

Chapter Title: The Strange World outside the Box

Book Title: Minds on Fire

Book Subtitle: How Role-Immersion Games Transform College

Book Author(s): Mark C. Carnes

Published by: Harvard University Press. (2014)

Stable URL: <https://www.jstor.org/stable/j.ctt83jhgx.14>

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact support@jstor.org.

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <https://about.jstor.org/terms>



JSTOR

Harvard University Press is collaborating with JSTOR to digitize, preserve and extend access to *Minds on Fire*

CHAPTER 11

The Strange World outside the Box

When Barnard president Judith Shapiro asked me to explain Reacting to her science advisory panel, a group of esteemed scientists and physicians, it seemed like a good idea. But as I walked to the podium, I wasn't so sure. During the preceding thirty minutes I had watched in mounting horror as these formidable scientists grilled a tenured scientist about his new course. What would they make of a historian's proposal to teach science through role-immersion games?

As I stood at the podium, perspiration trickling down my neck, I outlined the general concept of Reacting. When I saw the same stony eyes that had scrutinized the science professor, I swallowed hard. I explained how *The Trial of Galileo* pitted

Aristotelian motion physics against Galileo's alternative "world system." Then I described Galileo's difficulties in proving that the Earth moved given the data available to scientists in the seventeenth century.

After I sat down, everyone turned to an older woman with strikingly pure white hair.

"This story is familiar to us all," she declared. "The moment when we learned that what they taught us in graduate school was wrong. No one taught us that science changes."

Maureen Strafford, a professor at Tufts Medical School, nodded in agreement. Then she explained how, as a medical student, she had been taught not to administer painkillers to infants after heart surgery. Standard practice held that such drugs might delay recovery or prove addictive; moreover, the undeveloped neurological system of infants left them less susceptible to pain. After Strafford began making the rounds as a young physician, however, she was struck by nurses' accounts of the struggles of infants following heart surgery. The defining moment of her career came when she chose to advocate postoperative pediatric pain management. Like Galileo, she confronted staunch opposition from the scientific establishment. After Strafford finished speaking, other members of the panel chimed in with similar stories. They had been taught plenty of scientific information in college and graduate school, they said, but no one explained how new "truths" managed to supersede existing ones.

Nearly forgotten, I raised my hand and gingerly suggested that Reacting might be a good way to introduce English and art history majors to science, perhaps as an alternative to introductory chemistry or biology. The panelists struck this down

cold. "Science majors need this program more than nonscientists," the white-haired woman said. "They need to learn to think outside the box."

That phrase resurfaced several months later. I had emailed a foundation official about Reacting, and he suggested we chat after a lecture he would be giving in Manhattan. I agreed and instantly hatched plans to ambush him with a grant request. During the lecture he rehashed the familiar critique of higher education: student disengagement, poor retention rates, discouraging test results, employer dissatisfaction with grads—the whole litany. Then he said, "We need to think outside the box."

I snapped to attention. Immediately dollars swam through my head like floaters during an eye exam. How many zeroes, I wondered, should I tack onto my grant request?

Afterwards I hurried to the podium to introduce myself. We adjourned to a coffee shop and soon were chatting amiably. When I said that I agreed wholeheartedly with what he had said, he raised his cup in salute. But as I launched into my description of Reacting, he stiffened, set the cup down, and looked at me carefully. When I explained that Reacting classes were configured as games, run by students, his brow furrowed.

"I wasn't thinking of anything quite like that," he said.

I spoke more rapidly, rattling off anecdotes and summarizing studies touching on the points raised in his speech.

As I caught my breath, he said, "This all seems very strange."

"But once you get out of the box," I replied, exasperation tumbling out with my words, "you're in a strange place. If everything looks familiar, you're still in the box."

He lifted his cup and studied it. There would be no grant.

Delineations of the Box: General Education

American higher education is an impressive edifice, a workshop that has produced much of the knowledge revolution of the past century. Though located at hundreds of separate institutions, the workshop's chief structural element is everywhere the same: the academic department, a box of considerable strength—and rigidity.

Departments have promoted knowledge chiefly by embracing specialization. In 1936, when Harvard President James Bryant Conant declared that knowledge advanced “because of specialization” he was stating the obvious. But the specialization of Conant's era was rank dilettantism compared to what was to come. Specialized scholarly organizations and professional journals popped up everywhere. In 1983, for example, Philip Curtin, president of the American Historical Association, citing the “proliferation of knowledge,” noted that eighty-five specialized organizations had affiliated with the AHA. During the next thirty years, the number of AHA affiliates would increase fifty percent.

Specialization necessarily narrowed scholars' intellectual horizons. “The new Asianists and Africanists know next to nothing about European or American history,” Curtin complained. “Americanists know less European history than they did thirty years ago.”¹ Historians nowadays would smile at Curtin's words: most Americanists know next to nothing about many of the scores of subfields within *American* history. The trend toward specialization is even more pronounced in the sciences. In the 1930s nearly all of the members of the Ameri-

can Physical Society subscribed to *Physical Review*. Now, the APS has thirty separate divisions and *Physical Review* is published in nearly as many parts; few physicists subscribe to the entire publication.²

General education emerged as a curricular antidote to specialization. Most liberal arts colleges, seeking to ensure that students were exposed to a wide range of fields and ideas, required that they choose from a “menu” of courses beyond their major. An à la carte sampling would expose them to multiple intellectual traditions and the skills that would help them become productive workers and engaged citizens.³ Nowadays, the mission statements of liberal arts colleges commit plenty of fine words to this cause. Princeton’s catalogue, for example, maintains that its general education courses “transcend the boundaries of specialization and provide students with a common language and common skills.” In reality, however, most general education courses are taught by faculty who are hired by departments. Often the “general” education offerings are indistinguishable from departmental courses. Princeton undergraduates may fulfill their science and technology requirement by taking an introductory physics course whose sole reading is a standard physics text. At the other extreme, Princeton students can fulfill the literature and the arts requirement by choosing from among hundreds of boutique courses, ranging from “Animation from Ovid to Disney” to “Soccer and Latin America.” Students who enroll in introductory physics or a quirky literature class doubtless are confused by Princeton’s rhetoric about “transcending” disciplinary boundaries and inculcating a “common language.”

General education requirements are the result of deals brokered (and defended) by powerful department chairs. Chairs insist that undergraduates be required to take their department's introductory survey: How can students graduate from college without having studied American history, biology, or psychology? Then comes the wheeling and dealing. Louis Menand described the process as akin to *Jarndyce v. Jarndyce*, the impossibly protracted lawsuit in Charles Dickens's *Bleak House*.⁴

Yet because most scholars focus on ever-narrowing fields of specialization, they are increasingly ill-equipped to teach the courses students are required to take. Being assigned to teach the departmental survey is tantamount to a professional death sentence—a time-consuming diversion from scholarly work. That's why the task often devolves to untenured faculty, adjuncts, or graduate students.

In consequence, first- and second-year students are often herded into large introductory surveys staffed by overworked and inexperienced teachers. Such courses are money-makers—they generate far more tuition revenue than they cost in instructional salaries—and they build the enrollments that justify staffing levels for the entire department. This enables tenured professors to hide out in the upper-level seminars—or to avoid undergraduate teaching entirely. This convergence is often an unhappy one for undergraduates, who must struggle to make sense of huge, content-clotted lecture courses taught by the least experienced faculty. Although originally conceived as a way of buttressing the ivory tower, general education now sags against it, threatening to bring it down.

Vartan Gregorian, former president of Brown University, is among the many who have called for a reorganization of the curriculum “to give coherence to our specialized and fragmented base of knowledge.”⁵ Leon Botstein, president of Bard College, has specifically called for an end to the departmental monopoly on general education. Colleges must find a “curricular structure beyond the major” that “engages all students and spans disciplinary divisions.” Such an education, he noted, would focus on issues, questions, and problems rather than disciplinary concerns.⁶ A blue-ribbon study by the Association of American Colleges similarly recommended “interdisciplinary science courses that would focus on concepts and enigmas” and emphasize “the human, social, and political implications of scientific research.”⁷

Proposals to reform general education often make sense to college presidents, parents, students, and even many professors. But from the perspective of academic departments, bent on advancing knowledge within their disciplines, such proposals make no sense at all. How can scientists who were hired to conduct specialized research be expected to “emphasize the human, social, and political implications” of their work? How can researchers who burrow into ever-narrower fields within their specialization perceive the broad horizons of multiple disciplines? Rather than think the unthinkable, professors circle their wagons around the departmental box and defend it stoutly from menacing presidents and accreditation committees.

Role-immersion pedagogies, however, provide an alternative approach. A single Reacting game not only builds many of

the skills that the mission statements of most colleges purportedly address, as previous chapters have sought to illustrate, but it can also fulfill the interdisciplinary mandate of general education. *The Trial of Galileo*, for example, provides an introduction to motion physics, optics, and astronomy; and it also explores the impact of religion on scientific thinking as well as the impact of science on religion. Furthermore, the game shows how the 1632 debate over Galileo's system of scientific thought was influenced by the struggle for military dominance between the Spanish empire and France, by the advance of Protestantism in northern Europe, and by new philosophical and aesthetic movements. Students *see* how individuals change science—and in so doing, everything else. They *experience* how seemingly discrete subjects—physics, political science, religion, history—are indissolubly joined in the real world.

Reacting faculty have devised general education courses in which groups of Reacting games draw students into multiple intellectual traditions within a general framework. As the accompanying table suggests, faculty seeking to introduce students to the complex relationship of scientific ideas and society can run three games in a semester, perhaps beginning with *The Trial of Galileo* followed by *Darwin and the Rise of Naturalism* and then *Acid Rain and the European Environment*. Other faculty have created Reacting courses on global problems in the twentieth century, on democratic theory and practice, on Western religious traditions, major philosophical and aesthetic systems, and so on.

At present, nearly sixty teams of scholars are designing Reacting games. Within a few years, the curricular possibilities will be even richer.⁸

Illustrative Reacting general-education courses

General-education category	Reacting game 1	Reacting game 2	Reacting game 3
Science and society	<i>The Trial of Galileo</i>	<i>Darwin and the Rise of Naturalism</i>	<i>Acid Rain and the European Environment, 1979–1989</i>
Global issues in the twentieth century	<i>The Struggle for Palestine in the 1930s</i>	<i>Defining a Nation: The Indian Subcontinent on the Eve of Independence, 1945</i>	<i>The Collapse of Apartheid and the Dawn of Democracy in South Africa, 1993</i>
American democracy, Part I	<i>Patriots, Loyalists, and Revolution in New York City, 1775–1776</i>	<i>America's Founding: The Constitutional Convention</i>	<i>Frederick Douglass, Slavery, Abolitionism, and the Constitution, 1845</i>
Western religious traditions	<i>Josianic Reform: Deuteronomy, Prophecy, and the Israelite Religion</i>	<i>Constantine and the Council of Nicaea</i>	<i>The Trial of Anne Hutchinson</i>
Humanities and literature	<i>Marlowe and Shakespeare, 1582</i>	<i>Modernism versus Traditionalism: Art in Paris, 1888–1889</i>	<i>Modern Music in Crisis: Darmstadt, 1958</i>

Because much of the “content” is embedded within the structural elements of a Reacting game, many instructors choose games outside their specialization—or even their discipline. No longer obliged to function as authority-bearing dispensers of knowledge, they enjoy being guides and motivators who help

students surmount the many obstacles every game imposes. Uncertain gamemasters, when obliged to make a ruling on a contentious or debated point, simply respond that they need time to research the matter. And they do.⁹ After spending years within a particular academic burrow, many exult in the opportunity to come up and take a look at what is going on elsewhere. Some even believe that this revitalizes their scholarship.

General education was also conceived, as Columbia's John Erskine explained, as a way of providing "the basis for an intellectual life in common."¹⁰ In his view, the great books of Western civilization constituted the ideal foundation for that shared student experience. If everyone on campus read Plato, issues of rhetoric and justice might supplant the usual discussions of football or the dining hall food. But while St. John's College, with its four-year prescribed curriculum, and Columbia University, among other schools, have proudly retained their great books programs, relatively few institutions have followed suit. Few professors are trained to teach such works and fewer are inclined to do so. Other colleges have proposed common curricula, usually for first-year students, but few of these have gained wider acceptance.¹¹

However, some colleges and universities create Reacting courses, with the same set of games, played by the entire first-year or second-year class. Thus when a student mentions that he was James Madison in *his* class's Constitutional Convention game, "William Paterson" may describe how she scuttled the Virginia Plan in *her* class. In this way, education on campus can become general as well as academic. To further bind this social

network, these schools hold game-related art exhibits, plays, lectures, athletic competitions, and festivals.

Yet radical curricular innovation of this character is not common. Faculty on curriculum committees often balk at granting general education credit for Reacting courses. The irony is that while Reacting courses address the avowed purposes of general education, often far better than existing courses, the expansiveness of the games means that they don't fit neatly into existing general education categories. Many colleges wouldn't approve *The Trial of Galileo* for introductory science or introductory religion precisely because the game encompasses both categories of knowledge. Reacting courses are sometimes denied general education credit because they are too general.

Some special programs, such as first-year seminars, have provided an ideal curricular home for Reacting games. Honors programs and honors colleges, which seek a distinctive curriculum and pedagogy, have also embraced Reacting with few curricular obstacles. But at present, most professors offer Reacting games within their disciplinary courses. In large lectures, they often devote discussion sections, run by teaching assistants, to a complementary Reacting game. Increasingly, however, instructors of introductory courses in history, political science, or religion sacrifice breadth of coverage for depth of understanding and devote an entire semester to three games. Professors of introductory American history run *Forest Diplomacy: War, Peace, and Land on the Colonial Frontier, 1756–1757*; *Patriots, Loyalists, and Revolution in New York City, 1775–1776*; and *Kentucky, 1861: Loyalty, State, and Nation*. Political scientists feature *The Threshold*

of Democracy: Athens in 403 BCE; Henry VIII and the Reformation Parliament; and Rousseau, Burke, and Revolution in France, 1791. The creation of more games will facilitate the development of Reacting-based courses for many disciplines.

The Turn to Pedagogy and Assessment

For decades, reform of higher education was nearly synonymous with changing the curriculum, especially the requirements for general education. Faculty committees debated such matters endlessly, and the hiring of a new president or provost inevitably resulted in promulgation of an adjectivally engorged “Bold New Educational Initiative.” But the ensuing reshuffle of the familiar curricular deck seldom led to discernible changes in what or how students learned. During the past decade, however, leaders in higher education have shifted their gaze from curriculum to pedagogy. As with the debates on curriculum, however, discussion of pedagogical change has run smack into the solid wall of disciplinary tradition. Faculty who have learned their craft from esteemed mentors are skeptical—and rightly so—of the latest pedagogical fads. Confronted with much-ballyhooed (and often expensive) pedagogical “improvements,” ranging from Power-Point to classroom clickers, many instructors ignore the latest trends and just go about their business. Fads come—and, mercifully, they go.

During the past decade, however, calls for pedagogical reform have been trumped by a new emphasis on assessment. And assessment itself has undergone a conceptual sea change. No longer do assessment teams focus solely on educational inputs—the credentials and training of faculty, the design of syllabi and

the content of courses, and student evaluations of it all; nowadays the emphasis is on *outputs*: What have students learned—from individual courses and from college as a whole?

The new assessment assumes that once teams of administrators and faculty have determined what works—and what does not—instructors will embrace the successful pedagogies.¹² This has contributed to many worthy proposals. The American Association of Colleges and Universities, guided by George Kuh, has endorsed a set of “high-impact” educational practices, including first-year seminars, collaborative assignments and projects, writing “across the curriculum,” student-faculty research initiatives, community-based and experiential learning, and capstone courses and projects, among others.¹³ Furthermore, many faculty, working on their own (though often supported by their institution’s newly energized teacher development centers), have developed innumerable active-learning pedagogies—and imaginative enhancements to traditional teaching modes.

Despite these and other demonstrable successes, many instructors are disinclined to change the way they teach.¹⁴ In 2012 Carl Wieman, a Nobel Prize-winning physicist, bemoaned the failure of his three-decade campaign to persuade American colleges to adopt scientifically validated methods of teaching. “I’m not sure what I can do beyond what I’ve already done,” he declared.¹⁵ After studying a century of undergraduate education at Stanford, Larry Cuban was similarly “baffled” by the professors’ steadfast adherence to pedagogical conventions. Despite major transformations in nearly all aspects of the university, teaching had exhibited a “perplexing continuity.” He concluded that faculty attitudes were so completely embedded in the

university's departmental structures and traditions that "no magical programs, awards, or charismatic leaders" could solve "age-old dilemmas."¹⁶ Derek Bok concluded that, with respect to pedagogy, most colleges and universities find it next to impossible to break through "the crust of inertia and complacency."¹⁷

Proponents of Reacting have encountered the same resistance. In 2006, for example, an assessment team at Washington and Jefferson College did an intensive study of its twenty-eight "Freshman Forum" seminars, one-fourth of which were devoted to Reacting. The researchers issued a report that showed that the Reacting students rated their course as better than did students in the other seminars, and that Reacting students surpassed the other students in end-of-semester, critical-thinking essay writing.¹⁸ But when presented with this report, "almost all" of the non-Reacting instructors said they would teach as they had in the past. Furthermore, about a fourth of these instructors expressed doubts about whether Reacting sections should even be offered in the future.¹⁹

Most faculty members cling to familiar practices even when offered financial incentives to try something else. (If pecuniary considerations had been their primary motivation, few would have set their sights on a career in academia.) Most professors take their obligations seriously and resolve to do their duty—*as they have learned it*; many scoff at the nostrums proposed by educational consultants, learning researchers, and well-meaning administrators and assessment teams. But this may be changing.

Distance Learning: "The Coming Tsunami"

"There's a tsunami coming," Stanford president John Hennessy warned in 2012. Online education, with the University of Phoe-

nix in the lead, had already dug deep channels in the undergraduate enrollment pool. But now Stanford, Harvard, Michigan, Penn, Princeton, and other universities had formed online consortia that would inevitably siphon off still more. College administrators almost instantly discovered a technological solution to their two biggest problems: rising costs and poor retention. Online learning, though initially expensive, would reach a point at which additional enrollments would cost virtually nothing, and students who complained about inconvenient class schedules and insufficient campus parking could happily log in to “class” in their pajamas whenever they wanted.

Many professors expressed misgivings over online courses, but the iron law of economics, reinforced by the harshest of assessment metrics (retention), muted their objections. For example, when the Florida legislature imposed a 25 percent funding cut for the University of Florida, Provost Joe Glover announced plans to contract with a “private partner” to provide cheaper online courses. When the professoriate complained, Glover counterattacked: poor graduation rates nationwide, he observed, showed that higher education had not proven to be “tremendously effective in the face-to-face mode.” A few months later the University of Florida signed a ten-year \$186-million contract with Pearson, the education conglomerate, to run the University of Florida’s online education program.²⁰

“What happened to the newspaper and magazine business,” *New York Times* columnist David Brooks declared, “is about to happen to higher education: a rescrambling around the Web.” Professors would go the way of journalists, whose jobs had increasingly been rendered obsolete by the Internet. Although Brooks regarded the impending demise of traditional college

education with “trepidation,” he saw no reason for despair. After all, studies had shown that online education was “roughly as effective as classroom learning.” If students could learn as well by logging onto the Internet as by trooping to class, so be it.²¹ The coming tsunami, in other words, would crash through the ivory tower at its weakest point: the bricks and mortar classroom. Swiftly, MOOCs (Massive Open Online Courses) began morphing into McCROCs (Massive Closed Credit-bearing Online Courses). By early 2013, venture capitalists were pouring hundreds of millions into online education. The MOOC rush was on.

College administrators assured jittery faculty that there would always be a place for live instructors in “flipped” classrooms. Students would still want to interact with a real person. But many instructors could read the handwriting on the blackboard—which was inexorably being moved online. Complacency, the default response to pedagogical innovation, no longer seemed tenable.

But in late 2013 several major studies found that MOOC students weren't logging on—at least not with sufficient regularity to learn much.²² There were exceptions. Students with advanced degrees did well in MOOCs, as did those who were highly motivated; but less-motivated students—the same ones who fared poorly in regular college classes—usually failed to log in, watch the videos, and do the online assignments. In a bizarre reversal of arguments, defenders of online learning increasingly championed the *social* aspects of the experience. One study showed that while students in regular classes were sitting passively, alone and inattentive, distance learners were “often

more engaged than their campus-based counterparts.” (The exceptions were classes with collaborative learning activities.)²³ Another study found that students in face-to-face seminars were half as likely to participate in discussions as were students in online discussions.²⁴ For proponents of bricks-and-mortar colleges, this was the cruelest irony: distance learning was proving to be more successful at bringing students together than classes in which small groups of students were sitting next to each other.

The savviest thinkers in the MOOC camp were unfazed by the poor success rates of the early MOOCs. They regarded the videos of superstar lecturers as merely transitional, a temporary marriage of the pedagogy of the past with the delivery mode of the future. Online videos of even excellent lecturers would seldom be as effective as flesh-and-blood teachers. When staring at their iPads or smartphones, students were irresistibly lured to their social media or enticed by a new mission in *World of Warcraft*. The real revolution in distance learning would come when MOOCs exploited the advantages of the medium. John Seely Brown, former director of the Palo Alto Research Center (PARC) for Xerox and a proponent of new forms of online learning, envisioned a “new world of education” in which students solved problems through “team quests” and cultivated the imagination in approaches to learning characterized by “experiencing, playing, and occasionally failing.”²⁵ Jane McGonigal, a game designer with a PhD from the University of California, Berkeley, was already designing multiplayer collaborative games for business, the arts, social and political movements, and environmental activists.²⁶ Commenting on McGonigal’s pioneering work, Duke

professor and administrator Cathy Davidson observed that video games tapped into players' longing to initiate change and undermine conventions²⁷—a craving, as the present book suggests, for subversive play.

Educational gaming, used widely in elementary schools, has advanced upward in the curriculum. Higher education game designers have learned that the sophisticated historical visual reconstructions in *Assassin's Creed*, a popular action-adventure online game, can be enlisted for games containing historical content. Data-rich disciplines, such as political science, sociology, psychology, and art history, can be adapted to online gaming even more readily.²⁸ Within five years, perhaps fewer, a new generation of higher education games, based on software templates and graphics from popular video games, will likely transform online learning. College students may soon *experience* the dynamics of presidential politics by playing an online game entitled, say, "Electing a President, 2020." Or they may discover the difficulties of planting a colony in seventeenth-century North America by playing an online game entitled "Proprietors' Challenge: Founding a Successful New World Colony." Using the instant feedback systems devised by commercial video game designers, creators of the new online education games will continuously improve the games and make them more compelling. When college students at last prefer their for-credit video games to *Grand Theft Auto* or *World of Warcraft*, the educational millennium will have arrived. Then many professors, especially those charged with teaching content-heavy introductory courses, may see their enrollments evaporate. The online tsunami, when it finally arrives, may hit with more force than anyone has imagined.

Most administrators, though uncertain of the timing and extent of the looming threat, are leading the charge to shore up the undergraduate classroom. Creative faculty, too, supported by newly energized faculty development centers, have devised innumerable active-learning pedagogies and strategies. Building on many of these initiatives, José Antonio Bowen, president of Goucher College, has offered a sweeping reconceptualization of higher education to ensure that it better accords with the culture and expectations of students. Rather than function as dispensers of information, which students can find instantly online, professors must become motivators and coaches. Instead of holding office hours, they should schedule virtual interactions on Facebook, pose frequent questions and observations on Twitter, and encourage students to join online chat groups. Instructors should especially exploit the students' powerful social networks for pedagogical purposes. "In other words," Bowen explained, "we need to make college more like a video game."

Or, he notes, more like a Reacting class.²⁹

The Halfway Revolution

To promote real learning, we must shift our focus from the performance of teachers to the creation of structures that will stimulate learning. But persuading instructors to rethink their professional practice is no easy task. That's why administrators usually greet Reacting proponents on their faculty with open arms. Even administrators who are skeptical of role-immersion games often support their Reacting vanguard in order to stimulate wider discussions of teaching on campus.³⁰

The proponents of role-immersion games, moreover, inevitably play their trump card over traditionalists. Few regular instructors enter traditional classrooms confident that their lectures and open-ended discussions will produce an intellectually vibrant experience. Even exceptional teachers who deliver razzle-dazzle performances find the effort exhausting and the results uncertain. Andrew Hamilton, a biology professor at the University of Colorado, observed that he and his prize-winning colleague, after learning that two-thirds of the students hadn't clicked on the readings for their large course, redesigned it completely, eliminating the textbook and incorporating interesting new readings. Yet one-third of their students failed to pass the redesigned course. Hamilton concluded that he had to "come to grips" with the reality that the problem wasn't the curriculum or readings; the basic pedagogy of the standard course was "fundamentally broken."³¹ Hamilton's words echoed those of Henry Seidel Canby, who as a young English professor at Yale a century earlier nerved himself for class "as for an ordeal" and relapsed after each class into "a limp vacuity."³² If this anxiety grinds down the superstars, it proves even more burdensome to the numerous teachers who, though knowledgeable and conscientious, lack the master teacher's ready humor or charisma. Too often, our regular classrooms resemble a movie in which excellent actors struggle to breathe life into a so-so script. It's a lot of work and not many find the performance all that satisfying.

This, too, explains why Reacting has spread. *Instructors* find Reacting classes provocative, stimulating, and enjoyable. Their enthusiasm startles (and often unsettles) colleagues, some of

whom eventually visit a Reacting class. There they see students taking charge and working through difficult material. The visitors also realize that a class sparkling with such energy might be satisfying to “teach.” Eventually these professors attend a Reacting workshop and experience a miniversion of a game. Some become converts on the spot; most remain skeptical until they try a Reacting game in their own classes. Many then become enthusiasts of role-immersion games; some go further and join the Reacting community. Within a few years—or months—most join game-design teams, give Reacting presentations at professional conferences, and participate in the governance of the Reacting Consortium.

Role-immersion pedagogies have spread rapidly in recent years for another reason. They *differ* from conventional pedagogies and also *complement* them. To be sure, some students report that the experience of a Reacting class has caused them to become impatient with lectures; but most students insist that after a role-immersion experience, they better appreciate the reflective elements of regular classes. The Reacting teaching mode, though nearly antithetical to conventional instruction, can never supplant it, if only because no student wants to play more than one Reacting game at a time. Moreover, the imaginative loops of a Reacting game result in uncertain content coverage. Some classes playing *The Trial of Galileo* focus on theology, and others, on motion physics and astronomy; some, on whether the Earth moves, and others, whether the universe is infinite. Regular lectures and discussions cover more material and do it in a more predictable way. Reacting exposes students to smaller but deeper pools of knowledge, extending through

multiple disciplines. Regular classes encourage critical detachment; Reacting encourages empathetic identification. And where conventional pedagogies depend on solitary study, Reacting builds community and promotes engagement. Conventional and Reacting pedagogies are very different—and mutually supportive.

Perhaps most important, Reacting obliges students to address messy, unstructured problems: these range from solving interpersonal dynamics within a team to devising arguments based on difficult texts and rapidly changing situations. This requires imaginative thinking of the sort one seldom learns through passive pedagogical modes. Indeed, normal classrooms and even quiet dorm rooms (an oxymoron?) are often inhospitable to creativity. Learning researchers have found that when students are placed in novel and unfamiliar environments, they find it easier to think “outside the box.”³³ Not only do Reacting students long remember their debates as Roman senators and Puritan divines, they find that in such strange contexts all sorts of new and interesting ideas come naturally.

In a jibe at Plato, Aristotle insisted in the *Poetics* that imaginative thinking was a “higher thing” than the hard facts of reality and logic. Poetry, encompassing music and other creative arts, was a realm of intuition, emotion, and imagination that explored “that which may happen.” By posing the question, “What if?” we pass through a magic portal into another realm: we end up outside the box.³⁴

Our mental boxes consist of well-trodden neural pathways, structures of thought that make us who we are.³⁵ Those path-

ways that generate the most traffic, freighted with the strongest emotional ties, pertain to our self. When students take on Reacting roles, they move into a new imaginative realm. Soon they are outside the box of their (former) self. Then they find themselves ensconced in a new social network where they are obliged to articulate unfamiliar and even alien ideas. Inevitably, they ask (themselves): What if I were a different person?

This question unleashes tremendous imaginative power. Students whose beliefs have been prescribed by familiar religious or political texts rethink who they are and what they believe. Students who shrink from public speaking feel impelled to stand on chairs, sing songs, and deliver spontaneous orations. Students who fear failure, lest it reveal deep insufficiencies of the self, push their new personas into emotionally perilous waters. Students who cling to a small circle of like-minded friends reach out to others and form close and empathetic bonds with them. Students who take on roles as teammates cultivate leadership skills and agonize over moral dilemmas.

The suggestion that role-immersion games can solve almost all the problems afflicting higher education is so sweeping that sensible readers will likely dismiss it out of hand. But those who venture beyond the box in any field often discover a landscape that extends far beyond anything they had imagined.

Beyond Plato's Cave

The box as a metaphor for blinkered thinking perhaps originated with Plato's cave, whose denizens knew nothing of the illumined world of reason beyond the walls. Plato maintained that those who had escaped the cave and seen the real world

were obliged to help those who remained trapped in the cave; but he also knew from painful experience that a solitary instructor could achieve little. To endure, ideas must be housed within institutional structures. If the *Republic* provided a blueprint for the Platonic utopia, Plato's Academy was its institutional embodiment. Its rational purposes were inscribed above its front door: "Let none but geometers enter here." Logic constituted its foundation, and solid blocks of reason, its walls.

The Platonic ideal continues to inform the debate over higher education, usually as an unstated and unexamined premise. When contemporary critics complain that corporate influence and managerial models corrupt the academy, or that professors or legislators impose their own political agendas on it, the critics often assume that higher education somewhere existed in a purer form—and usually they have in mind, if vaguely, some variant of the Platonic ideal.

But the Platonic ideal has long been part of the problem, because it deprives higher education of the motivational and imaginative power of subversive play. Nietzsche made a similar observation in 1872: the emergence of the modern university and its "scholar-scientists" constituted the culmination of the Socratic vision and the ascendancy of Plato's "logical universe."³⁶ Nietzsche bemoaned the university's repudiation of the "ecstatic dream world" of music and art, of unfettered creativity. He advocated combining Socratic logic with the imagination, ecstasy, and creative destruction symbolized by Dionysus, the god who could change his identity at will.

Yet Nietzsche erred in assuming that the academic world was suffused solely with reason. Higher education has always

been animated by subversive play—the competition for prizes and chaired professorships, the thrill of overturning accepted wisdom, the wonder of imagining that the world can be different. When Galileo published his *Dialogue on the Two Chief World Systems* in 1632, for example, he knew he was treading on thin papal ice. He had nearly been silenced by the Inquisition in 1616, and in the intervening years his caustic tongue had earned him many bitter enemies. Yet he structured his masterwork as a dialogue among three characters, including a dull-witted figure named Simplicio—simpleton—who insisted that the Earth did not move. Many thought that Simplicio resembled Pope Urban VIII, including the outraged pope himself. Friends and colleagues had long pleaded with Galileo to refrain from humiliating those who disagreed with him, but Galileo could not resist. The “father of modern science,” as Einstein called him, was hopelessly lost in subversive play. Galileo worked so hard partly because he was having so much mischievous fun.

Humans have always succumbed to the allure of subversive play. Adam and Eve had it as good as it gets, living eternally in paradise. Yet when the serpent tempted Eve to compete with God (by eating of the tree of knowledge), to assume a new identity (“for ye shall be as gods”), and to flout His laws, Eve just couldn’t say no. Paradise had everything except fun, which is what Eve craved most.

God smacked them down, consigning Adam and Eve to work, suffering, and death—which proves that opposition to subversive play goes way back, too. Plato, Freud, Dewey, Piaget, Erikson—along with generations of college administrators and faculty who battled against fraternities and college

athletics—also assumed that subversive play could be suppressed. They were wrong.

The critics have plenty of good reasons for opposing subversive play. Many subversive play worlds, such as opium dens, gambling casinos, and beer pong matches, do much harm. Gamblers and binge drinkers may claim that their subversive play helps them let off a little steam, making it easier to knuckle down later and do some work; but these meager benefits hardly offset their costs to society.³⁷ Plato's Socrates, too, condemned the pervasive play of the male citizens of Athens. Freed from hard labor through the exploitation of slaves, they did little *but* play. Athenians consequently turned many aspects of life into contests, ranging from beard growing to choral singing. Socrates especially condemned the rhetorical competitions in the Assembly and law courts, where Athenians shouted and clapped "till the rocks and the whole place re-echo, and redouble the noise of their boos and applause."³⁸ Athenians conjured fantasy worlds that they mistook for reality. By transforming social and political life into competitions, by pretending that their own selves contained glorious multitudes, by undermining the natural social order, Athenians inhabited a colossal subversive play world. Plato's Socrates proposed to replace it with an antithetical utopia founded on work and structured by occupation.

But democratic Athens also shows the creative power of subversive play. The achievements of that single city-state stagger the imagination. The contests among its playwrights and rhetoricians (including Plato's Socrates!) gave rise to many classic works of literature and philosophy. In political theory, law, historical method, science, mathematics, medicine, sculpture,

architecture, and numerous other fields, the relentlessly playful Athenians added more to the storehouse of knowledge than any people before or since. They achieved so much not because they worked so doggedly but because they played so brilliantly.

Role-immersion games in higher education today hold the promise of restoring the churning passions and subversive impulses that have always invigorated the life of the mind. Yet many faculty and administrators remain wary. They regard with suspicion those who tinker with the ivory tower, and for good reason: a stream of pedagogical fads, most of them hawked by corporate vendors, has sloshed around its base for much of the past half-century. Nearly always these waters recede, having done little harm. Traditionalists then breathe a sigh of relief; sometimes, wiping their brow, they cite illustrious forebears such as psychologist William James, who disapproved of “namby-pamby attempts of the softer pedagogy to lubricate” the hard work of learning.³⁹

And so the ivory tower stands as a proud monument to the intellectual achievements of the past century. Most of us who work within its increasingly partitioned and uniquely adorned rooms love the place. If we find it difficult to think outside the box, it’s because our eyes linger within, drawn to a glittering wonderland of scholarly accomplishment. That’s why so many of us are willing to mount its ramparts in defense of tradition.

But often we stand alone. For over a century the minds of our students have been imprisoned within subversive play worlds, captives of the sophomoric creations of fraternity brothers and Mark Zuckerberg, of the NCAA and ESPN, of Anheuser-Busch and Coors, of *Grand Theft Auto* and *World of Warcraft*,

and of all of the giant corporations that usurp the motivational power of subversive play to generate profits.⁴⁰

Students (and teachers) deserve an academic world that is as exciting as intercollegiate football, as enchanting as *World of Warcraft*, as subversive as illegal boozing, and as absurd as fraternity initiations. As faculty and administrators, we can help students glimpse the intellectual wonderland that attracted us to academia in the first place: the invigorating scholarly debates, the transformational power of new ideas, the exhilarating risk of looking at the world in a different way, and the thrill of challenging accepted beliefs and practices. We must encourage students to experience the revitalizing contests and churning passions that have always breathed life into the republic of knowledge for which the academy must stand.