

# Connectivity, Propinquity and the Future of Academic Institutions



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The Age of Connectivity—and its implications—is upon us. According to Nebraska Senator Ben Sasse, in this post-information-age revolution “we are living through what is surely the greatest economic disruption since the Industrial Revolution—and what might end up being the largest economic disruption since nomadic hunter-gatherers first settled down to plant crops.”[1]

I believe that electronic-media-enabled “connectivity” might well be a term that is momentous enough to describe an “age” of the world because its properties ably capture the driving forces that are bringing about a fundamental change in the future of humanity—in the same manner that industrialization fundamentally changed our economic and sociological future.

**Industrialization affected the way we work and live by substituting machine labor for human labor. Connectivity is affecting the way humans work and live by substituting digital communication for face-to-face communication, that is: connectivity for propinquity.**

Propinquity means: the state of being close to someone or something; especially as it relates to physical proximity. By “connectivity” I mean: the state of having a high propensity to be joined or linked digitally with other human beings or intelligent devices, often to the exclusion of propinquity. In this Note, I advance the idea that the future of academic institutions turns

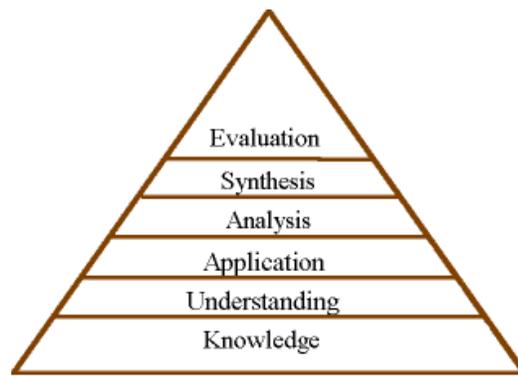
upon the extent to which these two nouns, connectivity and propinquity, work together.

In particular, I am concerned about how the substitutions inherent in the Age of Connectivity affect the future of academic institutions. It is one thing to substitute mechanical for human labor. It's quite another for machines to enable or constrain how much a person's relationships with other humans can develop or not develop—especially all-important learning relationships. In the process of substituting connectivity for propinquity in the Age of Connectivity, humans—while gaining ever-more access to each other through pervasive electronic media—lose certain kinds of social richness that have been the hallmarks of civilization, education, and of a civil society. For the first time in our history, connectivity and propinquity are being ever-increasingly separated.

In the past, connectivity and propinquity *did* work together: connectivity depended in large part upon propinquity. In those times, members of society were much more likely to be connected with those who were near them in physical proximity. The advance of media, for example: from written language, to papyrus, paper, movable-type print, national mail service, the telegraph, the telephone, radio, television, Internet connectivity, and now mobile-device-transported social media has gradually reduced this interdependency. **For the first time in history, connectivity can virtually ignore propinquity; and in my view, the uncharted consequences of this separation have implications for the future of academic institutions.**

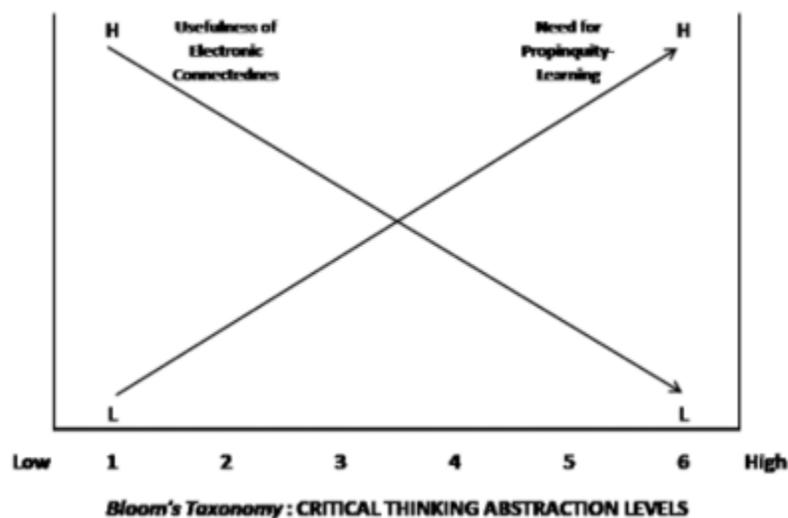
In April, 2017 in an interview with Charlie Rose, current Governor of Ohio and former Presidential Candidate, John Kasich said, "... here's the thing, our academic institutions are not preparing our people for the coming changes ... we have to prepare our people for the digital revolution, or we're going to have more division, more anger, and it won't be pretty." [2] Part of this preparation for the digital revolution requires understanding the relationship between connectivity and propinquity, because there are some kinds of learning that require propinquity. I explain this idea further, using the university as a case in point.

The primary purpose for the university is to serve as the *seat of learning*, which purpose has existed and remained essentially unchallenged across the centuries.[3] And, as suggested by Benjamin Bloom and colleagues in 1956,[4] learning may be classified according to the amount of critical thinking required, using a six-level pyramid-like taxonomy, with the lowest level requirements at the base, and the highest level ones at the top of the pyramid, as illustrated in the diagram below.



Until now, the primary learning purpose of the university was to focus on the acquisition and retention of information. Thus, referring to Bloom's Taxonomy to map the level of focus, most emphasis in the past has been on the lowest two levels of the pyramid: knowledge and understanding, with less emphasis on the middle levels: application and analysis, and (with notable exceptions) much less focus on the highest levels of critical thinking: synthesis and evaluation. Likely, this higher proportionate focus on the bottom levels was driven primarily by the information acquisition and retention limitations of the human mind. However, with the digital revolution, and subsequent connectivity via the Internet to vast stores of information that has been pre-acquired and pre-stored, the necessity for academic institutions to focus on the lowest levels of critical thinking (knowledge, and understanding) has diminished.

Of additional interest to those concerned with education, is the decreasing usefulness of mobile-device-enabled connectivity as the requirements for abstract thinking increase; and—I would argue—the higher need for propinquity-enabled learning as illustrated in the following figure.



As a simple example, then, consider for a moment a few verbs associated with the various levels in Bloom's Taxonomy; and in particular, notice the differences in necessary interpersonal interaction as one moves from lower to higher levels of critical thought:

1. *Knowledge*: memorize, name, recall, reproduce.
2. *Understanding*: classify, describe, grasp, sort.
3. *Application*: demonstrate, enact, operate.
4. *Analysis*: contrast, criticize, differentiate, question.
5. *Synthesis*: collaborate, cooperate, manage, unify.
6. *Evaluation*: argue, assess, consider, defend.

In my view, it is no accident that refinement of higher-order thinking skills: such as Level 5, synthesis: the capability to collaborate, cooperate, manage, and unify people, and Level 6, evaluation: to argue, assess, consider, and defend their ideas, is dramatically better-enabled by the proximity-to-people-focused coaching that learning propinquity offers. Therefore the question for academic institutions now is: *What actions of academic institutions lead to preparedness learning in the Age of Connectivity?* An answer to this question: (1) would provide a roadmap for the future of academic institutions; (2) could point to what should be done; and especially (3) can provide guidance for the future as to how to realign connectivity with propinquity and to capitalize on this reconnection.

Now consider the following "what if" question: **What if the job of the university—and for that matter of elementary and secondary education as well—were to be focused *less* on the acquisition and retention of information, and to focus *more* on developing the advanced problem solving ability that is possible through learning higher-order critical thinking?**

What if for example, the Business School—my home base—focused on solving the continuous stream of problems that arise from the fundamental obstacles to socioeconomic exchange: information uncertainty, relational uncertainty, and resource uncertainty?[5] Undergraduate education would then center on learning how to solve structured problems. Masters' level education would be focused on solving unstructured problems. Doctoral education would, through its primary objective of creating the next generation of researchers, focus on penetrating so-called "wicked" problems: those for which no structure for solution has yet been identified.

I therefore am arguing for a big-picture view; for an increasingly critical-thinking-based theory of education—specifically because most of the high-challenge problems of our current and next generation are less likely to be about memory recall, and are more likely to be about thinking deeply about humans in all our complexity. And such complexity can best be apprehended, I believe, through learning propinquity: first-hand learning that takes place among proximate people solving actual problems. In support of this assertion I cite my study of entrepreneurial expertise, <sup>e.g., 4,[6],[7]</sup> where for example, I have come to realize that there is only so much expertise that a person can gain without propinquity-enabled deliberate practice.[8] But where novices work side-by-side with experts, they acquire the fine points of sophisticated ability, because this thinking acuity is most-effectively transmitted person-to-person. Therefore, here is where connectivity once again needs propinquity.

Thus, while I agree that distance connectivity (non-human-proximate study and comprehension) seems to be well suited, possibly even better-suited to knowledge and understanding-type learning than is the geographically constrained, high-cost campus-based learning of the current university; I foresee a time, relatively soon I expect, where an artificial intelligence-driven (AI)-professor/ textbook reciter, will perform far better at the transmission and testing of knowledge and understanding than will the dated teaching and learning model that is human-recitation constrained. Structured, unstructured, and wicked human problems are unlikely to diminish. I believe that now is the time for research-trained and tenured/ tenure-track academic professionals (and the administrators who serve and are served by them) to capitalize on the unique research training signified by the PhD credential—even to re-tool if necessary, to be ever-better enabled to teach—due at least in part to propinquity—high-order critical thought proficiency in a given discipline.

What we need, therefore, is a growing population educated to think critically, enabled to solve structured, unstructured, and wicked problems. Neither can we do this as well teaching from a distance, nor with memory-recall-based education. In my view, propinquity-learning coupled with the benefits of connectivity—to modify the way the current job of the university is enacted—can better prepare people to engage the digital revolution with less division, less anger, and a positive future for academic institutions.

- Endnotes:** [1] Sasse, B. 2017. *The vanishing American adult: Our coming-of-age crisis—and how to rebuild a culture of self-reliance*. New York: St. Martin's Press.
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- [5] Mitchell, J. R., Mitchell, R. K., Mitchell, B. T., Alvarez, S. 2012. Opportunity Creation, Underlying Conditions and Economic Exchange. In: Andrew C. Corbett, Jerome A. Katz, (Eds.) *Entrepreneurial Action* (Advances in Entrepreneurship, Firm Emergence and Growth, Volume 14), Emerald Group Publishing Limited, pp. 89 – 123.
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