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THE INTERDISCIPLINARY TURN IN THE ARTS AND HUMANITIES

by

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Abstract: This article suggests that the arts and humanities are in the midst of an interdisciplinary turn. This turn is a reaction to two problems: the transformation of universities in the twenty-first century and the challenges posed by postmodernism. The interdisciplinary turn, as identified here, is toward critical thinking in teaching and learning and toward critical interdisciplinarity in humanistic inquiry. Exposing the problems and highlighting the opportunities can help scholars, artists, and educators consciously apply these approaches and intentionally plan for interdisciplinarity, with the goals of fostering student learning and advancing scholarship. By understanding what is happening in this turn, scholars and educators in the arts and humanities can better lead interdisciplinarity into the future.[1]

Keywords: interdisciplinarity, disciplinarity, critical theory, postmodernism, pedagogy, teaching and learning, critical thinking, arts and humanities.

Introducing the Turn

The arts and humanities are in the midst of an interdisciplinary turn. Over 250 books on interdisciplinarity have been published in the last decade alone, and, increasingly, academics frame their work as interdisciplinary. In a University of Minnesota (2006) survey of 150 professors from social sciences and humanities, almost all considered their work to be interdisciplinary. In a sense, we are like Molière's (1989) *Would-Be Gentlemen*: In the course

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of learning about literature, he is surprised and delighted to learn that he has been speaking prose all his life (p. 281). We are all interdisciplinarians now. The danger, however, is that if everything and everyone are interdisciplinary, then the term is defined out of existence. The interdisciplinary turn, as identified here, is toward critical thinking in teaching and learning and toward critical interdisciplinarity in humanistic inquiry. This turn is a reaction to two problems: the transformation of universities in the twenty-first century and the challenges posed by postmodernism. This turn creates opportunities for scholars and educators in the arts and humanities to foster student learning and to advance scholarship.

In order to provide clear orientation and specific examples, this article focuses primarily on the arts and humanities.[2] The broad fields of arts and humanities are, of course, large components of the modern university. The issues facing arts and humanities do not exist in isolation, and are indeed intertwined with issues in all other areas. Therefore, while the goal here is to clarify these issues in regard to the arts and humanities, this article does refer to other realms of knowledge.

Leaning into the Turn

In order to understand this turn, it is helpful to briefly trace the path: how disciplines and interdisciplinarity emerged, and the inevitable tension—and complementarity—between them. Humans naturally bring holistic approaches to problems, employing all our available knowledge and bringing all our tools to bear. But in the Western academy, scholars are conditioned to understand the world through disciplines. The epistemology is disciplinary.

Since ancient Greece, if not earlier, philosophers have sought to understand the nature of human knowledge, including what one knows and how one learns. From that era one can see the emerging tension between holistic and atomistic approaches. These methodologies, then and now, are not mutually exclusive, but do expose tendencies for how knowledge is produced and understood. While Plato tended to see philosophy as a more unified approach and body of knowledge, Aristotle saw more specific divisions of inquiry, with an emphasis on categorization. Medieval Christianity divided the world of knowledge into the *Trivium* (grammar, logic and rhetoric) and *Quadrivium* (music, geometry, arithmetic and astronomy), and these disciplinary taxonomies started the process of shaping our universities (Klein, 1990, pp. 19-20).

[2] This includes how art is studied and taught, because art professors may be practicing artists with backgrounds and perspectives from outside the academy, but not how art is created, since this article is on interdisciplinarity in the academy, not the entire realm of art.

The ideal of unified, holistic knowledge continued, from Renaissance humanism through Romanticism, but in the nineteenth century universities became more specialized and fragmented. The German academic structure became the model for the modern research university, with disciplines institutionalized as departments and systems of *Wissenschaft,* or "scientification," of knowledge. Professors were required to have specialized, professional training, with the certification of the appropriate academic degree, and advanced their careers by engaging in focused, discipline-based research, validated by their peers in the given discipline. Not only was existing knowledge disciplined, but also the production of knowledge was subject to discipline. Wilhelm von Humboldt advanced the goal that a university should exemplify how knowledge is discovered and should advance the frontiers of knowledge itself, rather than simply instruct students in existing knowledge. In addition, as modernism and disciplines developed, they became interdependent and interrelated, emphasizing purity of form and prioritization of theory over practice (Crease, 2010, p. 85; Forman, 2007, p. 2). In this discipline-based university model, the professoriate has tended to look down its collective nose at generalists as being amateurs and popularizers, or even dabblers. Discipline now equals department, with authority to regulate standards, bureaucracy to organize societies, and budgetary control to subsidize research (Klein, 1990, pp. 21-22; Klein, 2005, pp. 25-26*;* Rűegg, 2004, pp. 5, 17).

This disciplinary development has resulted in great advances in knowledge and made possible the progress of modernity. Disciplines have made it possible to delve deeply into one subject, to learn everything possible from one set of tools and to develop new tools based on discoveries. Disciplines have developed science, industry, arts, and letters, and the disciplinary model is imitated worldwide.

The problem, however, is that disciplines can be arbitrary and reductive, and "distort as much as they reveal" (Sarewitz, 2010, p. 65). Disciplines do not necessarily emerge naturally from knowledge itself, but are instead often based on "external contingencies and internal intellectual demands" (Klein, 1990, p. 104). In the case of the arts, this problem is evident when one considers dance as opposed to mime. Is a given performing artist a dancer or a mime? The forms do have apparent differences. For example, dance is often accompanied by music and may feature elegantly costumed performers, while mime may be silent with performers in more neutral clothing. The differences between these forms lie in these surface features, while at a definitional level they are quite similar. Both are forms of physical performance, in that they foreground the movement of the body through space and deemphasize language. At

universities, however, dance and mime are studied and taught quite differently. Mime is part of the discipline of theater, while dance is considered a separate discipline. This division does not necessarily come from the art itself; instead the distinction is based on the prime movers in each form. Thus Decroux and Lecoq are considered mimes because their original work emerged out of theater. Theater professors studied their works in graduate theater programs and then went on to teach their techniques in theater departments. The works of Graham and Bausch, on the other hand, emerged out of dance, and their works have been studied and taught in dance departments. Even a newer, more neutral, term, "movement theater," puts a thumb on the disciplinary scale. A far greater understanding of these performances and artists could be gained from an interdisciplinary examination of movement and space, and text and sound. How does the body move, or remain still, through and in space? What is the relationship of movement and stillness? How are text, language, sound, and silence deployed? What are the relationships of text, nonverbal sound, and silence? How are each of these performance aspects heightened or diminished in the audience's attention?

Disciplines exert this gravitational force through a linkage of discipline and power. As Foucault (1977) observes, "disciplines became general formulas of domination" (p. 137). Stuart Henry (2005) similarly refers to a "disciplinary hegemony" in which "disciplines have come to control content, pedagogy and the organization of higher learning" (p. 4). Disciplines, in this view, become systems of power that control resources and access to dissemination.

In response to this disciplinary hegemony, the concept of "interdisciplinarity," referring to knowledge and its production, emerged in the early twentieth century, with identifiable interdisciplinary movements and programs. Initially, interdisciplinarity was marked by a nostalgic search for a lost "golden age" of unified, holistic knowledge (Klein 1990, pp. 12, 19). Over the course of the twentieth century, the drivers of interdisciplinary growth and development, according to Klein (2010b), have been the complexity of nature and society, the desire to explore problems and questions that do not nest comfortably within one discipline, the quest to solve society's problems, and the opportunity to exploit the power of new technologies (p. 26). Complex problems have required complex approaches, resulting in fissions of existing disciplines into subdivisions and fusions into new interdisciplines (Klein, 1990, p. 43).

A precise taxonomy of interdisciplinarity may be counterproductive to fluid and creative approaches to scholarly inquiry. Julian Huxley (1967), the evolutionary biologist, suggested that instead of inventing new terminology, "perhaps plain *cooperative* would be better" (italics in original; p. 32).

Huxley's clarity of vision is valuable, though Klein (2005) suggests some features of interdisciplinarity that help to clarify its nature: permeating boundaries; integrating methods and theories; creating new epistemologies, alternative structures, and pedagogies; and providing opportunities for political engagement, cultural awareness, and greater equity (pp. 6, 37, 55, 66).

Discipline and interdiscipline can also be seen as complementary: Disciplines can encourage depth and technical mastery, while interdisciplinarity can provide for a broader perspective (Fuller, 2010, p. 52). This relationship is evident in Ibsen's *Hedda Gabler* (1965), in which the professorial Tesman writes the ultimately specialized dissertation on domestic handicrafts of Brabant in the Middle Ages, while the Dionysian Løvborg writes about "The Future." Løvborg is the interdisciplinary partner to Tesman's discipline.[3]

I. The Interdisciplinary Turn

This intellectual history sets the stage for the current interdisciplinary turn. In the twentieth century, interdisciplinarity fought its way into the academy, sometimes with grudging acceptance and often kept on the margins. In the twenty-first century, while disciplines remain dominant, interdisciplinarity has become established, as witnessed by the flood of interdisciplinary books referred to above, the creation of interdisciplinary departments, and even the construction of interdisciplinary buildings. This progress is the culmination of a process that has been going on for decades. The current interdisciplinary turn, however, suggests new approaches to scholarship, teaching, and learning are emerging now. The term "turn" is borrowed from Richard Rorty (1979), who looked at what he called the "linguistic turn" and concluded, "Interesting philosophical change … occurs, not when a new way is found to deal with an old problem, but when a new set of problems emerges and the old ones begin to fade away" (p. 264).

Rorty's approach suggests that one ask what new set of problems has emerged at this historical moment. Two problems have confronted academic institutions and scholarly inquiry: the challenges to universities posed by budgets and demographics, and the challenges to scholarship from postmodernism. The current interdisciplinary turn is in response to these problems: a turn toward critical interdisciplinarity in scholarship, and a turn toward critical thinking in teaching and learning. Exposing the problems and

[3] Note, however, that Tesman gets hired as a professor, while Løvborg gets drunk, loses the manuscript and shoots himself.

highlighting the opportunities can help scholars and educators consciously apply these approaches and intentionally plan for interdisciplinarity, with the goals of fostering student learning and advancing humanistic inquiry. By understanding what is happening in this turn, professors can better lead interdisciplinarity into the future.

1. Problems Leading to the Interdisciplinary Turn

a. The Turning University

Regarding the first problem, the challenges to universities, leaders in higher education agree that the problem of funding is immense. While the crisis of the great recession may have passed and some state budgets are rising, the money is not necessarily being used to restore cuts to higher education. Academic leaders are trying to determine the long-term trends: Are universities in the downturn of a cycle or in the midst of a radical transformation? To answer that question, one needs to look at the challenges facing higher education.

Universities are stabilizing, and hiring has resumed. University endowments are recovering, and private contributions have picked up. University budgets, however, are still constrained. There is little new money, government support is down overall, families struggle to pay for college, and the total price of attending college continues to increase beyond the cost of living. In addition, the demographics are changing. The student body of the future will be older, more diverse, more female, more from lower socio-economic levels, and more likely to work while in college. These changes are not problems per se, but leaders recognize that universities must change, as must the approaches to teaching and learning, because of the new student body. The result, with careful planning, can be a more positive learning environment for everyone.

Regarding future funding, the line goes, "Flat is the new up." The new normal consists of uncertainty, ambiguity, and a need for change. University and government leaders will continue to offer support for the arts and humanities, and those words of support may be backed up with funding. But administrators also look at data: the number of students, the cost of delivering instruction, and the ability to bring in external funding. These are areas in which the arts and humanities struggle to compete with STEM disciplines. Many universities have eliminated programs in the arts and humanities because of perceptions that study in these fields does not

lead directly to degree-related jobs, and that these fields do not contribute to economic development. In addition, perhaps in part because these perceptions are reiterated by politicians and university officials, student enrollment in the arts and humanities has declined. The cost of instruction in the arts is also expensive. Equipment is costly, and instruction may need to be offered in small groups or even one on one. One cannot effectively teach a room full of tuba players. For universities using forms of responsibility-centered budgeting, in which each unit is accountable for income and expenses, the limited income from enrollment and high cost of instruction make the arts problematic.

In response to these budgetary problems in the arts and in other areas, too, university administrators often promote interdisciplinarity as a means to achieve greater efficiency. A professor with an interdisciplinary education (or inclination) may be perceived as a generalist who can cover a wide variety of courses. Instead of hiring separate specialists to teach music, drama, and visual arts in courses offering specialized and intensive training, a university can hire one professor who is supposedly interdisciplinary enough to cover all the arts in general-education survey courses. Instead of supporting innovative interdisciplinary scholarship, a university can use interdisciplinarity as a rhetorical flourish ("do more with less" or "get more bang for the buck"), resulting in fewer professors overall and more generalists who teach high-enrollment courses.

b. Postmodern Turns

The second problem referred to above is the challenge that postmodernism poses to the academy. In the humanities, as in many other fields, postmodernism has undermined categories, including political, sexual and cultural. Critical theory has transgressed boundaries and challenged long-standing structures and methodologies. Postmodern art, both visual and performance, celebrates pastiche, kitsch, and parody, recycles cultural icons, and creates self-reflexive works that are laced with irony, are rich with intertextuality, and undermine logic.

Postmodern critical theory offers a critique of holistic interdisciplinarity, the approach that emerged in the early twentieth century as involving a grand narrative that erases difference and reinforces a patriarchal and normative hegemony. As the narrative is deconstructed, the internal contradictions cause the concept of holistic universality to implode, to collapse upon itself. According to Klein (2005), critical theory

has "deconstructed the metanarrative of Western humanities and the accompanying discourse of universality" (p. 44). Postmodern discourse, characterized by interrogation and intervention, has replaced the unity and universality of modernist interdisciplinarity. Plurality and heterogeneity have overtaken the twentieth-century interdisciplinary goals of synthesis and holism. The hybridity of postmodernism has trumped the purity of modernism (Klein, 2005, pp. 30, 54).

The seminal works of postmodernism, from Barthes, Foucault, and Lyotard, emerged in the 1960s and '70s. Many interdisciplinary scholars of the twenty-first century understand that postmodernism, in addition to clearing a path, also provided new approaches to critically rethink interdisciplinarity. As seen through a postmodern lens, interdisciplinarity becomes a discourse on knowledge production and creative activity (Fuller, 2010, p. 51). The end is not postmodernism; instead, postmodernism provides critical tools for interdisciplinary inquiry.

2. Opportunities in the Interdisciplinary Turn

These problems (the challenges to universities posed by budgets and demographics and the challenges to scholarship from postmodernism) create interdisciplinary opportunities in the changing university of the twenty-first century. If transformational change is inevitable, those in the arts and humanities should consider what kind of growth, development, and innovation are possible, and how it may be possible for scholars and artists to lead that change. While these issues are important across the academy, the particular threat of cuts to the arts and humanities makes it especially important for leaders in these areas to be in the vanguard of change. In addition, humanists and artists should consider how their fields can provide unique insights and perspectives for innovation.

Just as student activists in the 1960s demanded that universities renew themselves, with declarations for radical reform, the elimination of academic disciplines, and research that dealt with the real world, so too the emerging new student body can drive change. Now, as then, interdisciplinarity can be a progressive agent of reform and innovation (Weingart & Stehr, 2000, p. xii). While many of the reforms proposed earlier remain unrealized, the lofty hopes, goals, and dreams inspired many in today's professoriate. Despite the enduring power of disciplines, advocates of interdisciplinarity would do well to seek those goals still on the horizon. These opportunities make possible the current interdisciplinary turn in in the arts and humanities.

a. The Turn in Interdisciplinary Scholarship

Interdisciplinary scholarly inquiry is not an end in itself. Instead, interdisciplinarity makes new forms of inquiry possible. It can offer tools of critical thinking, insight**,** creative problem solving**,** and collaboration. Interdisciplinarity can fill gaps, point out blind spots, and highlight rigidities and incapacities in traditional disciplines (Davidson, 2010, p. 209; Hall, 1900, p. 11). Brian Massumi (1987), commenting on the work of Deleuze and Guattari, suggests, "The question is not: is it true? But: does it work? What new thoughts does it make it possible to think?" (p. xv) The interdisciplinary turn, in this sense, is not a condition, but a tool: What does the interdisciplinary turn make possible?

Critical interdisciplinarity, while not new, drives the interdisciplinary turn. Critical interdisciplinarity in the arts and humanities draws on the previously established scholarship of critical theory by integrating approaches from the social sciences to expose tacit systems of domination and to promote greater equity. Bertolt Brecht (1964), writing about theater, suggests the basis for this approach: "laying bare society's causal network / showing up the dominant viewpoint as the viewpoint of the dominators" (p. 109). Critical interdisciplinarity transgresses disciplinary norms, undermines hegemonic structures, disrupts accepted organization of knowledge, and interrogates the purpose of these structures. Critical interdisciplinarity can foster a more participatory democracy and a more egalitarian society, in what Klein (2010b) calls an "agora of public debate." This approach "breaks free of reductionist and mechanistic assumptions about the ways in which things are related and how systems operate," and seeks out unstructured problems with complex cause-and effect-relationships, non-linearity, and heterogeneity (p. 26). Critical interdisciplinarity exposes implicit structures by standing outside the accepted disciplinary framework that defines acceptable discourse and lines of inquiry. Critical interdisciplinarity is also consistent with postmodernism in that both challenge twentieth-century holistic approaches to interdisciplinarity. Instead of envisioning a grand narrative, critical interdisciplinarity suggests nodes of knowledge, endlessly crossing, deconstructing, and forming new clusters.[4]

[4] For example, Asian Studies is often cited as an as interdisciplinary field, and in my own work on Southeast Asian puppetry, Stephen Lansing's research on systems of wet-rice farming has helped me understand the relationship of art and religion in Bali. Or for my book on opera houses in Appalachia, I had to study coal mining and men's fraternal organizations and employ the methodology of cultural landscape studies.

Roland Barthes (1977) cautions that "Interdisciplinarity is not the calm of an easy security." Instead, interdisciplinarity begins "when the solidarity of the old disciplines breaks down." The resulting mutations result in an "unease in classification" and an awareness of the "interests of a new object and a new language" that no longer have a place in the previously existing disciplines (p. 155). Following Stuart Hall's (1990) approach to cultural studies, critical interdisciplinarity is not about building a coalition among different departments or contributing to an established discipline. Instead, critical interdisciplinarity suggests "how one could decenter or destabilize a series of interdisciplinary fields" (p. 16). Interdisciplinary inquiry should encounter some new and inscrutable beast that, if examined solely with the tools of one discipline, would be definable only by lopping off major body parts. Critical interdisciplinarity should eschew easy security, acknowledge unease in classification, and seek to create new languages to explain newly discovered objects. Critical interdisciplinarity means thinking critically not only with interdisciplinarity, but also about interdisciplinarity itself.

Critical interdisciplinarity also suggests multiple ways of knowing, and scholars and educators in the arts and humanities can make unique contributions in this regard. Post-structural critics insist that works of art are constructions, and focus on the reader/viewer/receiver rather than the author. The meaning of a work of art is not fixed by the author, and meaning does not inhere in the work of art. Instead of focusing on the author's intention or a single meaning, Barthes (1977), in his famous essay "The Death of the Author," suggests that the author, consciously or unconsciously, draws on many pre-existing texts, and that the reader creates multiple possible meanings. Instead of meaning being single and universal, meaning is dependent on conditions of time and place and the identity of the observer, including race, ethnicity, gender, sexual orientation, religion, class, etc. Even a single individual can receive what Fuller (2010) calls a parallax view, in which a mind receives contradictory inputs (p. 50). Critical interdisciplinarity in the arts and humanities, therefore, is not a search for correct meaning or single truth; instead, it is a process of disruption, a search for ambiguity, and an act of provocation. While holistic interdisciplinarity in the twentieth century often searched for universal patterns uniting works of art across time, space, and culture, or found value in "comparing" works of art across disciplines, critical interdisciplinarity seeks to intervene, disrupt, and deconstruct.[5]

[5] One can see this approach in the change at Ohio University from Comparative Arts to Interdisciplinary Arts. "Comparative" respected disciplinary boundaries and sought to compare and contrast, while the interdisciplinary approach transgresses boundaries and seeks new avenues and objects of inquiry.

b. The Turn in Interdisciplinary Learning

Regarding the interdisciplinary turn in learning, Herbert A. Simon (2010), Nobel Laureate and one of the founders of the (interdisciplinary) field of cognitive science, helps frame the issues: "Learning results from what the student does and thinks and only from what the student does and thinks. The teacher can advance learning only by influencing what the student does to learn" (qtd. in Ambrose et al., p. 1). Changing the emphasis from what the teacher does to what the student does, from teaching to learning, shifts the center of the classroom, and is consistent with the decentering of critical interdisciplinarity. The change that Simon encourages can start with a few fundamental questions: What are the learning goals? How is the student body changing? How should teachers adapt the learning activities to meet the new challenges? How can interdisciplinarity help achieve the stated goals?

One approach, suggested a century ago by John Dewey (1902), the great philosopher of education, is that teachers should not lecture to students about abstractions. Instead, students should engage in actual physical processes such as spinning, weaving, and metalworking. While these techniques are practical and discipline-based, the learning goals are interdisciplinary and intellectual. Instead of a teacher providing students with immediate answers and solutions, Dewey wanted students to run up against obstacles. As a result, they would learn to exercise "ingenuity, patience, persistence [and] alertness" (p. 37). The goal is for students to learn approaches to inquiry, skills of problem solving, and techniques of critical thinking. Students themselves should discover the questions that cause them to investigate further.

While Dewey focused on technology of his era, current scholars of teaching and learning recognize that information technology has transformed the world, and that the university must respond. Eugene Eoyang (2012) argues that factual knowledge—information—was central to education in the twentieth century. Experts owned the information (p. 38). Education during that period was referred to in Germany as the "Nűrnberger Trichter," the Nuremberg Funnel, pouring information into student's heads. In the digital age, however, all information, all culture, is readily available to everyone at the click of a mouse. If the goal of the university is simply to provide information, the Internet has made the university obsolete.

Because of this information revolution, universities are asking what students need now and what education is for. Information remains essential, but it is not enough. Student learning, as Eoyang (2012) eloquently observes, should focus on the skills of insight and critical thinking. Students need what

computers cannot provide: inference, intuition, and imagination. Confronted with a flood of information, learners need to sift, sort, and evaluate (p. 41). Similarly, Lyotard (1984), in *The Postmodern Condition*, notes that while traditional education focused on "reproduction of skills" and "transmission of information," interdisciplinary studies entails "connecting together series of data that were previously held to be independent." Imagination, for Lyotard, is "the capacity to articulate what used to be separate," and imagination "allows one either to make a new move or change the rules of the game" (p. 52).

Teachers of the arts and humanities can be central to this transformation. As post-structuralism has undermined the fixity of meaning in the arts, the skills of inference, intuition, and imagination become critical. Student-readers should not rely on the author to provide meaning. Instead, it is their responsibility and obligation to infer, intuit, and imagine. Instead of sending students on a treasure hunt for the golden nugget of meaning, teachers can encourage readers, as Barthes (1975) suggests in *The Pleasure of the Text*, to find pleasure, and even bliss (*jouissance*), by actively and freely engaging with, and even re-enacting, the text. By employing Dewey's spinning and weaving, Eoyang's sifting and sorting, Lyotard's imagination, and even Barthes' bliss, the interdisciplinary turn can promote critical thinking, creativity, cultural awareness, and contextualization.

In order for students to engage in this critical interdisciplinary process, the environment should be centered on the learner, as pedagogical best-practices now encourage. The teacher is not the expert imparting wisdom, but a kind of cognitive coach. For example, professors can stop teaching "just in case": just in case you need this information. Instead, teaching should be "just in time" (Wiggins & McTighe, 2005, p. 243). Professors have often felt a suffocating obligation to "cover" a disciplinary subject area—just in case the students might, some day, somehow, need that information. Professors now recognize that students remember little of material presented as information, and that the Nuremberg Funnel may actually lead to less retention. Instead, a teacher can help students understand *when* they need to learn and clarify *why* they need to learn. When students run into Dewey's obstacles, the teacher can help them—just in time—to progress in their learning. In that way, students learn not only the information, but also how to identify when they need more knowledge and why they need it. Professors can help students to build networks, form clusters, and follow threads themselves. This thinking is both critical and interdisciplinary.

In addition, focusing on an overarching interdisciplinary "essential question" can help students think beyond the limits of a learning outcome

(Wiggins & McTighe, 2005, pp. 58, 243). Current pedagogical theory rightly emphasizes student-learning outcomes, which should be well-defined, measurable, and achievable. On the other hand, many professors balk at this approach and yearn for their students to think bigger, broader, and deeper. Many want students to ponder the open-ended questions that are the basis of humanistic thought and artistic creativity. Such questions engage the "big ideas" that frame the entire subject of the course, and even reach beyond. Asking these questions is essential, although the answers may be either unattainable or ultimately unsatisfactory. For example, in a theater class one might ask, "What is a play?" Or in relation to almost any subject in the humanities, students might ponder "What is race?" or "What is gender?"

The classroom, in this model, is not for knowledge delivery, but for critical thinking. With twenty-first century technology, teachers can put Dewey's ideas into action with the flipped classroom: posting lectures online and using classroom time for engaged learning activities and projects. "Team-Based Learning" (2016) can engage students in peer learning, inquiry, knowledge production, and debate. While these approaches can be, and are, employed in disciplinary studies, the open-ended nature of this critical thinking encourages students to reach beyond and between disciplines. In addition, students in these classrooms are encouraged to activate their prior knowledge from other disciplines, which may have little to do with the subject at hand, and to apply that knowledge to the material in front of them (Ambrose et al., 2010, p. 13). These approaches steer teaching and learning away from the Nuremberg Funnel, in which the contents may have a limited shelf life. This turn toward student engagement in critical thinking may also help with the changing student body. Teaching that encourages collaborative teamwork, emphasizes problem solving, engages with larger issues, and activates prior knowledge can foster a more effective learning environment for nontraditional students than conventional modes of teaching. This interdisciplinary turn in teaching and learning provides the opportunity to prepare students, as Stephen Lehmkuhle (2012) suggests, for "jobs that don't yet exist, to solve problems that aren't yet known," and to use "technologies that have not yet been invented" (qtd. in Witkowsky, 2012, p. 39).

c. Intentional Planning for the Interdisciplinary Turn

In practical terms, the interdisciplinary turn needs institutional support. The old budgets are not returning, but scholars and artists can push back against interdisciplinarity as a budget-cutting tool. They can collaborate,

cooperate, create, and integrate to foster innovative scholarly inquiry and engaged student learning. They can forge new interdisciplinary structures of scholars, artists, and students, not to cover budget cuts with generalists, but to critique, to transgress, and to discover new, unexplored territories.

In the humanities, this interdisciplinary transformation is evident in the emergence of "studies"—cultural, gender, race, performance—areas that were previously considered academically unworthy or intellectually insignificant. While some area studies may be under threat, few in the humanities question the enduring contributions of, for example, gender studies or African American studies. In the arts, many visual art departments in the twenty-first century have reorganized into interdisciplinary clusters: "Foundations," to establish fundamental art principles and practices that apply to all areas; "Two-Dimensional Art," encompassing painting, printmaking, photography, etc.; "Three-Dimensional Art," incorporating ceramics, sculpture, woodworking, etc.; and "Expanded Practice," reaching across all art forms. In the performing arts, some schools of dance, film, and theater have merged to provide students with training and opportunities across the disciplines. In these instances, there may be some claimed benefit in efficiency, but the real goals are to promote interdisciplinary creativity and collaboration.

These changes have been achieved over the last decades, and tend to be within the arts or humanities. They set the stage, however, for more fundamental transformations in the current interdisciplinary turn. For example, new collaborations are being forged between the arts and humanities, on the one hand, and sciences, engineering, and medicine, on the other. The model of arts as handmaiden to science and technology should be avoided in these collaborations. All too often, artists are brought in at the end of a process to provide an engaging design for a project that is already essentially complete. Humanists are asked to help craft comprehensible language to explain complex technical ideas. Instead researchers should ask for input from artists and humanists from the start of a project: What do artists see about the world that scientists may miss? What creative insights can artists provide? Scientists and technicians, focused on a direct line of inquiry, may not as readily employ the inferences and intuitions, the creative leaps and jumps across logic, that an artist can suggest. How can humanistic inquiry raise problematic and complicating issues, such as race and gender? A disciplinary, technical approach may ask narrowly focused questions that elide such interdisciplinary human issues. Critical interdisciplinarity, especially from humanistic and creative perspectives, encourages this critique of what we know and how we know it.

Intentional planning for interdisciplinarity is necessary to achieve these goals. Structural transformations should eliminate barriers and blur boundaries between academic departments and create new interdisciplinary structures. Specific changes to advance interdisciplinary learning should include encouraging evidence-based best teaching practices; providing for different learning styles; forming structures for team-taught classes; forging paths to follow issues from one course to another; instituting joint positions with interdepartmental search committees; and creating flexible and innovative spaces to provide for chance encounters, community involvement, and informal social interaction (Witkowsky, 2012, pp. 39-40; Sá, p. 546; Harris & Holley, 2008, p. 42).[6] None of these ideas are especially new, but they linger more in strategic plans than in actual practice. Because these approaches are familiar, practical, and achievable, they are more likely to be implemented if presented as "intentional interdisciplinarity." That is, while university administrators may be reluctant to create new interdisciplinary programs and positions, these approaches, costing less than new lines for the ongoing base budget, can create a structural web that supports interdisciplinary research and teaching and learning.

II. Seeing Past the Turn

One could think about the interdisciplinary turn in the arts and humanities as a Faustian bargain. Faust is dissatisfied with traditional knowledge. Having learned everything the academy could teach him, he dismisses all the disciplines. What does Faust seek? Why does he sell his soul? For the knowledge that lies beyond and between. While Marlowe's Dr. Faustus (1969) will go to hell in the fixed time of twenty-four years, Goethe's Faust (2005) explores the universe as long as he remains curious and seeks new knowledge. As soon as he is satisfied with what he knows, as soon as he stops learning, he goes to hell. Who are the Fausts of today? Why should they sell their souls? How can they be saved from damnation? Contemporary scholars, artists, educators, and students are engaged in the interdisciplinary turn of critical thinking and research. They are transgressing boundaries to critique existing paradigms, transcending disciplines to discover new worlds, and employing digital technology for humanistic inquiry. If we can better understand what is happening here and now in the interdisciplinary turn, we

[6] Interdisciplinary Arts at Ohio University, for example, offers a team-taught seminar with up to seven professors in the same room at the same time, and professors hold joint appointments in Theater, Music, Film, Art, African American Studies, African Studies, Southeast Asian Studies, and Women and Gender Studies.

can better lead change into the future. The critical interdisciplinarian resists the lure of satisfaction, stands at the edge of the known world, and looks out.

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