

## The University and the School

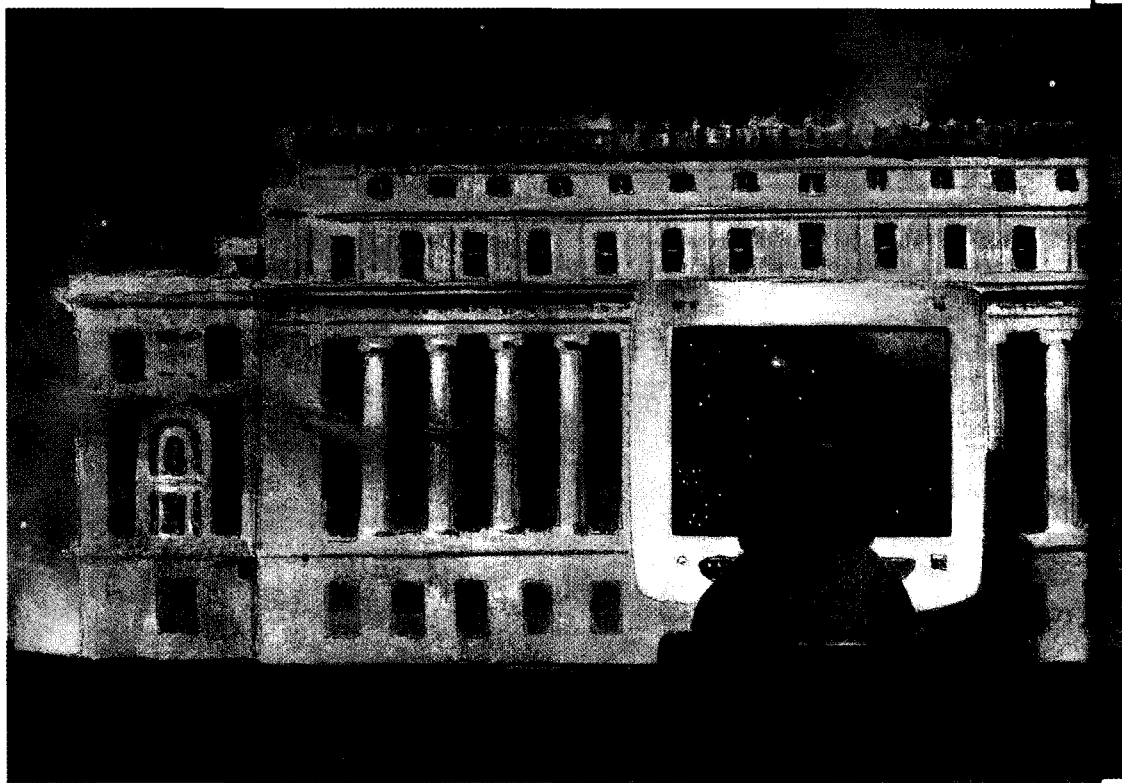
by Robbie McClintock '63 '68GSAS

Consider the two cultures of education. Recently, a colleague and I discussed how technology might affect college entrance and teacher preparation. We mused that these two functions are the main interactions between the university and the school. Selecting who gains college entrance and preparing teachers for the schools join institutions of higher education to elementary and secondary schools. Otherwise the university and the school are separate, with a different scale, a different tone, and a different culture—differences that educators in each realm generally take for granted. We speculated that perhaps digital technologies would bring these two cultures of education closer together, perhaps eventually to make them one. Let us examine this possibility.

In historic origin, the university preceded the school. The modern university, grouping professional studies with a center for the study of the arts and sciences, is a medieval institution. The modern school, grouping students by age as they labor period by period on a daily regimen of subjects, derives instead from the early modern era. From their beginnings, the university and the school have differed in the scope of the cultural resources with which they worked. However imperfectly, the university aspired to provide its faculty and students with an infrastructure of scarce and costly resources—complete collections of books and manuscripts and instruments of precision and power, both natural and cultural. The school, in contrast, used a limited set of cultural tools, special epitomes, mass-produced through print, cheap enough for each student to possess. These textbooks defined the content of school subjects, the scope of their curricula, and the sequence of their lessons. The university dealt with the full stock of knowledge; the school with its core essentials.

These original differences between the university and the school persist as the material substrate, girding the separation

of their cultures. Universities aim to preserve and perfect the whole culture through the work of a chosen few. Schools aim to introduce everyone to a few elements of the culture. The resources of the university have been too expensive for the school, and the standardized techniques of schooling have been inappropriate for the specialized autonomies supported by the university. Early Protestants described the educational situation well in setting forth their goal of “a learned clergy and a lettered people.”



Subsequent educational history secularized and implemented this aspiration far more fully than the most ambitious early reformers ever envisaged. Now, perhaps, the basic situation may be undergoing change. Very rapidly, historically speaking, digital technologies are changing the constraining conditions supporting this separation of the university and the school. Digital technologies are radically altering the limiting conditions inherent in printed communication.

First, digital technologies perfect the intellectual infrastructure of the university. In the past, each university struggled to make the complete assemblage of cultural resources accessible to scholars and students. With the Internet, the ideal is becoming actual, providing the university a shared,

much-expanded infrastructure of digital libraries and networked laboratories at lower costs in dollars and in space.

Second, digital technologies deeply transform the economic constraints that bifurcated education into two cultures. With print technologies, cost curves rose continuously, accelerating as increases in scale entailed additional costs of elaborate storage and retrieval provisions. The cost curves for digital technologies are very different: the initial threshold is high, as the system does nothing without an expensive infrastructure, but given the infrastructure, the incremental costs of more use and users are nearly negligible.

In short, a ubiquitous intellectual infrastructure will avail all cultural resources in it to everyone on it. The school, like the university, gains the unprecedented opportunity to work with the complete assemblage of intellectual resources available in the culture. The ideal, not of a learned clergy and a lettered people, but one directly of a learned people, becomes a historic potentiality, which profoundly transforms the structural relation between the university and the school.

Cultures change slowly, however. We can see a transformation of cultural constraints rapidly emerging. Before people can effectively make new possibilities actual in their lived experience, however, a tremendous task of cultural innovation lies ahead. The university will have an essential role in this task, one that runs counter to the common sense of past practice. Many efforts to apply digital technologies to the system of schooling are under way, induced directly by governmental and philanthropic funding. These efforts may have little effect on the character of everyday educational experience, however. In potentiality, the new technologies alter the basic limiting constraints that have shaped the school. Working within the school, changing the curricular and organizational

expectations embodied in it is very difficult. Digital technologies, implemented from within, provide little force for reform relative to the established programs of modern schools, with a set curriculum of limited scope that all should learn to more or less similar measure, with a teacher-centered learning process managed through lesson plans and enforced by a variety of broad-based testing programs. New technologies are not directly relevant in the performance of these tasks. Hence, the main accomplishment of school-based technology projects will be infrastructural, providing teachers and students with classroom access to a reasonably well-developed digital infrastructure, while the pedagogical program remains unchanged and the measurable educational effects, relative to expenditure, prove disappointingly marginal.

Be that as it may, the changing infrastructure is likely to become a significant Trojan horse by which the university enters the school in a quite new relationship. The cultural characteristics of networked digital technologies suit the work of universities very well, expanding the assemblage of knowledge, facilitating its storage and retrieval, providing powerful tools of analysis and simulation. Here, the major innovations make immediate sense relative to the traditional purposes of the university. The library and laboratory have been the key workplaces of higher education, and these become significantly more effective through digital technologies. Change will come to the school as people within it reach out and enter into the realm of the university through a contagious recognition that these resources are as much for them as they are for anyone else. When that happens, people in the university will reciprocate, realizing that their work has a far broader audience than they hitherto believed.

We might observe, by way of summing up, that the most interesting form of distance learning is occurring, not as people use the Internet to take familiar courses of instruction, but as they begin to participate in cultural work, from which they once stood at a great distance. The distance in distance learning is less spatial and more cultural—those who in the past stood at an unbridgeable cultural distance from the university are spontaneously discovering that they have much to gain from the full assemblage of resources supporting the advancement of learning. As this happens, the university and the school will increasingly become one, the cultural foundation for a learned people. ♣

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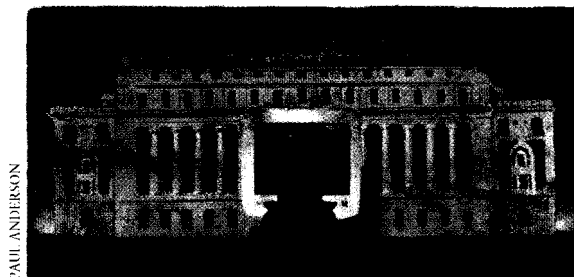
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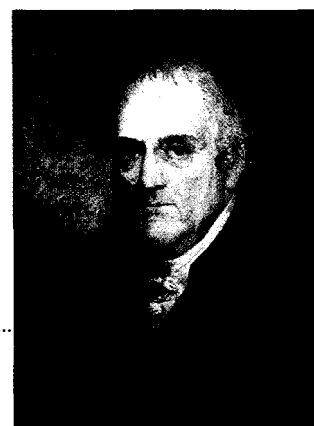


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