Social Foundations of Education for the Information Age

Leonard J. Waks, Temple University

Introduction: The Social Foundations of Education

In this paper I re-imagine the social foundations of education (SFE) as a project within the information society. I start with what I take to be a reasonably non-controversial definition: SFE is a field of scholarship and teaching aiming to provide a comprehensive understanding, through description, interpretation, and social inquiry, of the educational institution of society and its relations with other institutions—economic, political, cultural, religious, familial, and social-structural. It seeks to understand education both as it has existed in various previous societies and as it exists today, and it seeks to understand the dynamics of institutional change—how various intrinsic and extrinsic factors cause it to shift from one form to another and from its present to some future state. It also seeks to understand the broader aims, purposes and values underlying education, to evaluate educational policies and organizations in light of those purposes, to critique existing policies and organizations, to prescribe desirable changes in them and through publications, consultation and teaching to assist education publics, professionals, and policy makers in bringing about these changes.

Work in SFE is distinctly inter-disciplinary and trans-disciplinary. In engaging in its core tasks SFE draws upon the disciplines of history, sociology, philosophy, anthropology, economics, political science, and other disciplines as relevant. The philosophy, history, and sociology of education and other disciplines operating under the umbrella term "educational studies," contribute to SFE but neither define it nor are comprehended by it—these fields maintain distinct identities as sub-disciplines within social science and humanities disciplines.

This is the field of SFE that I have known and worked within for the last fifty years. It is the field as reflected in contemporary textbooks, and in course and program descriptions in university catalogs. Any effort to re-imagine SFE will have to remain bounded by such a definition—otherwise it will not be re-imagining SFE, but imagining a change from SFE to something else.

Social Foundations as "Foundational"

In what way are the tasks of SFE, as defined, "foundational?" We can consider three broad claims: (1) that SFE provides *normative foundations* upon which education should be constructed or reconstructed; (2) that SFE accounts for the *causal foundations* or root causes of educational practices, in factors extrinsic to education, such as class structure or interests of political elites; (3) that SFE provides *the best knowledge base* for thinking about educational practices and educational change.

Normative Foundations

Students in SFE may convince themselves that they know best about what should be done. They are often frustrated by change processes that move too slowly, or in altogether wrong directions. If SFE scholars think they know best, then obviously they are all alone in thinking so. Only a Platonist theory would ascribe to scholars—as philosopher kings—the role of prescribing for society. In modern democracies policy makers, elected or appointed, make decisions based on many influences, including the preferences expressed by powerful economic elites, policy influencers such as Non Governmental Organization (NGO) operatives, and electoral majorities. From all appearances, these groups pay little or no attention at present to communications from SFE professionals. If SFE hopes to influence education, it will have to adopt new communication practices and join in alliances with influential groups in society. More about this later.

Causal Foundations

The educational institution is a complex web of norms and practices. It is always undergoing changes, with emergent features responding to new social needs. As Larry Cuban has argued, such changes are necessary merely to maintain stability.[1] While no single causal account is likely to explain institutional behavior as a whole and account for emergent features, some causal frameworks have illuminated key features of education, including Herbert Gintis and Samuel Bowles's Marxian (broadly critiqued) explanation of differential educational provisions in terms of social class relations,[2] Andy Green's explanation of the origins of publically supported mass education systems in terms of modern state formation,[3] and Robert Dreeben's functional account of schools as inculcators of societal norms.[4]

However, the educational institution also changes from within; in this sense, education does not have causal foundations: Thomas F. Green's account of these internal dynamics strikes me as another signal contribution to SFE.[5] More significantly, as Stanford sociologist John Meyer explained in another SFE classic, educational status has come in the last century to determine social positions: school and college diplomas have served as job qualifications and have thus determined the work their possessors do, the knowledge and information they absorb, the income they earn and the wealth they come to possess, the neighborhoods they live in and the people they associate with.[6] In a very real sense, not only does education not have social foundations in this causal sense but rather society has educational foundations.

Knowledge Foundations

The causal frameworks mentioned above are components in a larger body of SFE knowledge, a loosely-connected composite of disciplined inquiries, conjectures and speculations, and interdisciplinary investigations of many sorts. Today's post-modern sentiment warns against

1. Larry Cuban, "Curriculum Stability and Change," in *Handbook of Research on Curriculum*, ed. Philip W. Jackson (New York: Macmillan, 1992): 216-247.

2. Samuel Bowles and Herbert Gintis, *Schooling in Capitalist America: Educational Reform and the Contradictions of Economic Life* (New York: Basic, 1976).

3. Andy Green, *Education in State Formation: the Rise of Educational Systems in England, France and the USA* (London: MacMillan, 1990).

4. Robert Dreeben, *On What is Learned in Schools* (Addison-Wesley, 1968).

5. Thomas F. Green, *Predicting the Behavior of the Educational System* (Syracuse: Syracuse University Press, 1980).

6. John W. Meyer, "The Effects of Education as an Institution," *American Journal of Sociology* 83, no. 1 (1977): 55-77.

expecting or desiring this composite to converge upon a unitary and total grand narrative of SFE. It is better to conceive SFE as a patchwork of contributions, to be critically examined, brought together for synthesis as useful, and put to work in various theoretical and practical projects: of scholars organizing research programs, state policy makers laying out policy agendas, educational leaders formulating purpose and mission statements, political candidates constructing education platforms, teachers planning lessons and curriculum projects, NGO officers framing up interventions, and philanthropic foundations assembling project schedules.

In these cases SFE knowledge offerings cannot merely be swallowed whole—adopted and "applied." At best they can be placed on the table along with other kinds of inputs from project participants, in situations with inherent constraints. They can then contribute to the thinking of participants as they seek to resolve problems according to criteria inherent in their own problem situations. To contribute, SFE knowledge must be user-friendly—accessible and attractive to these audiences. It must be placed into circulation in knowledge flows of potential SFE end-users. The SFE knowledge base will be rendered vastly more effective by engaging these other professionals in collective inquiries, with its research agenda collectively shaped by SFE professionals and end-users of SFE communications. This insight shapes my image of a future SFE—more about this later.

The Educational Situation of the Information Age

Re-imagining SFE in a new social era is recursive. SFE is itself an education project, and its place in a new social order is itself an SFE question. To begin we have to characterize this new information network social order. Here I consider four key information webs operating in this order: (i) the human web; (ii) the knowledge web; (iii) the learning web; and, (iv) the work web—the network that allocates work opportunities based on capabilities acquired through the knowledge and learning webs. After describing these webs I will examine their upshots for educational change.

(i) *The human population is now inter-connected in a human web*. Our era is characterized by its vast information network of internet computers and mobile devices extending to every continent and indeed, to almost every human settlement including remote villages. Just about anyone, anywhere, can now send to and receive multi-media messages from anyone else in real time.

(ii) *The world's ever-expanding knowledge base is increasingly available free on-line in a knowledge web*. Open source encyclopedias such as Wikipedia, as well as authoritative reference works like the Stanford Encyclopedia of Philosophy and many others, are available for free. Publishers like Flatworld Press are making free, open-source textbooks available in all fields of knowledge.

Free open access scholarly journals are also proliferating in all fields. The standard definition of "open knowledge" is provided by the Budapest Open Knowledge Initiative:

> By "open access" to this literature, we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for

> copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited. [7]

Open knowledge is now trumping knowledge behind commercial paywalls, as scholars can search for it, find it, use it and cite it without constraint. According to the Directory of Open Access Journals, headed by Lars Björnshauge, Director of the Lund University Libraries, there are now 6165 open access journals,[8] and a recent study shows that over 20% of peer-reviewed research is now freely available for open access online.[9] More significantly, research is now rapidly migrating from commercially published journals to free, on-line journals. Harvard is now mandating that its faculty move to open access online publications and other universities are certain to follow.[10]

(iii) *Learners can now readily acquire the world's knowledge through a learning web of free and low-cost on-line tutorials and courses*. A world class education is now available for anyone, anywhere, with an internet connection. Four prominent examples are YouTube, Khan Academy, Open Courseware and Certificate Academies like EDx and Coursera.

You Tube contains millions of videos—variously estimated at between 250 million and a billion—including brief tutorials on just about every topic. More than 800 million unique viewers each month watch these videos and more than one trillion views took place in 2011.

The Khan Academy currently offers more than 2000 10-to-20 minute video lessons on just about every topic in school and college math, science, and economics. Sal Khan, the founder and until recently the sole faculty member, earned an MBA from Harvard Business School, where he was the president of his class. Khan made some videos to tutor his cousin in 8th grade math, and when these went viral on You Tube, Khan had a transformative insight: "With just a computer and a pen-tablet-mouse, one can educate the world!"[11] Khan's goal for his free online academy, as stated on his website, is ambitious: to empower everyone, everywhere with a free, world-class education. So far Khan has focused on math, science and economics, but he plans eventually to cover everything. He says: "my goal is to keep on making videos 'till the day I die!" Considering that he expects to live another forty to fifty years, "that should give me time to make several tens of thousands of videos in pretty much every subject."[12]

The Open Courseware project, initiated by MIT in 2000, has now spread to more than 150 additional universities and research centers, and currently offers more than 4,500 courses in nine languages. Tufts, Duke, and U.C. Berkeley are among the major U.S. sources of courseware, while in Europe the Technical University of Delft has emerged as a leader, ranking

---

7. Peter Suber offers an excellent brief explanation of open knowledge, Open Access Overview - Focusing on open access to peer-reviewed research articles and their preprints, http://legacy.earlham.edu/~peters/fos/overview.htm.

8. Directory of Open Access journals, http://www.doaj.org/.

9. Bo-Christer Björk, Patrik Welling, Mikael Laakso, Peter Majlender, Turid Hedlund T, & Guðni Guðnason (2010) Open Access to the Scientific Journal Literature: Situation 2009. *PLoS ONE* 5, no. 6 (2010): e11273.doi:10.1371/journal.pone.0011273.

10. In April 2012 Harvard University, noting the skyrocketing prices of commercially published scholarly journals that are putting a damper on the spread of knowledge, officially urged its faculty members to seek publication in open access journals, to resign from the boards of all publications keep articles behind paywalls, and to encourage their scholarly associations to take control over publication in their fields. See Ian Sample, "Harvard University Says it can't Afford Journal Publishers' Prices," *guardian.co.uk*, April 24, 2012. http://www.guardian.co.uk/science/2012/apr/24/harvard-university-journal-publishers-prices.

11. Albert C. Lee, "The Most Popular Teacher on YouTube, *Philippine Daily Inquirer*, April 9, 2013. http://www.technologytimes.pk/2011/08/06/khan-academy-advances-internet-education/.

12. Taimoor Zubair, "Khan Academy Advances Internet Education, *Technology Times*, August 6, 2011. http://www.technologytimes.pk/2011/08/06/khan-academy-advances-internet-education/.

second globally in technology courseware behind MIT. The famed Indian Institute of Technology is among the leading sources in Asia. The source institutions have joined forces in the Open Course Ware Consortium, a "worldwide community of hundreds of universities and associated organizations committed to advancing Open Courseware and its impact on global education."[13] Certificate Academies have now emerged from the Open Courseware movement. In December 2011 MIT announced *MITx*, an initiative, starting in early 2012 to eliminate barriers to higher education by offering MIT courses online along with "certificates of mastery." MIT has made the MITx open-source software infrastructure freely available to educational institutions everywhere. All MITx courses will be free, and the Institute aims to make the certificates of mastery available for a "modest fee."[14] In May 2012 Harvard announced that it will be partnering with MITx in this venture, now renamed EDx.

In April 2012, Daphne Koller and Andrew Ng, two computer science professors at Stanford, received funding to initiate *Coursera*, an organization making a comparable effort to provide free online higher education with certificates of mastery and links to employers recognizing them. The founders say: "We hope to give everyone access to the world-class education that has so far been available only to a select few. We want to empower people with education that will improve their lives, the lives of their families, and the communities they live in."[15]

So far, Stanford has partnered with Princeton, the University of Michigan, the University of Virginia, Georgia Tech, the University of Toronto, Duke, Rice, and a dozen other major universities to make the *Coursera* mission a reality. Certificates of mastery are listed among the components of Coursera offerings. In August 2012, *Coursera* announced that it had already enrolled over 1 million students from 196 countries. Recently Coursera has announced that in addition to certificates of mastery, it will offer a capabilities market for certificate holders, connecting them to work opportunities.

With the most prestigious universities now committed to these certificate academies, the dream of universal, free or very low cost, top quality higher education for all students throughout the world is rapidly becoming a reality.

(iv) *Individuals and groups can now find opportunities in the work web to use the capabilities they obtain through the knowledge and learning webs.* The work web now supplements and in some cases even replaces the system allocating work opportunities – and social position – through diplomas.

In the industrial age a link was forged between education and work, with diplomas serving as necessary job qualifications. In the information age that link has been broken. The developed world is undergoing an *occupational crisis*, as jobs get outsourced to low wage nations or replaced by computerized industrial robots—both processes accelerated by digitalization and the Internet. Jobs commensurate with educational attainments are disappearing.

Since the 1870s technical and professional job creation has kept pace with rising educational levels, prompting individuals to invest in education. As noted earlier, social positions came to be allocated largely on the basis of educational attainments, which, as job recruitment filters, came to define life-chances: where graduates (and drop-outs) worked, what they earned, where they lived, and with whom they associated. But in the information era the rate of return on pri-

13. The Open Courseware Consortium, http://www.ocwconsortium.org/aboutus.

14. "What is *MITx*? Answering Common Questions about the Institute's New Approach to Online Education, MIT News, December 19, 2011. http://web.mit.edu/newsoffice/2011/mitx-faq-1219.html.

15. This statement is taken from the Coursera website, https://www.coursera.org/#about.

vate investment in education is falling; students are leaving higher education unable to find remunerative work yet saddled with debts threatening to cripple them economically for life.

A work web is, however, being built on top of the human, knowledge, and learning webs. As a result, the allocation of social positions based on academic attainments is now being augmented and in some cases replaced by network allocation: the assignment of career opportunities based not on degrees and diplomas but on on-line learning and online connections.

The Internet and inexpensive digital tools now place many professional-level capabilities in the hands of non-degreed amateurs. Coursera offers one clear example of documented online education at this level. Further, as Clay Shirky notes in *Here Comes Everyone*, everyone online has *dual visibility*: they can rapidly be *found* and *assessed*.[16] Work seekers use web services— blogs, LinkedIn, Facebook, and YouTube—to make themselves and their specific capabilities known. Employers can already find and assess work seekers inexpensively using tools like Google Search and LinkedIn. They can now also use capability markets such as the knowledge-work labor market firm Innocentive, and the new work market promised for Coursera students. The internet has thus drastically reduced transaction costs for bringing potential workers—even those without diplomas—onto work teams.

Diplomas, which represent only standard levels of knowledge rather than capabilities for specific tasks, are now being rendered inefficient and unnecessary as job filers.[17] Why hire a professional with a diploma who will expect a long term job with a wage premium and benefits, when you can inexpensively find the specific capabilities you need for specific tasks online, pay a market price, and move on when you need different capabilities? Lou Gellos of Microsoft explains why his firm uses high-skilled temporary contract workers: they do only the part of the project where their capabilities are needed. "They're experts at it. Boom boom, they're finished." Maynard Wells, a former COO at E-bay who now runs the labor services firm Live Ops, stated the primary advantage of such workers to firms: "You have access to the talent you need. And when the need is gone, the talent disappears."[18]

The structure of knowledge work is now shifting in the direction of contingent contract employment, heralded a decade ago by Daniel Pink as "Free Agent Nation."[19] Many long-term full-time jobs with benefits that disappeared in the recession of 2008-9 are not coming back. They are being replaced by new work opportunities for those with highly developed and flexible capabilities, mediated by the dual visibility of workers in the work web.

New Education Agencies for the Information Age

The SFE question that arises is this: what are the implications of the shift to information society for education? They can be summed up in terms of (i) a decline in formal education and an expansion of informal education, (ii) the emergence of new kinds of schools and colleges, and (iii) a demand for new kinds of educational professionals.

16. Clay Shirky, *Here Comes Everybody: The Power of Organizing without Organizations* (New York: Penguin, 2009).

17. The growing significance of the 'amateur' workforce is explained clearly in Jeff Howe, *Crowdsourcing: Why the Power of the Crowd Is Driving the Future of Business* (New York: Random House Digital, 2009), especially chapter 1, "The Rise of the Amateur," 23-46.

18. Peter Coy, Michelle Conlin & Moira Herbst, "The Disposable Worker," *Bloomberg Business Week*, January 7, 2010 (Cover Story). http://www.businessweek.com/magazine/content/10_03/b4163032935448.htm.

19. Daniel Pink, *Free Agent Nation: The Future of Working for Yourself* (New York: Warner, 2001).

The Rise of Informal Learning

Rising participation in formal education in the last century can be explained largely by the rising social benefits awarded to those holding diplomas. Put simply, graduates at every level attained more advantageous social positions—higher salaries, more prestige, better residential neighborhoods and better schools for their kids—than drop outs at that level. Once a certain percentage of a given age cohort attained a given level of attainment, the diploma at that level could be used cost-effectively as a job filter, to lower transaction costs by excluding those lacking that attainment. But the same process works in reverse: as personal capabilities made visible online and certificates of mastery from certificate academies replace diplomas as job qualifications, the benefits accruing to diplomas decline and participation drops. In the work web, firms with work opportunities will not care about college, or even high school completion. They will care primarily about capabilities for tasks on hand. The high transaction (search and assessment) costs tied to finding and hiring personnel are dropping rapidly, along with the benefits of diplomas as signals in the hiring process.

This concern for capabilities will place a much greater weight on informal education. In a frequently cited study, Sally Ann Moore of Digital Equipment Corporation estimates that in learning for adult-level performance about 5% of time must be devoted to the didactic dimension to develop the "I Know," 20 % to the discursive and heuristic dimensions for "I understand" and "I Can Do," and an additional 75% to the informal education dimension of "*I Adopt and Adapt*."[20] The first three components can be organized in formal courses: teachers can present, explain and discuss the basics, and then guide the first steps of practice. The last stage, however, requires many hours of informal learning through applying and augmenting formal lessons. Malcolm Gladwell, in his best-seller *Outliers*, has recently popularized the notion that it takes 10,000 hours of concentrated practice to become proficient at any activity. According to Gladwell the statistical "outliers" with unusual skill do not generally have extraordinary talent but rather possess the drive and opportunity to master the skill.[21] Schools and colleges specialize in the initial 25%. Much of the additional 75% takes place out of school, either during the school years or later. As capabilities come to trump diplomas, more young people will find the motivations and demand the opportunities for informal learning for performance.

Changing Schools and Colleges

To meet these demands, schools and colleges will have to change. If the only services they offer are formal courses and diploma programs, they will not survive. Young people will be far better served by home-based education combining formal online courses and varied informal education opportunities linked to work-related skill development. Today only better-off families can provide home supervision, and their children can gain the benefits of this sort of mixed educational program. But even those families unable to provide supervision are soon likely to demand comparable opportunities for informal learning and apprenticeship-like settings.

So let us ask an SFE question: what kinds of successor organizations to schools can meet the needs of youth in information society? They will have to exhibit a greater openness of staff recruitment, curriculum, and method than the schools and colleges of today. Cyber-schools and

20. Cited in "Informal learning,"*Wikipedia*. http://en.wikipedia.org/wiki/Informal_learning.
21. Malcolm Gladwell, *Outliers: The Story of Success* (New York: Little Brown, 2008).

Open universities exhibit some of the desired features, but these remain alternatives operating within the entrenched paradigm. Thinking ahead to a new informational paradigm for education, let us employ the term "learning centers" for new secondary-level educational organizations blending self-directed learning, adult supervision, in-person F2F instruction, web access, online learning, mentoring, informal education, and connections to work through internships, apprenticeships, and contract jobs. Such organizations can combine the best features of good schools, libraries and museums, apprenticeships and home-based education. Instead of a bloated curriculum designed to fill time until graduation, such organizations can design individual educational plans for each learner combining core academic learning with personalized informal learning for performance. While learners completing their programs may earn diplomas, their energies will be more sharply focused on gaining real-world capabilities with immediate pay-offs - access to adult level tasks. This learning center design can also be employed at the two-year polytechnic college level—both community colleges and proprietary schools.

Today, many four year colleges suffer from the flood of ill-prepared and unmotivated students, there only because they see no alternatives as the pay rate of those with only high school diplomas drops to near the drop-out pay rate. High schools and polytechnic colleges organized as learning centers, in combination with the learning web and the work web will restore opportunities for these young people. They will not feel compelled to go to college, and face the futility and debt burdens of today's youth.

Once these young people withdraw from the four-year college pool, colleges and universities can devote themselves to the tasks they are best equipped to handle: preparing academically talented and motivated youth from every group in society for knowledge creation, professional practice, government service, and leadership. In the process, many of the less competitive colleges and universities will suffer declining enrollments, and many will fail.

New Educational Professionals

The learning center model for secondary schools and polytechnic colleges demands new kinds of educational professionals, including mentors, media educators, and focus teachers, in addition to in-person classroom teachers trained to integrate live instruction with online learning resources. Each student in the learning centers will have an individual learning plan combining live and online formal and informal learning and work experience. The complex web of innumerable online learning opportunities is bewildering; opportunities are limitless, yet careful choices must be made. Young people will in most instances need guidance from adults acting as life mentors—though of course some youths will chart their own paths and amaze us. The mentors require counseling skills; they also need up-to-date knowledge of the opportunities available for work experience and further education, to assist learners in making the transition to adult status in the community.

Learners will also need media educators able to diagnose individual knowledge and information needs and to connect learners with suitable online media resources. These educators will stay abreast of new media developments, and brief other members of the teaching staff so that all can coordinate their efforts with the best online resources. Because a large share of learning, formal as well as informal, will in learning centers take place online, media educators will have to bear much of the weight for academic learning. They will also be the primary teachers in the area of "learning to learn": providing training in search, knowledge synthesis, and multi-

media information presentation. Some will be media generalists, but others will be specialists in humanities, social studies, math and the sciences.

Some students will require "focus teachers" to narrow down on and remove specific learning blocks. Some people learn rapidly, others lag behind and get left behind. Live teachers and online learning programs both are capable of detecting barriers to learning. In in-person and synchronous online classes, however, teachers must push ahead. Students who fall behind are assigned to remedial or developmental tracks, and get labeled as slow or disabled learners. Many drop out.

Learning centers by contrast are devoted to each individual student. No students are labeled or assigned to remedial classes. All are expected to learn in accord with their abilities, and supported every step of the way. Once areas of weakness are discovered, teachers immediately provide online tutorials, e.g., from Khan Academy. Students who cannot keep up the pace are rapidly re-assigned to asynchronous courses where they can learn at their own pace. When needed, special "focus teachers" are assigned to work one-on-one with students experiencing difficulties. These teachers are also responsible for recruiting and training the volunteer tutors available throughout the day to all students. Focus teachers require specialist training in diagnosis and treatment of learning problems, and in the management of para-professionals and volunteers.

Schools and Colleges of Education

As the information era progresses college enrollments will decline. Students with focused occupational goals may bypass college, acquire necessary capabilities through certificate academies and work experiences. Instead of work with "job security" they will seek to retain "employability security" through lifelong certificate learning and periodic shifts to challenging new work situations demanding cutting edge skills.

As a result, many of today's pre-service teacher education students—typically drawn from the lower half of the college class—will by-pass college in the coming years, and the recruitment pool for pre-service teacher training will change. Meanwhile, professionals in non-education fields will increasingly be recruited by school districts for teaching jobs, and local school districts and other agencies will compete with schools of education as providers of teaching qualifications. These alternative on-site agencies may be especially attractive for recruits because of their opportunities for practice teaching.

As schools of education lose their monopolies over teacher preparation, they will need to be restructured to serve new needs of new clients: school districts, but also business firms, government agencies, philanthropic foundations, media providers and non-governmental public interest organizations. Teacher education will no longer dominate the spirit of these schools. Programs in educational psychology and counseling will acquire new roles in training focus teachers and mentors. Such programs can be organized on a certificate basis so those seeking these roles—whether current teachers or professionals in other fields—can quickly get up to speed.

The research and development functions of schools and colleges of education will expand. As the pre-service teaching role declines, professors of education will devote more time to Research and Development. In keeping with current trends, the proportion of full time professors to part time staff in both teaching and research will continue to decline. Full professors will be tantamount to laboratory directors, responsible for organizing research projects and doctoral training. These projects will be staffed in part by researchers hired on contract for specific task-related capabilities.

The colleges as a whole will be re-organized as "complex organizations"[22]designed, in the words of Dee Hock, to be "infinitely malleable and yet extremely durable."[23] In such organizations operational units are self-organizing, solving problems through local interactions to find emergent, rather than pre-scripted, predictable solutions. Central leadership gives up command and control but takes on two other functions: (i) establishing a suitable context for creative self-organization within work units and (ii) coordinating the emergent results to keep the organization as a whole coherent and effective. Education Deans, working collaboratively with senior faculty, will establish the college missions and operating principles, but cede considerable power to program directors and professors to shape projects, to find, assess and hire staff, to market to clients and obtain project funding.

The colleges as a whole will be, like the early RAND corporation, organized to optimize significant inter-faculty and inter-program interactions. While RAND had distinct departments, it operated as a network of interconnected individuals and groups. Its offices all faced a central courtyard, so that all staff members ran into each other every day; its studies in turn drew from many disciplines and placed research problems in multiple contexts. Burton H. Klein, a former RAND researcher argued in *Fortune* that conventional research suffered from "too much direction and control."[24] By loosening planning and control RAND fostered creative thinking and a context for collaboration to optimize its power and relevance to emerging problems. Another former RAND researcher spoke of RAND's "anarchy of both policy and administration…" that gave each worker a unique degree of individual freedom.[25] RAND leaders gave up the illusion of control to stimulate and harness the complexity within the RAND network, and deans in colleges of education will have to do the same to survive in the information age.

Conclusion: Re-Imagining Social Foundations

If current trends continue, the foundations disciplines—philosophy, history and sociology and the others—will all but disappear in the pre-service preparation of teachers. In some ways this will be a welcome development, as SFE scholars will be liberated from teaching required SFE courses to students who are academically underprepared and unmotivated. The downside is that regular full time faculty positions for SFE scholars will decline.

However, SFE training should serve future education scholars well. Big-picture thinking and a problem-focused research orientation will both be essential for all educational professionals in staying abreast of the changing landscape with its shifting opportunities for project development and funding. Leadership roles in education-related agencies of all kinds will require them. All such agencies will also have needs for external consultants. A major challenge lies in developing SFE training programs enabling our graduates to master both the SFE literature and the requisite non-academic skills - in action research, consulting, team leadership, project development and management, grant writing and project marketing.

---

22. See David Axelrod & Michael Cohen, *Harnessing Complexity: Organizational Implications of a Scientific Frontier* (Free Press, 2000).

23. Dee Hock, "The Chaordic Organization: Out of Control and Into Order," *World Business Academy Perspectives,* 2003. http://www.fastforwardblog.com/wp-content/uploads/2008/11/dee-hock-the-chaordic-organization.pdf.

24. Burton H. Klein, "A Radical Proposal for R. and D.," *Fortune* 57, no. 5, (May 1958), 112 ff.

25. Johnny Ryan, *The History of the Internet and the Digital Future* (London: Reaktion Books, 2010), 44.

Two inspiring leaders and role models are Ken Benne,[26] who combined scholarly finesse in SFE with leadership in human relations and group dynamics training, and Joseph Schwab, whose re-imagining of educational scholarship around the idea of "the practical" showed how foundational ideas could be put into circulation for decision making.[27] As the number of full time professorial positions in colleges of education decline, and the role of SFE changes, the "soft skills" of communications, consultation, inter-group relations, and group leadership are becoming essential for SFE scholars seeking opportunities within the work web. I imagine professionals in SFE forming a complex professional portfolio, with work in teaching, training, research, consulting members and project leadership. Some will be employed full time in universities, whether in tenure track professorships or other roles. Others will be employed in school districts, policy agencies, think tanks, publishing firms, and elsewhere. Yet others will join Pink's Free Agent Nation and offer their services in the free market as multipreneurs. Here the tickets to success will be what they have always been: (i) specialize—gain current knowledge in the areas where you offer your services, and network with those in the relevant specialized communities, and (ii) make yourself visible and useful—make yourself available (through blogs, popular publications, community lectures and workshops and other services), then find needs and fill them.

In this scenario the role of the "foundational disciplines"—philosophy, history, and sociology of education and the like, will continue to change. Scholars were recruited from mainstream discipline departments to colleges of education in the late 1960s and 1970s to revitalize the field of educational studies, which was quite correctly perceived as cut off from these parent disciplines. Two problems emerged, however. First, as these mainstream discipline-based scholars trained their own graduate students in colleges of education, and these students in turn got placed in professorial positions in such colleges, the links with the parent foundational disciplines were once again weakened. Second, the knowledge bases and research skills derived from the separate disciplines were not always optimal for the challenges of SFE. As a result, educational studies moved first in interdisciplinary, and eventually in trans-disciplinary directions. Scholars attending the annual meetings of AESA today will encounter very little, if anything, in the way of mainstream philosophy, history or sociology of education.

This loss of cutting edge inputs from the disciplines is not a good thing, and is not easy to rectify. One way to restore these links would be to revitalize these sub-disciplines within main-

---

26. Ken Benne was, along with George Counts, Harold Rugg, and others, a member of the famed Kilpatrick Group at Teachers College that conceived SFE as a field of study. He joined his University of Illinois colleagues in authoring the most influential SFE textbook, W. O. Stanley, B. Othaniel Smith, Kenneth Benne, and Archibald Anderson, *Social Foundations of Education* (New York: Dryden Press, 1956). I have drawn on Benne's definition of SFE in the introductory section of this paper. Benne combined interests in educational theory and interdisciplinary research with those in practices of democratic leadership. He was, along with Kurt Lewin, the founder of the field of group dynamics training with its "T-groups," and is responsible for introducing the concept of the "change agent." See Kenneth Benne, *A Conception of Authority* (New York: Russell and Russell, 1971); Warren Bennis, Kenneth Benne & Robert Chin, *The Planning of Change* (New York: Holt, Rinehart and Winston, 1984); R. Freeman Butts, "Kenneth Benne: The Compleat Teacher, or the Philosopher's Practice of Civic Virtue," *Educational Theory* 43, no. 2 (1993): 223–228.

27. Schwab saw SFE workers attending to the social dimension of educational programs, as necessary components, along with those attending to the other commonplaces—teaching, learning, and subject matters—in practical work groups. He then imagined curriculum workers in the role of coordinators—guarding against imbalances in emphases among these commonplaces. See Joseph Schwab, "The Practical 4: Something for Curriculum Professors to Do," *Curriculum Inquiry* 13, no. 3 (1983): 239 – 265; Lee S. Shulman & Joseph Jackson Schwab, in *Remembering the University of Chicago,* ed. Edward Shils (Chicago: University of Chicago Press, 1991); Ralph W. Tyler, "Personal Reflections on The Practical 4," *Curriculum Inquiry* 14, no. 1 (1984): 97 – 102; Ian Westbury & Neil J. Wilkoff, eds., *Joseph J. Schwab, Science, Liberal Education, and Curriculum: Selected Essays* [includes "Practical 1 - 3"] (Chicago: University of Chicago Press, 1978).

stream disciplinary departments, and link them to colleges of education through joint appointments and joint programs. This was the trend in the 1960s and it is worth re-considering today – though it will not be easy. Philosophy, sociology and history of education, to consider just three examples, are as valid sub-disciplines as philosophy, history and sociology of law, medicine, science or art. Students of SFE will, of course, wish to take courses in these fields as appropriate to their teaching and research interests. At the same time, the faculty members responsible for these sub-disciplines in their home departments should be recruited by colleges of education as members of interdisciplinary and trans-disciplinary teams for teaching, research and development in SFE. In this way current knowledge and methods from the academic disciplines will available on an on-going basis for SFE. SFE students wishing to specialize in these sub-disciplines may do well to transfer to the disciplinary departments for their doctoral degrees, earning minors in SFE, as few graduates of SFE from education colleges are likely to secure positions in disciplinary departments—though it has occasionally happened. Colleges of Education and SFE departments should work to build close and mutually respectful relations with the disciplinary departments – not always an easy task—through joint projects in teaching and research projects, including those funded with external grants.

Those with expert knowledge in philosophy, history and sociology of education, however, will have a hard time selling that knowledge—especially in its current academic forms - in the free market. As illuminating as this knowledge is, and as useful for many educational professionals and the education public, it is simply not a marketable commodity. This is not an indictment, just a fact. SFE, on the other hand, when re-imagined as knowledge-for-use in diverse settings, in the hands of professionals combining its interdisciplinary knowledge base with the human skills as envisioned above, has a bright future.[28]

Bibliography

Axelrod, David & Michael Cohen, *Harnessing Complexity: Organizational Implications of a Scientific Frontier*, Free Press. 2000.

Benne, Kenneth. *A Conception of Authority*. New York: Russell and Russell, 1971.

Warren Bennis, Kenneth Benne & Robert Chin. *The Planning of Change*. New York: Holt, Rinehart and Winston, 1984.

Butts, R. Freeman, "Kenneth Benne: The Compleat Teacher, or the Philosopher's Practice of Civic Virtue." *Educational Theory* 43, no. 2 (1993): 223–228.

Bowles, Samuel and Herbert Gintis, *Schooling in Capitalist America: Educational Reform and the Contradictions of Economic Life.* New York: Basic, 1976.

Coy, Peter, Michelle Conlin & Moira Herbst. "The Disposable Worker." *Bloomberg Business Week* (New York) January 7, 2010.

Cuban, Larry, "Curriculum Stability and Change," in *Handbook of Research on Curriculum*, edited by Philip W. Jackson. New York: Macmillan, 1992: 216-247.

Dreeben, Robert. *On What is Learned in Schools*. Boston: Addison-Wesley, 1968.

Gladwell, Malcolm. *Outliers: The Story of Success*. New York: Little Brown, 2008.

Green, Andy. *Education in State Formation: the Rise of Educational Systems in England, France and the USA*. London: MacMillan, 1990.

28. The argument presented in this article is extended in my book *Education 2.0: The Learningweb Revolution and the Transformation of the School* (Boulder CO: Paradigm, 2013).

Green, Thomas F. *Predicting the Behavior of the Educational System*. Syracuse, NY: Syracuse University Press, 1980.

Howe, Jeff. *Crowdsourcing: Why the Power of the Crowd Is Driving the Future of Business*. New York: Random House Digital, 2009.

Klein, Burton H. "A Radical Proposal for R. and D." *Fortune* 57, no. 5, (1958): 112 ff.

Meyer, John W. "The Effects of Education as an Institution." *American Journal of Sociology* 83, no. 1 (1977): 55-77.

Pink, Daniel, *Free Agent Nation: The Future of Working for Yourself,* New York: Warner, 2001

Sample, Ian. "Harvard University Says it can't Afford Journal Publishers' Prices." *guardian.co.uk*, April 24, 2012. http://www.guardian.co.uk/science/2012/apr/24/harvard-university-journal-publishers-prices.

Schwab, Joseph. "The Practical 4: Something for Curriculum Professors to Do." *Curriculum Inquiry* 13, no. 3 (1983): 239-265.

Shirky, Clay. *Here Comes Everybody: The Power of Organizing without Organizations*. New York: Penguin, 2009.

Shulman, Lee S. & Joseph Schwab. "Joseph Jackson Schwab,"in *Remembering the University of Chicago,* edited by Edward Shils. Chicago: University of Chicago Press, 1991: 452-468.

Tyler, Ralph W. "Personal Reflections on The Practical 4," *Curriculum Inquiry* 14, no. 1 (1984): 97-102.

Waks, Leonard. *Education 2.0: The Learningweb Revolution and the Transformation of the School*. Boulder CO: Paradigm, 2013.

Westbury, Ian & Neil J. Wilkoff, eds. *Joseph J. Schwab, Science, Liberal Education, and Curriculum: Selected Essays*. Chicago: University of Chicago Press, 1978.

Leonard J. Waks is professor emeritus of Educational leadership at Temple University. He earned doctorates in philosophy (Wisconsin-Madison,1968) and Organizational Psychology (Temple, 1984). He has taught philosophy, educational theory and social foundations of education at Purdue, Stanford, Penn State and Temple. His research focuses on the emerging educational arrangements of global network society, and gthe continuing relevance of American pragmatism. He is the author of *Technology's School* (JAI:1995) and *Education 2.0: The Learningweb Revolution and the transformation of the School* (Paradigm: 2013) as well as more than 100 journal articles and book chapters. Waks has recently been elected President-Elect of the John Dewey Society.