

**Workshop: How to Redesign Undergraduate Curricula**

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I am grateful to the organizers of this conference for bringing back into central focus the question of teaching and learning in higher education. I know that in my own country, and I believe in Germany and the European Union, the major issues of higher education policy are usually of an economic and administrative nature. The purposes of higher education, as well as the embodiment of those purposes in the structure of curriculum and the practices of teaching and learning, are too often left at the margins of discussion.

In this workshop, my intention is to take up the broad question of what higher education is for, a topic with a long if contentious history, and to propose some categories of thought and devices of deliberation for addressing the matter of how educational purpose might be made practical for redesigning academic curricula.

To frame the workshop, I will make my argument in three steps. First, I will argue that much of the contemporary dialogue about the purpose of higher education rests on a series error. I mean the assumption, common in American educational policy discussion but also in the Bologna process, that the primary purpose of higher education is economic: the training of a workforce. On the contrary, I will draw on contemporary sociology to argue that the university needs to be seen as primarily a *culture-forming institution*. While it is true that at present the culture being formed by higher education is

a highly instrumental and fragmented one, this should not be taken for granted but rather examined critically.

Second, I will argue that once one grasps the culture-forming nature of higher education, new questions arise: what ends *should* be embodied in curricula, and how ought these purposes be realized in curriculum and the practices of teaching and learning? Once such a discussion of educational purposes is opened, moreover, it leads directly to the further theme of how higher education ought to contribute to the development of democratic societies. How, in other words, might higher education contribute to preparing not only skilled workers but knowledgeable citizens and responsible persons? My answer returns to long-standing themes of what in Anglophone countries is often called liberal education and in Europe the tradition of *Bildung*.

Third, to make these questions practically manageable, I will advocate a set of categories for analyzing and evaluating curricula, actual and proposed, on the basis of how well they fulfill the demands of a genuinely reflective education that is also practically oriented. I will then conclude with some questions to pursue further in the workshop.

### **My Background**

In making my proposal, I will be drawing upon my own background as a researcher in higher education, as well as prior academic experience in philosophy and in the sociology of culture. Over the past decade at the Carnegie Foundation for the Advancement of Teaching, I directed a project called the Preparation for the Professions Program. This was a multi-field comparative study of the teaching and learning practices employed in

North American universities for the training of future lawyers, members of the clergy, engineers, nurses, and physicians. I have also taken part in research on the preparation of undergraduate students in business, which is currently the largest field of study among American university students. In addition, at the Carnegie Foundation I directed a research seminar, entitled “A Life of the Mind for Practice,” that brought together expert practitioners from the professional schools with faculty teaching in the arts and sciences disciplines, asking how students might be better prepared to bring their academic training to bear in practical situations, as professionals, citizens, and persons.<sup>1</sup>

### **The Narrowness of Contemporary Discussion of Curriculum**

First, then, the narrowness of contemporary discussion of curriculum. It is widely believed, though the belief is rarely examined, that because advanced economies demand more and lengthier academic preparation for employment, higher education’s primary function is to prepare the future workforce. The assumption at the basis of this belief is that the activities of teaching and learning in the university somehow contribute directly to producing a skilled workforce. But is this true? There are, in fact, good grounds to question this currently widespread belief.

On the one hand, it is certainly true that the kinds of knowledge produced by the university and the personnel it certifies have become central to nearly all aspects of what we understand as progress in the social, economic, and political domains. Indeed, in selecting personnel for occupational roles, educational certification has become virtually the only legitimate form of discrimination. However, the critical certifying role of the university today has not arisen because universities can be shown to do a particularly

good job of preparing people for the actual business of carrying on functions in the occupational order, nor that they are necessarily the most egalitarian of selective processes.

On the contrary, as sociologists of education David Frank and John Meyer argue, there is much evidence that “the university certifies individuals...without actually preparing them to meet occupational role demands.”<sup>2</sup> On a macro level across societies, the worldwide expansion of universities since World War Two also correlates only weakly with measures of national growth in functional effectiveness in economic, military, or political spheres.<sup>3</sup>

Instead of searching for elusive, and he believes, illusory functional explanations for this expansion, John Meyer counters the usual functionalist sociology of education with the argument that the evidence actually supports a very different hypothesis. “The university,” he argues, “is less about training people for jobs in the complex society, and more about establishing the ground rules for this society—the doctrines that local realities and actions can and should be seen in terms of universal principles.”<sup>4</sup> The university, in this view, is an institution of culture-formation more than it is a motor of social, economic, or even technological development. The “functionality” of the university is in this sense cultural rather than technical.

So, while it is common to claim that this vast expansion of higher education worldwide is about training personnel for more intellectually demanding occupations, there is little evidence to show that universities do a particularly good job of preparing people for carrying functions in the occupational order. On the contrary, every field does

most of that preparation in the work setting itself. This is perhaps most conspicuous in medicine, by all accounts a very high-tech field indeed.

What universities actually do, in this view, is to *certify* individuals without actually preparing them to meet the demands of occupational roles. This points away from a functional explanation of universities and toward their role as shaping a specifically modern culture. Universities teach respect for, and at least basic understanding of, a mode of thinking that has come to be identified with “rationality” and modern culture itself. This is analytical thought: the capacity to understand and manipulate symbolic discourses.

These discourses are made up of symbols that translate particular objects or events into general concepts plus rules for combining and manipulating such symbols. The culture spread by the university, then, puts a premium on formal knowledge, abstracted from context and narrative particularity. Such thinking is held to be a superior kind of knowledge, exemplified in the sciences, though it is thought to be ultimately “applicable” to practice through formal techniques for deducing results according to general formulas. Over time, that model of knowledge has become an unquestioned canon according to which intellectual disciplines are defined and criticized.

### **Reopening the Question of Educational Purpose**

It is the prestige of this model of knowledge that has allowed the university to distinguish itself as the ideal certifying institution within a global culture that increasingly thinks and speaks in the idiom of analytical thought. However, this development has brought with it a negative, if largely unintended, consequence. Like the philosophical

positivism that was its ancestor, this contemporary culture of criticism and evidence is universal in its claims. It understands itself as the cutting edge of humanity's forward progress and is highly intolerant of any other approach to understanding. Thus, its ascendancy in the academy has created a cold climate for the older ideals and practices of *Bildung* or liberal education. These traditions of education also recognized the importance of analytical disciplines, but they were primarily concerned with transmitting heritage and raising issues of the value and meaning of knowledge. Indeed, the older tradition of liberal education claimed a larger educational purpose: it focused on enabling individuals to gain a coherent sense of the world and their possible place in it.

The assumption here is that the acquisition of specialized knowledge, in itself, remains educationally incomplete. It demands as its complement the cultivation of intellectual coherence and ethical intelligence of comparable sophistication and depth. I would add that, particularly in a world of fast-changing and ever more complex knowledge development, the training of students' analytical skills in particular fields needs to be matched by the development of their capacities to reflect on the value and significance of their courses of specialized study. This is equally true whether the courses are in the professional schools or the faculties of arts and sciences. Without such a new effort at curricular integration, the current direction of higher education is likely to produce a serious misalignment between the kind of culture universities form in their graduates and the deeper, moral needs of a democratic society. Max Weber's frightening image of "specialists without spirit" is all too likely an outcome.

### **Reconceiving the Curriculum: Three Modes of Thinking plus Practical Reasoning**

If today's higher education is to reclaim the formative aim of aligning the culture of knowledge with the purposes of ethical and civic life, then it must once attempt to provide a broad orientation for students as well as specialized training. It must, that is, enable students to make sense of the world and their place in it, preparing them to use knowledge and skills as means toward responsible engagement with the life of their times. This aim represents a contemporary translation of the ideals of liberal education as *Bildung* for a democratic and globally-attuned society. Such an education requires academic content knowledge and several kinds of cognitive skills. But, importantly, it also requires developing the capacity to bring this knowledge and skill to bear on complex and ambiguous issues of the world.

But can such broad goals be specified with any degree of precision? Can they, for example, be identified in the curriculum and in the actual practices of teaching and learning in use in any given curriculum? I believe the answer to both these questions is yes. In order to make the point, I want now to propose a *set of categories* for analyzing the content of curricula and pedagogical practices in reference to the goals of liberal education described above. I will call these capacities the Three Modes of Thinking. They are: **Analytical Thinking**, **Multiple Framing**, and **The Reflective Exploration of Meaning**. These receive their integration and gain their full significance in the application of **Practical Reasoning**.

As we have seen, conceived as a formative institution of contemporary culture, higher education's core activity concerned with generating and teaching forms of Analytical Thinking. Such thinking involves making sense of particular events in terms

of general concepts and then manipulating those concepts according to general rules or principles. This process requires students to determine what any particular event represents in a broader sense, to formulate claims that can be backed up with evidence, to reason through the justification of those claims, and to critique the claims, reasoning, and evidence of others.

The process of translating particular items or events into abstract categories can involve the quantitative or mathematical expression and manipulation of concepts as well as ideas and logical sequences expressed in language. Teaching for Analytical Thinking involves ensuring that students understand the categories and concepts they need in order to make sense of a subject matter and helping them reason through the application of those concepts to particular instances. In higher education as a whole Analytical Thinking – often identified as “critical thinking” – is recognized as a central goal and criterion of academic success.

### **Multiple Framing**

While the progress of the sciences attests to the power of well-developed analytical reasoning, scientific creativity as well as many of the problems of the world demand more than Analytical Thinking alone can provide. This is so not only because the sheer degree of complexity can sometimes overwhelm our analytic capacities, but also because some kinds of ambiguity or subjectivity are inherent in the problems and questions themselves.

That is, for some kinds of problems, there are several alternative cognitive frames with which one might make sense of the issues, each of which makes different starting

assumptions and therefore appropriately takes different considerations into account. This means that even some models or systems that are internally coherent and make sense analytically, given their starting assumptions, may not be the only or necessarily the best way of framing the problem. When starting assumptions are questionable, Analytical Thinking alone will not provide a sufficient base for addressing consequential issues. And the capacity to see alternative ways to frame a given set of issues is not itself provided by Analytical Thinking.

This means that Multiple Framing is needed in order to move beyond a particular set of assumptions. This is because Analytical Reasoning cannot in itself resolve basic differences between competing, fundamentally different but internally coherent models or theoretical perspectives. Students need to learn that even internally consistent systems are contingent in some sense, and they also need to learn how to recognize the nature of that contingency – in relation to history, culture, ideology, and the like.

Most importantly, teaching for Multiple Framing broadens students' perspectives. When courses include attention to this kind of inquiry as well as Analytical Thinking, students see that basic assumptions can be called into question, that there are alternative ways of framing the issues that may not have been evident at the outset.

### **The Reflective Exploration of Meaning**

Unless the rigorous thinking involved in both Analytical Thinking and Multiple Framing is directed toward some committed purpose, it runs the risk of leading to relativism of values or outright cynicism about intellectual endeavor. Students can learn to make and tear apart argument, but this very facility can make it hard for them to find

any firm place to stand. Therefore, Analytical Thinking and Multiple Framing need to be complemented and completed by a third mode of thinking, the Reflective Exploration of Meaning. Students need to engage with questions like “What do I really believe in, what kind of person do I want to be, what kind of world do I want to live in, and what kind of contribution do I want to make to that world?” While a lack of attention to the third mode can be crippling for any type of education, it is an especially dangerous limitation when students are preparing for work that has important implications for the welfare of society.

The Reflective Exploration of Meaning therefore extends questioning into the ethical realm, as when students confront what another person or a situation may ask of them, and how they should respond. This is also the mode of thinking essential for the formation of democratic citizens. If Analytical Thinking demands evidence and rigor, and Multiple Framing inquires into the strengths and limitations of various methods of investigation, this mode of thinking pursues self-awareness in the probing of questions and problems of living in our world. This is the traditional heart of liberal education, the focal point of *Bildung* and humanistic learning.

### **Practical Reasoning**

This mode of thinking integrates and completes the larger enterprise of higher education by developing individuals’ capacity to integrate their learning so as to engage concretely with their world. Practical reasoning is the capacity to put knowledge to responsible use in complex, real-life situations. Too often educators assume that if students gain theoretical knowledge and analytical capacities, they will automatically be able to bring that knowledge and cognitive skill productively to bear when they need to

make decisions and judgments in complex worlds of practice. But generalized conceptual knowledge is not sufficient to guide judgments about particular, unique situations. For that, individuals must be able to move between the distanced, external stance of analytical thinking—the third-person point of view typical of most academic thinking—and the first and second-person points of view that are integral to acting with others.

Practical reasoning is the ability to navigate this back-and-forth between general concepts and the challenges and responsibilities that arise from particular situations. Although it is essential to realize the larger aims of higher education – the capacity to make sense of the world and one’s place in it – in fact, the university, especially the arts and sciences faculties tend to be weak in providing experience with practical reasoning. Professional fields tend to do better.

While professional fields such as law, medicine, architecture, and engineering prepare their members by emphasizing the formal, universal concepts that undergird their fields, they must also go beyond theoretical learning and teach their students how to relate this knowledge to the demands of particular clients, patients, and technical or social problems. They do this through the use of case studies, simulations, and participation in and reflection on clinical practice. Given these resources, there is in principle, if too rarely in practice, a large area of potential collaboration and mutual learning between the faculties that could greatly enrich the educational mission of higher education.<sup>5</sup>

### **Using and Testing the Scheme: Some Questions for the Workshop**

To see where and how this scheme of Modes of Thinking might be useful for the analysis and design of curricula, I would like to conclude with a set of questions.

Using the Three Modes of Thinking plus Practical Reasoning as a *template*,

1. Where, in the architecture of the curriculum, are each of the Modes presented?
2. Are the Modes presented in *explicit* or *implicit* ways? By what means?
3. By what kinds of *teaching practices* are the Modes presented: e.g. classroom lecture? Seminar/discussion? Simulation/laboratory? Clinical experiences?
4. What faculties are responsible for each of the Modes? Does any faculty or educational program act as an *integrating center* in the curriculum?
5. How would one know if the teaching of these Modes of Thinking is having its intended effects? I.e. What kinds of assessment are/ought to be employed?

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<sup>1</sup> The introductory volume is: William M. Sullivan, *Work and Integrity*, (San Francisco: Jossey-Bass Publications, 2005). The research seminar provided the basis for the book co-authored with Matthew S. Rosin, *A New Agenda for Higher Education: A Life of the Mind for Practice*, with Matthew S. Rosin, (Jossey-Bass Publications, 2008). The profession-specific studies have been published by Jossey-Bass Publications:  
*Educating Clergy*, 2005  
*Educating Lawyers*, 2007  
*Educating Engineers*, 2008  
*Educating Nurses*, 2010  
*Educating Physicians*, 2010

<sup>2</sup> David John Frank and John W. Meyer, "Worldwide Expansion and Change in the University," unpublished paper, Stanford University, January 5, 2006, p. 13. Frank and Meyer, "Worldwide Expansion," p.10.

<sup>3</sup> John W. Meyer, Richard Rubinson, Francisco O. Ramirez, John Boli-Bennett, "The World Educational Revolution, 1950-1970, *Sociology of Education*, 1977, Vol. 50 (October): 242-258,

<sup>4</sup> Frank and Meyer, "Worldwide Expansion," p. 1.

<sup>5</sup> For examples of such mutual learning and collaboration, see: Sullivan and Rosin, *A New Agenda for Higher Education*.

*Handout One*

29 October, 2010

**Workshop: How to Redesign Undergraduate Curricula**  
**William M. Sullivan****A Template: Three Modes of Thinking plus Practical Reasoning****The Formative Purpose of Higher Education:**

The purpose of higher education is to enable individuals to make sense of the world and their place in it, preparing them to use knowledge and skills as means toward responsible engagement with the life of their times.

This kind of education requires academic content knowledge and several cognitive skills, as well as the capacity to bring this knowledge and skill to bear on complex and ambiguous issues in the real world. Among these cognitive skills are Three Modes of Thinking: **Analytical Thinking**, **Multiple Framing**, and **The Reflective Exploration of Meaning**, integrated and completed by **Practical Reasoning**.

**Analytical Thinking**

Sometimes referred to as higher order or critical thinking, this is the capacity to understand and manipulate symbolic discourses. These discourses, verbal and mathematical, are made up of symbols that classify or translate particular objects and events into general concepts plus rules for combining and manipulating these concepts. Analytical Thinking abstracts from particular experience in order to produce formal knowledge that is general in nature and independent of any particular context. It is methodical and consistent, beginning with a particular set of assumptions or categories, and proceeding to develop the implications of these concepts through deduction. Examples of such discourses range from mathematics and logic through theories in the various academic disciplines.

**Multiple Framing:**

This is the ability to work intellectually with mutually incompatible analytical perspectives. It involves conscious awareness that any particular scheme of Analytical Thinking, or intellectual discipline, frames experience in particular ways. Therefore, any given theoretical perspective may be challenged from another, also internally consistent, analytical point of view. Solving complex problems which are rooted in a clash of multiple, irreducibly different perspectives deriving from different assumptions of value demands facility with Multiple Framings of problems and situations.

**The Reflective Exploration of Meaning:**

This is the mode of thinking that encompasses the most self-reflective aspects of learning. It involves the exploration of meaning, value, and commitment. For example, it asks: What difference does a particular understanding or approach to things make to who I am, how I engage the world and what it is reasonable for me to imagine and hope? These questions extend into the ethical realm, as when students confront what another person or a situation may ask of them, and how they should respond. This is the mode of thinking essential for the formation of democratic citizens. If Analytical Thinking demands evidence and rigor, and Multiple Framing inquires into the strengths and limitations of various methods of investigation, this mode of thinking pursues self-awareness in the probing of questions and problems of living in our world. This is the traditional heart of liberal education, the focal point of *Bildung* and humanistic learning.

**Practical Reasoning**

This mode of thinking represents the capacity to draw on knowledge and intellectual skills to engage concretely with the world. Practical Reasoning goes beyond reflection to deliberate and decide upon the best course of action within a particular situation. It demands that individuals understand the proper aims of the activity in which they are engaged as well as the context of that activity. It requires the ability to perceive the different purposes and perspectives of other participants in the situation, and it employs multiple framings of the situation so as to balance conflicting perspectives while aiming at an outcome that seems best for these persons, in this situation, at this time. Such thinking is characteristic of professional judgment, as well as being a key capacity of citizens and statesmen.

## *Handout Two*

29 October, 2010

### **Workshop: How to Redesign Undergraduate Curricula William M. Sullivan**

#### **Using and Testing the Scheme: Some Questions**

Using the Three Modes of Thinking plus Practical Reasoning as a *template*:

1. Where, in the architecture of the curriculum, are each of the Modes presented?
2. Are the Modes presented in *explicit* or *implicit* ways? By what means?
3. By what kinds of *teaching practices* are the Modes presented: e.g. classroom lecture? Seminar/discussion? Simulation/laboratory? Clinical experiences?
4. What faculties are responsible for each of the Modes? Does any faculty or educational program act as an *integrating center* in the curriculum?
5. How would one know if the teaching of these Modes of Thinking is having its intended effects? I.e. What kinds of assessment are/ought to be employed?