a more critical stance.

A course that focuses in-depth on a few literary texts or authors is a good candidate for the application of this strategy. One way to make interpretive efforts vibrant and vital to students (and not too formal or abstract) is to connect them to students' own imaginations and writings. A student may be asked to act as coauthor of *Middlemarch*, for example, and to expand upon or further develop the original masterwork. The student may invent a new character and insert it into the story, provide a different ending to a novel, or situate the events of a novel within a different culture or time. By enacting these transformations, the students become deeply immersed in the style and subject matter, and they are empowered by cocreative license to change and critique them. The result is critical and mature ownership of both the mechanics of the text and its core ideas.

4. Contemporizing. The contemporizing strategy brings abstract concepts to life by steeping them in the present moment. As engaged participants in their own culture, students read the past through the lens of the present and develop deeper insight into it. By "trying on" a particular concept that is made obscure and abstract by spatial and temporal distance, students become aware of the particulars of their own cultural experience, which they begin to see as more malleable and open to transformative action and intervention. This strategy involves the process of embedding remote ideas within contemporary culture and personal experience.

Teaching Daniel Defoe's novel *Moll Flanders*, for example, may involve a dry analysis of the materialism of early capitalism in the Age of Enlightenment. Alternatively, the instructor can make this historical period come alive by comparing and contrasting Moll Flanders's acquisitiveness to our own cultural obsession with profit, image, and personal security. What is our judgment of our own materialism? Is it similar to or different from Moll's? Students can also be asked to find a contemporary equivalent of Moll among media personalities or to rewrite an episode of the story—using the cocreation strategy in addition to contemporizing—for a contemporary audience. Through the search for points of connection and disconnection between the text and their own culture, students emerge as historically informed readers of classical texts and as critical consumers of their own culture.

5. Cross-pollination. New insights or plans of action are often born at the intersection of two ideas, methodologies, or concepts. Since the humanities disciplines are in the business of commenting on, critiquing, and contextualizing events, experiences, and phenomena, they lend themselves most naturally to interdisciplinary crossover. The cross-pollination strategy involves bringing a humanities perspective to bear on topics or methodologies outside of its realm or on different disciplines within its own

realm. Substance and depth are imparted by linking concepts from different disciplines.

A more complex and multi-faceted understanding of human memory is bound to emerge within a college classroom when, for example, the perspectives of a neuroscientist and a literary critic converge. In a class such as Science and Literature of Memory, students learn about memory mechanisms as manifestations of brain function. But by also reading biographies and autobiographies, they recognize that different memory mechanisms lead to different ways of recording or retaining life events. Students discover both the fallibility and the internal logic of memory through the lenses of neuroscience and creative writing. In the process, the whole notion of memory is enlarged, concretized, and transformed into a tool for self-inquiry.

All five of the preceding strategies for making concepts tangible aim to take students beyond theoretical abstraction and put them in touch with tangible reality: the reality of one's creative process, wordsmithing, or craftsmanship in any medium (strategies 1 and 3); the reality of social life (strategy 2); the reality of one's own time and culture (strategy 4), and the re-

> **None of the strategies shortchanges conceptual learning in any way**

ality of knowledge as revealed in transfer (strategy 5). None of the strategies shortchanges conceptual learning in any way. But they all view conceptual learning as a means, not as an end in itself. To embody concepts in clay or charcoal or to push them further through coauthoring requires close reading and sophisticated interpretation. To implement ideas—such as environmental agency—in a real-world setting, one needs to possess thorough and critical knowledge of those ideas. The act of "trying on" in the present concepts that may be rooted in the remote past or converging ideas from several different fields make it imperative that students know the historical and disciplinary context well enough to be able to engage in a productive compare-and-contrast process. Thus, the goals of liberal education and the personal ownership of ideas impart a higher purpose and motivation to the study of the humanities and enhance, rather than compromise, theoretical and conceptual learning.

This conclusion is echoed and substantiated by *Scholarship in Public: Knowledge Creation and Tenure Policy in the Engaged University*, a new report from the Tenure Team Initiative of

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Imagining America: Artists and Scholars in Public Life. The authors of the report point out that "significant numbers of faculty believe that public scholarship and creative work are driving vital new areas in the humanities and arts" (Ellison and Eatman 2008, iii). Therefore, they urge, initiatives of public engagement on the part of arts and humanities faculty need to be supported by "the reward system, the incentive system, our communication practices" (x). Hopefully, the many examples of public engagement in the humanities scholarship cited in this report as well as the recommendations to support them administratively indicate a turning tide.

Engaged humanities scholars

Many more strategies could be developed to help move academic practice beyond theory building to active reengagement with social life. The obstacles to this goal of liberalizing humanities education, however, are many. The tenure system pushes for ultraspecialization and for the formalization of humanities disciplines, cultivating the ivory purity of their abstract conceptual bases. The continuing dominance of postmodernist thought in research and criticism challenges and deconstructs the role of the humanities as a positive force in society. Yet there is reason for hope. A number of top humanities scholars are gaining recognition for pioneering approaches that bring the humanities out of the ivory tower and back into the thick of cultural life. By attending to the goals of liberal education, these scholars inspire hope that humanities research and teaching may move in this direction.

Elaine Scarry, the Walter M. Cabot Professor of Aesthetics and the General Theory of Value in the English department at Harvard University, keeps a very close eye on how literary theory can be applied to the most urgent issues in the world—war, electronic signaling, plane crashes, nuclear weapons, and the experience of pain. She applies the same analytical energies to the study of Thackeray as she does to reading documents on the 1996 crash of TWA flight 800 or naval weapons manuals. Scarry sees her mission as that of an engaged public intellectual. "There is nothing about

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being an English professor that exempts you from the normal obligations of citizenship," she observes. Literary criticism provides a methodology for "reading" contemporary culture and even for "solv[ing] social problems and sav[ing] lives" (Eakin 2000). Passion for disciplinary crossover and public activism mark Scarry's work in the humanities and demonstrate that, even from atop the ivory tower, humanists can branch out into the real world and make their voices count.

With doctoral and master's degrees in electrical engineering and computer science as well as a Master of Fine Arts degree in music, Diana Dabby, associate professor of electrical engineering and music at Olin College of Engineering, bridges two academic worlds: the sciences and the arts. A concert pianist and a composer, Dabby feeds initial musical themes into a "chaotic mapping" engine she developed to produce nonlinear musical variations of the original works. Composers around the world use her engineering innovation to generate creative nonlinear variations on musical themes. This technique for connecting chaos theory and musical expression can also be applied to other art forms—visual or kinetic inputs in graphic art, word sequences in poetry, or dance movements. In a sense, Dabby makes physics concepts audible and tangible in her musical compositions. This cross-disciplinary translation is a form of cocreation: she actually extends and enriches her musical expression through subtly engineered variations. She also demonstrates the creative range of science and makes her students aware of its power to channel personal expression.

Stephen Greenblatt has long been a proponent of "treating cultures as texts" (Gallagher and Greenblatt 2000, 13). The New Historicist approach, of which he is considered the founder, treats a literary text as a product of its time and social environment rather than a thing in itself. The placement of a text within its broader social and historical context transforms it into a tangible cultural artifact, the carrier of contemporaneous social concerns, economic practices, and philosophical beliefs. The New Historicist project, according to Greenblatt and Gallagher, is concerned with "finding the

creative power that shapes literary works *outside* the narrow boundaries in which it had hitherto been located, as well as *within* those boundaries" (2000, 12). In this effort, Greenblatt "contemporizes" the literary text; he makes it aware of its historical and cultural roots and connects it powerfully to the audience. Students process the text on more levels than the linguistic and become engaged readers of the whole culture that produced it.

Scott Gilbert, an accomplished biologist at Swarthmore College and author of a major textbook of developmental biology, is also trained in cultural and feminist theory and teaches a course called History and Critique of Biology. Humanistic insight helps him put biology in a broader social context. In this encounter, cultural theory of gender roles, for example, meets with biological facts on mimicry, gender cannibalism, and the process of fertilization. Some of the theory stands up to the test and is enriched by scientific data. Other concepts and metaphors—for example, "sperm as a warhead"—prove to be biologically fallible and misleading. Gilbert sees both science and the humanities as two interpretive systems—one bent on limiting interpretations and paring away false assumptions (science), and the other (humanities) on generating a steady stream of new interpretations. This cross-disciplinary dialogue helps Gilbert's students overcome the misconceptions that science is just solid truth and that humanistic concepts are pure abstractions. They realize that the conceptualizations of the humanities refer to phenomena and tangible relationships in the real world and that the real world both learns from these ideas and metaphors and informs them in a reciprocal way.

Conclusion
The efforts of these scholars are driven by the same core impulse as the five strategies proposed above, namely, the desire to restore to the humanities its liberal education mission of fostering involved citizenship and active ownership of ideas. Scarry imparts the sophistication of literary analysis to the interpretation and resolution of urgent issues of the day. Dabby extends musical ideas by translating them into a physical medium. Greenblatt opens up literary texts to the larger culture that produced them. Gilbert tests and probes humanistic insights by bringing relevant scientific data to bear on

them. These approaches indicate the variety of opportunities for connecting the humanities to real issues and physical phenomena and for fostering in students a sense of tangible ownership. Following the lead of these scholars could create momentum for reawakening humanities teaching to its civic duty.

The engagement of students in cocreation, action, and ownership of concepts does not compromise conceptual learning in the humanities. On the contrary, it enhances it. On a par with measuring students' conceptual understanding and skill at textual analysis, new outcomes should be developed within the humanities disciplines to measure the maturity of students' moral judgment, their degree of social awareness, and their ability to own and embody their beliefs and theories. □

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