BINARY EDUCATORS IN A QUANTUM WORLD:
CONTEXTUALIZING THE CHANGE AHEAD

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A review of the headlines of 2015 that were most central to public discourse exposes an interesting trend. Tension and divisiveness were themes of the year, and whether concentrated on race (#blacklivesmatter), gender identity (#callmecaitlyn), or sexuality (#lovewins), these threads of subjectivity suggest a desperate national dialogue in the United States, one that is focused on the battle between reaffirming 20th century categories of "normative" behavior and social hierarchies, and creating new possibilities for individuality, inclusivity and liberated selves. French media theorist Jean Baudrillard (1929-2007), who may have been the most prophetic voice for the formative years of our digital history, mocked our move into virtuality as we began spending more time with our gadgets and less time engaged in embodied discussion. Even before the launch of the World Wide Web, Baudrillard (1990/2009) claimed:

> Thanks to the machinery of the virtual, all your problems are over!... We have left the hell of other people for the ecstasy of the same, the purgatory of otherness for the artificial paradises of identity… Alienation of man by man is a thing of the past: now man is plunged into homeostasis by machines. (pp. 65-66)

Consider the profound implications of this thought in 2015. If there is any doubt that we have indeed become plunged into homeostasis by machines, take a moment to be a more critical observer of U.S. public places. Race, ethnicity, sexuality, and gender no longer seem to matter when everyone is face down, thumbing through gadgetry, unaware of their surroundings.

This is the world in which our young people are growing and maturing—a world made difficult by the complexities and practicalities of our digital lives—and the social ruptures that weave the fabric of this world extend deep into the classroom. Swirling thematics of crisis have surrounded higher education for the past few decades as educators have struggled with the evolution of instructional technologies. On the one hand, early adopters in the classroom have championed what they consider to be the transformative power of everything from social media to Second Life. On the other hand, skeptics still stand behind Thomas Russell's (1999) findings of "no significant difference," which suggest that the introduction of digitally mediated instructional methods has no effect on student achievement. From these beginnings, the conversation has not gotten easier.

During the past few years, we have witnessed important stories and have participated in many conversations that explain why a curricular response is essential to the future of the academy. In 2011, Richard Arum and Josipa Roksa published *Academically Adrift: Limited Learning on College Campuses,* which reported on the effectiveness

of instruction on college students. Among their findings were rather sobering statistics on the number of students who did not demonstrate any significant improvement in learning in either the first two years of college or over the course of all four years of matriculation. In addition, the authors noted that, when students actually did make improvements, those improvements were modest at best.

In 2012, Duncan, Hoekstra, and Wilcox reported the results of a study on whether in-class cell phone use had any effect on student learning. Not surprisingly, the authors reported that three-quarters of the population included in the study reported regular phone use during class, and that there was a significant correlation between cell phone usage in class and reduced academic achievement; put differently, those students who reported little or no cell phone use during class performed significantly better in courses than their counterparts. This very practical concern exposes an arduous risk for the academy: if we move towards an indiscriminate response, and implement broad-based anti-technologies policies in the classroom, we may also alienate our students, who have come to consider their gadgets to be extensions of themselves.

In 2013, the suicide of 26-year old Aaron Swartz took many by surprise, and though his name might be unfamiliar, it is quite possible that history will consider his legacy as central to the formation of our future. Swartz was a prodigy of the digital era who, during puberty, became one of the contributing founders of the social news site Reddit. Swartz also wrote a piece called the "Guerilla Open Access Manifesto," in which he lamented the ways that corporations require individuals to pay for access to information. A firm believer in the notion that information should be publicly available to all members of society, Swartz's downfall stemmed from his 2010-2011 attempt to download a subscription-based academic journal library called JSTOR from the campus of the Massachusetts Institute of Technology, with plans to upload it elsewhere for free public consumption. Swartz was caught on film during this process, and was indicted by a federal grand jury on charges of, among other things, wire fraud and computer fraud. According to Swartz's family and friends, the intense pressure that resulted from the investigation and the U.S. government's promise to seek the maximum prison sentence of 50 years, as well as $1 million in fines, led to his untimely death. It is important that our students know about this bright young man's story as they form their own paths in the world.

"Individualized adaptive technology," "the completion agenda," "The College Scorecard," "stackable experiences," "time to degree," "MOOCs," "for-profit institutions," "nonbiological humans," "augmented humans," "nanotechnologies." The language of the era reveals layers of complexity that will lead to a future we cannot yet begin to imagine. The language of the era also reveals a sad truth: we are a generation of binary educators living in a quantum world.

A curricular response to these complexities cannot be formulated until we are honest with ourselves. We do not yet fully understand the developmental distinctiveness of this generation of students, and we tend to forget that many of them have much to teach us as well. In this age of fractal thinking, interdisciplinarity will become essential for the academy, and this is especially difficult to consider, as our doctoral training

has largely produced generations of myopic specialists who do not see the world through interdisciplinary lenses. We are moving into an age of interconnectedness and interrelationships, where the human subject will begin playing a secondary role to digital machines in an orchestra of intricacy. In an era where people largely have open and free access to more information than at any other time in human history, it is neither sufficient for Ph.D.'s to claim that they are the sacred sages of learning, nor for higher education institutions to assume that the status quo of the past few centuries will survive unaltered. Today, rather than continue to wallow in the discourse of the past, we should instead turn our attentions to how the academy might use the knowledge of the past to begin to shape the futures of our disciplines. In curricular circles, this movement has already begun to take shape in terms of posthumanistic theory.

Baudrillard (2007) claimed that our quest for exhaustive knowledge resulted from "the product of an internal logic, of a built-in obsolescence, of the human race's fulfillment of its most grandiose project, the Promethean project of mastering the universe" (p. 16). As we enter into this century, the curricular outcomes that we should be seeking (that is, the end result that we should hope for in each of our students) are outcomes that prepare them for living in a society driven by dynamic, exponential growth. Flexibility and a willingness to change will be central to this new world, but the academy is not well known for its ability or willingness to embrace change. However, there must be hope for transformation ahead in the academy. Otherwise, we may ourselves be active agents in the obsolescence of our most magnificent tradition. The call to change is sounding loudly, and the ability to participate in a conversation whose end result is a reformed educative experience for a new era is, quite possibly, the noblest goal we might reach.

References

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Biography

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