

## Economies of Scope in Liberal Arts Institutions: Colleges as Intentional Communities

By Marshall J. Horton and John C. Cox





Marshall J. Horton is Regions Bank Professor of Economics and Finance and Chair of the Department of Business Administration at the Frank D. Hickingbotham School of Business at Ouachita Baptist University. He recently served as President of the Federation of Business Disciplines (FBD).



John C. Cox is Associate Professor of Marketing and holder of the Harvey Jones Chair of Marketing at the Frank D. Hickingbotham School of Business at Ouachita Baptist University. Dr. Cox is CEO of Cox Auctions and Realty in Hot Springs, Arkansas.

## ABSTRACT

This paper considers liberal arts institutions of higher education as intentional communities, much like cities of voluntarily-affiliated inhabitants. A path-breaking analysis of such communities is to be found in the economic work of sociologist Jane Jacobs. Jacobs' model of economies of scope as a consequence of division of labor in small communities nested within larger macro environments is adapted to American liberal arts colleges. Even though economies of scale may not be practical for colleges, the juxtaposition of many different types of community members through a variety of academic disciplines still provides an avenue for economies of scope and import replacement, a few representative examples of which are provided.

## INTRODUCTION

American colleges and universities have been analyzed as monolithic institutions within fragmented industries. Many studies have divided institutions into various types. However, very little work has been done in the analysis of the types themselves [1]. Without much differentiation within an institution, there are not many avenues for potential economies of scope. The most frequently used of these divisions is the

Carnegie classification system in which colleges and universities are divided into research, doctoral, comprehensive, master's, liberal arts, and technical institutions.

#### A definition of liberal arts institutions

According to Baker, Baldwin, and Makker (2012), liberal arts colleges in the United States are declining in number, continuing a trend previously noted by David Breneman in 1990. Almost as distressing to the researchers as the closure of such institutions is their evolution into more comprehensive institutions. Blumenstyke (2015) has taken this a step further: liberal arts colleges are dying (p. 142).

All of this begs the question, "What is a liberal arts institution?" The sources cited above hold out the standard that liberal arts institutions are small, private, enclaves, sometimes church-related, sometimes not, in which professional studies are eschewed in favor of the classical divisions of the grammar, logic, and rhetoric (*trivium*) and/or arithmetic, geometry, music, and astronomy (*quadrivium*). The specific academic disciplines associated with these have been the arts, languages and literature, mathematics, natural sciences, philosophy, psychology, religion, and social sciences. The classic work on how U.S. higher education developed through the mid-twentieth century is Veysey (1965).

The liberal arts classification has been evolving over more than a century. Contrary to some claims in the literature, Pfnister (1984) wrote that American liberal arts institutions were infused with pragmatic studies from the beginning. For example, an early document about liberal education, the Yale Report of 1828, was a reaction against applied studies in a variety of areas (p. 152). Pfnister (pp. 163 – 164) went on to quote Morris Keeton and Conrad Hilberry, who wrote in 1969 that the salient features of successful liberal arts colleges were:

- (1) intricate and active engagement in a network of educational opportunities outside of old campus boundaries
- (2) variety of students
- (3) colorful and diverse careers of faculty
- (4) complexity of purpose.

Consistent with Keeton and Hilberry, Hersh (1999) pointed out that, contrary to much of what has been written, a practical, professional, education is not the opposite of a liberal education (p. 173). Rather, the trend throughout the past several decades has tended to be away from the general and toward the specific.

McPherson and Schapiro (1999) stated that more institutions, particularly smaller ones, are *styling* themselves as liberal arts colleges. Although causality is difficult to determine from available data, faculty at small colleges tend to run their own shops to a greater extent than at universities. They take satisfaction in a manner of work that may have more in common with a medieval craftsman than with a modern, corporate, worker (p. 72). A source of funding for such institutions, high-tech companies tend to hire liberal arts graduates for their creativity and critical thinking, since it helps companies anticipate and deal with the direction of changes in technology (Segran (2014)).

Freeland (2009) called these trends in liberal arts education a necessary revolution in order to inculcate active citizenship by combining thinking with doing, although he stated that it was far from an organized movement. He further credited John Dewey and Pragmatism, lauding attempts to de-emphasize pure disciplinary academics in higher education.

#### Liberal arts institutions as intentional communities

An alternative way of analyzing liberal arts institutions is to consider them as *intentional communities*. Delucchi (1997) came closest to this idea when he noted that exclusive, selective, colleges tend to style themselves as 'liberal arts' (p. 421). A working definition of intentional community is "a group of people who voluntarily come together to develop a common set of values." Using this definition, liberal arts institutions join the diverse ranks of the Hutterites, the technology-embracing cousins of the Amish and Mennonites (Janzen and Stanton (2010)) and inhabitants of retirement villages or planned housing developments such as Hot Springs Village, Arkansas, or Del Webb's Sun City, Arizona. Many of the arguments developed by McKenzie in his 1996 book, *Privatopia*, apply equally well to liberal arts institutions, as defined in the next section, as to planned communities.

Thomas (2012) followed up on the U.S. Supreme Court decision in Hosanna-Tabor Evangelical Lutheran Church and School v. Equal Employment Opportunity Commission, 565 U.S. (2012), in which a unanimous court ruled that religious organizations have some limited exemption from federal discrimination laws in the selection of personnel under both the Establishment Clause and Free Exercise Clause. The trend in jurisprudence appears to be toward recognizing some quasi-governmental status for *bona-fide* communities with religious missions.

#### Economies of scope

In yet another literature, higher education, along with other enterprises [2], has been characterized as subject to considerable economies of scope. For example, Cohn, Rhine, and Santos (1989) tested higher education cost functions to find both scale and scope economies. De Groot, McMahon, and Volkwein (1991) found economies of scope in joint production of undergraduate and graduate instruction for research institutions, but did not analyze economies of scope in the joint production of teaching and research (p. 431).

The first formal study of economies of scope is generally taken to be Panzar and Willig (1977, 1981). Their approach concerned multiproduct firms in which inputs are shared by two or more product lines. The presence of a sharable, quasi-public input combined with sub-additive costs results in economies of scope (1981, p. 268).

Multiple product lines and sharable inputs *can* give rise to economies of scope. Mathematically speaking,

$$c(x, y) < c(x,0) + c(0,y)$$
 for all x, y

where c is a multivariate cost function of producing product lines x and y (for the twovariable case). This condition is weaker than the initial model of Panzar and Willig, in which separability of market segments was used to explain economies of scope, diseconomies of scope, and multiproduct firms. But, as Teece (1980) pointed out (p. 225), economies of scope alone are insufficient to explain multiproduct firms. After all, inputs and production processes within firms can be *unbundled* rather than combined: Clearly, market contracts can be used to undo the organization implications which Panzar and Willig impute to cost functions alone.

Goldhar and Jellinek (1983) stated that the scope of work in some industries, particularly those in which newer technology is employed, are likely to benefit from economies of scope quite apart from scale considerations. For example, the increasing requirements for production flexibility yield a greater variety of market segments for a given manufacturing company and may require efficiency to be of secondary consideration (p. 141). Gimeno and Woo (1999) emphasized the role of multimarket contact in extended interdependence. But they then analyzed cost efficiency rather than explore the potential for new markets. Chavas and Kim (2007) decomposed production functions into four components: economies of scope into complementarities, economies of scale, convexity of technology, and degree to which outputs are catalytic (capable of being or highly leveraged in the operating sense) (p. 419).

Hersh (1999) maintained that liberal education allows future leaders to enlarge the scope of their analytic embrace (p. 180). But why would this apply only to undergraduate or non-professional studies? Surely graduate studies and/or business and entrepreneurship programs bring yet another dimension of scope to the mix.

#### Jacobs' approach

Jacobs (1961, 1970, 2000) pioneered the practical application of economies of scope to intentional communities. Specifically, she analyzed large cities as laboratories for how neighborhoods, institutions, and industries interact in a rich milieu of diverse backgrounds. She pointed out that economic development takes place in a large city naturally, without governmental programs picking winners and losers, through economies of scale leading to economies of scope then to local import replacement and subsequent export industries. Cohen (2006) is apparently one of many who have confused Jacobs' concept of import replacement with the older, Keynesian trade policy of import substitution (Blagburn (1950) and Bruton (1998)). According to Jacobs (2000), the root cause of expansion (is) competitive successful export work, either foreign or domestic (p. 49).

## FIGURE 1

#### Jane Jacobs' Original Model of Import Replacement



Jacobsian cities are enclaves of neighborhoods, or intentional communities with diverse skills, interests, and demands. In an interview with Steigerwald (2001), Jacobs provided yet more examples of import replacement and economies of scope in action. In particular, she found fault with governmental efforts to stimulate economic development, pointing out that they generally achieved exactly the *opposite* of their stated goals. For example, she pointed to efforts at urban renewal as prime causes of urban blight in inner cities. Dependence on governmental funding may compromise normally evolving paths of scope, ultimately leading to community collapse.

# Liberal arts institutions as intentional communities and Jacobsian economies of scope

While not large, liberal arts institutions represent varieties of diverse intentional communities. While it may be true that all academic institutions are intentional communities, the close proximity of members in Jacobs' neighborhood approach is perhaps more apparent in smaller institutions than in large ones.

Liberal arts colleges contrast with highly specialized research institutions. When academic departments aim for the research institution model, the limited signals between like academic departments (the proverbial ivory towers) aim at a rifle-shot approach in an effort to enjoy specialization and resulting economies of scale. In more of a shotgun approach, a liberal arts college represents, by design, a variety of academic disciplines. In this regard, liberal arts institutions are a particularly rich, chaotic, broth of interconnections, much like in a Jacobsian urban community. The potential for interactions between diverse constituencies is immense. Figures 2 and 3 illustrate the contrast between research institutions, in which depth is emphasized at the expense of breadth, and liberal arts institutions as they have evolved, emphasizing breadth of subject matter rather than specialization. This view lauds, rather than laments, the diversification of liberal arts colleges into applied areas such as business and entrepreneurship.

FIGURE 2 Hyper-specialization ideal of the research institution



FIGURE 3 Fruitful chaos of the liberal arts institution [3]



As polar cases, contrast the ivory tower dilemma of the hyper-specialized researcher in an arcane field of study in a research institution with that of the member of the liberal arts college community. In the case of the research institution, it is realistic to consider that there may be only one other contact on earth with whom the individual member of the research community can readily converse. Certainly, much duplication of effort would imply more potential gains from trade through further specialization.

On the other hand, the contacts at the teaching-oriented liberal arts college are many and diverse. If only six are involved in day-to-day activities in addition to research, fifteen separate relationships are possible. Given that the number of potential relationships between n community members is (n - 1) + (n - 2) + ... + (n - (n - 1)), the typical faculty of 100 or so would have 4,950 potential relationships from which to glean economies of scope. As mentioned below, the physical proximity of practitioners in different fields in smaller institutions is significant. As the size (scale) and depth (specialization of departments) of the institution grows, it is conceivable that the number of contracts within that institution actually *declines*. This idea, along with similar observations about the relative richness of smaller campus communities was raised by the noted educator Martin Trow in 1968 (Trow (2010)).

How do liberal arts institutions embody diversity? The broad array of academic viewpoints and variety of skills and abilities, including professional schools and auxiliary

activities, embody considerable diversity of thought and method. Some ways of modifying the traditional liberal arts institutions include

- Moving to form professional schools and departments
- Establishing internships
- Engaging in sports and maintaining other auxiliary activities and centers, and
- Participating in professional societies and maintaining accreditation.

It seems plausible that survivors among liberal arts institutions are evolving from isolated, inbred enclaves of uniformity to incubators for ideas through economies of scope. Unlike Jacobsian cities, liberal arts colleges may well consider trying first economies of scope and *then* economies of scale. The opposite approach, embracing unbundling, or disaggregation, with online instruction, bookstores, marketing, etc., and outsourcing of auxiliary services and functions with an eye to shedding any input that does not contribute directly to greater enrollment, may be a movement in the wrong direction.

This is perhaps best seen in the situation of an institution that still emphasizes teaching but has graduate programs, such as a doctoral institution. Figure 4 shows the Jacobs model modified for such an institution, like as a Baylor or Dartmouth, that has aspects of both liberal arts colleges and research universities in which economies of scope may be expected to follow from economies of scale. Graduate students may teach from professors' textbooks (flow 1), which potentially leverages intellectual capital into higher undergraduate enrollments (flow 2). This additional enrollment directly affects undergraduate teaching and indirectly feeds back into textbook modification and graduate teaching (flows 3).

#### FIGURE 4 One Example of How Doctoral Institutions Follow Economies of Scale with Economies of Scope



Figure 5 illustrates the situation for a "modified" smaller liberal arts college in which an entrepreneurship program can overlay virtually every classic field of study and lead to new work and import replacement. Such institutions tend to be enrollmentdriven and may expect to face financial challenges, as in the recent case of Burlington College [4]. Some advocates of the traditional roles and definitions of liberal arts institutions, such as Breneman, might infer that liberal arts colleges that embrace applied fields like entrepreneurship have crossed the line into the realm of comprehensive institutions on their way to evolving into doctoral universities. Freeland might disagree, as noted above, and argue for the modification. If necessity is the mother of entrepreneurship, and if an entrepreneurship tends to thrive in an environment where there is a healthy cross-fertilization of ideas, then the creativity touted by liberal arts institutions can be a path to a secure future when combined with studies in entrepreneurship.





Even if entrepreneurship, *per se*, is not explicitly recognized in the academy as an academic study, its practice is aided by dynamic processes of capitalism that Schumpeter (1975) labeled "creative destruction." Kirzner (1975) cited Schumpeter in contrasting innovation with imitation:

"The opening up of new markets, foreign or domestic, and the organizational development from the craft shop and factor to such concerns as U.S. Steel illustrate the same process of industrial mutation . . . that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one." (p. 102).

Far from duplicating what has gone before in an effort to specialize and achieve economies of scale, the innovators are characterized by disruption, "continually dogged by the imitators and routine-huggers" (p. 102).

Of course, this process can and does occur in highly specialized research institutions, but the depth of discourse may effectively act as a barrier between academic disciplines at that level of specialization. In a less specialized institution, this approach may benefit more from scope economies because experts from different areas must talk to each other in order to produce materials that will sell. Professors in areas of economic need may feel that their colleagues in other areas are approachable (and understandable) about collaboration. Music professors may seek the help or counsel of an instructor in business law to deal with copyright issues. English professors who can edit and revise may be consulted by biologists or musicians in writing for wider audiences. Religious-affiliated institutions may consider combining missions and business. Biology departments might submit a business plan for converting food service garbage into biodiesel fuel for use in university vehicles. In a comprehensive or even doctoral institution, departments have an advantage in this regard over research institutions partly because professors are less likely to get grant funding for specialized research than those at a Stanford or MIT. The fact that more of the faculty teach undergraduate students directly and train graduate students to do the same requires the ability to make the material accessible to a more general audience, including scholars and practitioners from other academic disciplines.

It should be noted that import replacement can occur at research institutions, but it is likelier because of increased specialization and economies of scale than because of economies of scope arising from shared inputs. The very strengths of research institutions, specialization and concentration on a very targeted body of knowledge, give rise to fewer shared inputs as academic silos are formed that may well be impregnable. In addition, the sheer physical advantage for collaboration in smaller institutions is significant. The University of Chicago, as just one example, is spread throughout the city of Chicago. How practical is it that collaborators in entirely different fields get together frequently enough for a meaningful dialogue? Chat rooms and twitter will only carry one so far.

A primary thesis running throughout Henry Rosovsky's popular book on American higher education, *The University: An Owner's Manual*, is that research institutions like his own Harvard are hopelessly specialized in silos, with departments and schools fighting one another in cutthroat competition (Rosovsky, (1991)). To the extent that research institutions are emulating liberal arts institutions and promulgating interdisciplinary programs, they may succeed in poaching away some of the traditional advantages of teaching-oriented institutions. But the opportunity cost is the lost specialized knowledge that only a research institution can support. For example, an astrophysicist must surely give up some potential breakthrough in her field in order to collaborate with a musicologist or expert in archaic languages for engagement in interdisciplinary research.

While it is true that colleges and universities differ from large cities in that they are subject to publicly-declared missions and objectives while urban communities may not be, the aspect of the intentional community that seems to matter most is that for liberal arts institutions, those who are there have voted with their feet, just as those in

large cities have voted with their feet. In those instances in which residents find that they have made poor or ill-informed selections, there are mechanisms in both communities for those who are out-of-synch with most of their colleagues to effect change in their environment. Like almost all cities, almost all liberal arts institutions accept state and federal funding in some form. Whether the issue is for a Christian institution to consider admitting students who do not subscribe to the mission of the institution or for New York City to ban junk food, economies of scope can occur. When the emphasis for a college is to increase enrollment and try to achieve economies of scale, as the recent case of Burlington College demonstrates, economies of scope may not occur.

## CONCLUSION

The results of this analysis suggest that a liberal arts institution can embrace professional fields and auxiliary activities without necessarily changing its mission. Rather, it is merely generating economies of scope through the kinds of diversity that really matter to stakeholders, including faculty, donors, parents, and students. Additionally, liberal arts institutions, like cities, should be selective in what kind of external funding they accept, whether it is in the form of a government grant or a donation for a new athletic complex, since it may divert resources away from potential scope economies toward objectives more appropriate for a different kind of intentional community. As in the case of Burlington College, it is conceivable that outside help may serve to pick winners and losers based on measures built on economies of scale, which may in turn lead to disaster.

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## NOTES

[1] A notable exception was the pioneering, Carnegie-financed, study by Keeton and Hilberry (1969).

[2] For example, Callan and Thomas (2001) analyzed scope and scale in solid waste disposal industries and Cockburn and Henderson (2001) found that profits of large pharmaceutical companies appear to be due more to scope economies than to scale economies.

[3] Donald (now Deidre) McCloskey once contrasted the sterile lucidity and system that typified Classical French economics, with the fruitful chaos of nineteenth-century British economics (McCloskey (1982), fn. 1, p. 84).

[4] As of this writing, the latest closure of a small, private, liberal arts institution was Burlington College in Vermont. According to Thomason (2016), the college was unable to attract sufficient enrollment to maintain its line of credit. The need for the school's "crushing debt" stemmed from a 2010 attempt by a former president to expand enrollment in the face of *dis*economies of scale. All of the attempts to revive the college aimed at attracting students and increasing enrollment. None involved economies of scope using faculty synergies (Johnson (2014)).

Photo by Carole E. Scott

