

## **Of Rivers and Universities**

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## **Abstract**

Rivers and universities are two important resources with enormous potential value to society. However, both must be harnessed in order for society to receive the maximum possible benefits from each. Additionally, each has a maintenance fee associated with it which requires an adequate level of investment by society. The many parallels or similarities between these two powerful entities provide a number of analogies which are explored in essay form.

Throughout much of recorded history, both rivers and universities have played important roles in society and contributed substantially to its progress and development. Today they remain valuable resources and also provide a number of interesting and instructive analogies which are highlighted in this essay and have implications for educational policy and practice.

Two of my greatest passions over the last two decades have been rivers and universities, so it is only natural that I should see certain similarities between them. During this 20-year period I have been employed at four colleges and universities and been a student at four others, representing both private and public, large and small, wealthy and poor, prestigious and nondescript, graduate and undergraduate, commuter and residential, urban and rural institutions. During weekend, holiday, and vacation trips I have also canoed or rafted rivers in Arkansas, Colorado, Missouri, Oklahoma, Tennessee, and Texas.

At first glance, rivers and universities would seem to have little in common. But upon closer examination and deeper reflection, a number of parallels come to mind. These similarities serve as a vehicle in the present essay to stimulate deeper thinking about rivers and universities, and about the broader society they both serve. A few basic thoughts on rivers will be presented first for later comparison.

Rivers operate as part of an age-old hydrological cycle in which seasonal variations and atmospheric conditions combine to produce various forms of moisture which eventually become liquid water. Rivers must be nourished and fed. They are dependent upon the environment for their well-being and continued existence. And they each have a beginning point, a source of origin.

Rivers tend to grow and mature over time. They cut deep channels and widen their banks. And because rivers are interdependent with the environment, their form is subtly but constantly changing. Occasionally a river will even change course due to a flood, earthquake, or other severe environmental pressure or disturbance.

Rivers also attract and refresh us. Swimmers, skiers, rafters, tubers, kayakers, canoers, boaters, sailors, and fishermen flock to rivers for their many recreational uses. And rivers speak to us, from the gentle gurgling of a mountain stream in the early spring or the lazy lapping of waves in a summer breeze, to the thunder of a waterfall or the roar of a raging torrent.

Finally, and most importantly, rivers exert a powerful force on society and satisfy basic needs such as irrigation, transportation, the generation of hydroelectric power, the supply of municipal and industrial water, and the support of various species of plant and animal life.

Universities are similar to rivers in many of these respects. The cycle of students also is of ancient lineage, as each year some students enter and others leave, creating an unceasing influx and egress. Among the earliest and best-documented attempts at formal education was that of the Greeks, famed for teachers such as Socrates, Plato and Aristotle, and institutions of learning such as the Academy and Lyceum.

At the beginning of the Middle Ages, universities were begun in Europe at places such as Salerno, Bologna, Paris, Oxford, Cambridge, Salamanca, and Prague. These and other institutions provided training for church leaders, civil servants, and merchants, with professional fields limited to theology, law, and

medicine, and a curriculum made up of the seven liberal arts and philosophy.

These early universities were of humble origin and catered primarily to an emerging middle class, but interestingly, of the institutions in the Western World which have survived since the Middle Ages, all but a handful are universities.

Like rivers, universities are also dependent upon their environments for well-being and survival. Universities do not operate and exist in a vacuum; rather, they are part and parcel of society and therefore should reflect the values and goals, address the needs, and serve the interests of a larger population. Accordingly, universities look to their environment for support--for volunteer leadership, financial resources, students, research grants and contracts, ideas and information.

However, universities differ in their ability to respond to environmental demands and opportunities because of different constraints such as institutional mission, organizational structure, available resources, and other factors.

Universities require private sector funds to supplement the limited income generated from tuition and fees, endowment, and auxiliary enterprises. This is true even at institutions which receive state appropriations, since education is highly labor-intensive by nature and especially since the percentage of operating budgets supplied by state appropriations has been declining for a number of years at most institutions. Such gifts help to provide and/or maintain a margin of excellence.

Like rivers, universities also have a beginning point, a source of origin. They usually serve not just a single community, but an entire region. Some even have a national and international clientele and impact. They are founded at

specific points in time by specific authoritative bodies with specific missions. Specific individuals have contributed to their success or lack thereof, and specific events have been critical turning points in the life and development of specific institutions.

And like rivers, universities tend to grow and mature over time. As they prove their worth to society, the educational mission is frequently expanded to include new areas of service in response to expressed needs in the environment. As enrollment and funding increase (in recent years the two have not always gone together), often programs and departments grow, additional research and policy institutes are launched, library holdings are increased, and new buildings are constructed to provide suitable accommodations for teaching, research, offices, support services, and auxiliary enterprises.

At certain points in history, environmental pressures have also changed the face of higher education by producing major innovations such as the founding of womens' colleges, the introduction of coeducation, the land grant movement, the founding of historically-black institutions, the changing of admission policies to admit blacks and other minorities, the G.I. Bill, and the community college. And over time, universities have cut deep channels in society through which knowledge is generated and disseminated in an intricate system of information exchanges.

Like rivers, universities also hold an attraction for many people, as demonstrated by continued enrollment growth. A college education has become a part of the "American Dream" and is an expectation of many families for their sons and daughters. Moreover, studies have consistently shown that college

graduates enjoy a higher social status, lower unemployment, and increased career earnings.

And like rivers, universities speak to us. The quiet sounds of a book or magazine page being turned in the library, the keystrokes of a computer keyboard, or the whirring of a robotic arm in an engineering laboratory are familiar sounds to those acquainted with college campuses. But so is the roar of students at a football or basketball game, or at the conclusion of a commencement ceremony.

Just as rivers provide abundant recreational opportunities, a cost-efficient energy source, and a stable drinking supply, universities also contribute in important ways to the quality of life in the communities and regions where they are located. Athletic events, plays, concerts, art exhibits, music recitals, vast libraries, and economic partnerships with government and business serve the public interest in a variety of ways.

In a broader sense, universities perform critical roles for the larger society as well. At minimum they serve a socializing function, a legitimizing function, a certifying function, a repository function, a research function, and a canonizing function. As part of their social contract, universities also produce leaders, supply certain portions of the labor market with skilled employees, and try to address selected societal needs through research, public forums, debates, policy initiatives, and scholarly publication, among other methods.

As producers of knowledge in the modern electronic age, universities contribute in some measure to the daily flood of information with which we are deluged. But more importantly, universities provide a structure to make sense of this mass of data, and to sort and distill the important from the unimportant, the

essential from the nonessential.

They provide a framework and an organized and efficient approach to the study of particular subjects and to the acquisition of knowledge and skill development in various academic disciplines. And they require adherence to accepted research practices and procedures to ensure that the search for truth is conducted in a scientific manner.

Despite its many virtues, however, education has the potential to be harmful, or at least to be used in a harmful manner or for harmful purposes. Information is power, and knowledge without ethics, absent regard for the needs, goals, laws, and values of the greater society in which it exists, can be dangerous since knowledge by itself, without an adequate frame of reference, is incomplete.

Many states have coordinating boards or other agencies which oversee colleges and universities, and most institutions of higher education seek voluntary accreditation from regional and national accrediting agencies. Another "check" in most American universities is the lay governing board, composed of societal representatives with a fiduciary responsibility to protect the public trust.

Rivers also have the potential to be harmful, so society has designed appropriate safeguards. Dams and flood gates help to prevent or at least minimize flooding, and other structures help to prevent erosion. Roads, airports, bridges, and houses are also customarily designed to allow for drainage of excess water, and in flood plains, many homes are elevated.

Rivers and universities also have in common the concept of "currents." Swimmers often enter a river at one point with the aim of swimming directly across to the other side in a straight line. They may fail to take into account the

current, however, which is not always readily apparent or discernible to the naked eye, and end up some distance downstream from their original destination. Occasionally someone will drown, failing to prepare adequately by wearing a life jacket, being unable to swim, or finding the current too powerful and being overcome by it.

The best universities have currents flowing through them as well, some of which are invisible to the naked eye. Theories, values, ideas, and philosophies from the larger society and from particular academic disciplines, as well as different organizational cultures and institutional traditions, permeate institutions of higher education, and in fact characterize the brightest and best of them.

Therefore, despite attempts by most institutions and professors at impartiality, objectivity, or even neutrality, such currents influence, to greater or lesser extents and for better or worse, the free flow of information and exchange of ideas which characterize the learning process.

Someone has stated that a mind once expanded to embrace a new thought can never return to its original state. This explains how students enter college with a particular major in mind or perhaps are undecided as to what they want to study, with a value system largely inherited from their family, peers, and larger environment, and emerge as different people when they graduate or elect to leave the educational system.

Like the weathering effect of water upon rock, soil, and other substances with which it comes into contact, education acts in a variety of ways to shape and effect change in those whom it touches, and students often alter their majors, goals, or values while in college, based on a new awareness of the world and a

new understanding of themselves.

Of course, some students become victims of bureaucratic rules and regulations, budget cuts, program reductions, departmental closings, too few course selections, or inadequate financial aid. And others experience difficulty due to academic unpreparedness, lack of effort, poor study skills, emotional problems, social immaturity, homesickness, or violation of campus regulations, local ordinances, or state statutes.

However, these are exceptions rather than the rule, and even some "dropouts" pursue an education later in life with added motivation, skill, and maturity, while others decide that higher education is not a priority or perhaps the best option for them. Sometimes all it takes to turn things around is a change of environment from one campus to another.

"Access" and the distinction between "public" and "private" are also concepts shared by rivers and universities. Rivers are at times inaccessible due to the surrounding terrain, a lack of roads or bridges, or gates, fences, and other obstacles. Entry fees, boating permits, and other financial outlays are another source of potential barriers.

Rivers cross time zones, property lines, taxing jurisdictions, and other artificial designations, creating certain legal and logistical problems. For instance, rivers can be located partly on public land and partly on private land. Private land may be owned by an individual, a corporation, or other entity, while public lands may include a military base, an Indian reservation, state and national parks, wilderness areas, land managed by the U.S. Forest Service, and other varieties.

It is also possible for rivers to have special designations such as a National Scenic River. Land adjoining rivers is often leased as well, creating another layer of ownership. With so many different categories of land 'owners' having a vested interest, different restrictions and regulations regarding access apply in many cases. However, legislatures and courts have decreed that rivers are free-flowing, natural streams and that navigation cannot be impeded or obstructed by property owners.

Because of the obvious benefit and economic advantage of having access to a stable water supply, individual property owners or groups of property owners, cities, states, and even nations have fought battles and engaged in bitter lawsuits and wars to protect or secure "water rights." Similarly, cities have bid and competed with each other to be selected as the site for a new university, or as the location for an established university which has decided to move its campus.

As court decisions have made clear, higher education is not yet a "right" in the same way that states have historically regarded their responsibility concerning secondary and elementary education, i.e., an obligation to provide a "free" public education to all students. Therefore, universities have different admission policies that reflect the different decisions each has made about the desired composition of its student body.

Clouding the issue further is the fact that some universities are private and therefore not subject to state-mandated policies regarding admission requirements. However, in recent years federal legislation prohibiting discrimination and tying federal financial aid dollars to institutional compliance has forced colleges and universities to approach the admissions process in a

somewhat different manner.

Access, however, remains to some extent a form of competition and depends somewhat on past academic performance and scores on standardized tests such as the ACT, SAT, LSAT, and MCAT, although other factors are often considered in the evaluation process. In most European countries and other nations, the selection and screening process is much more rigorous, with personal interviews and several national qualifying exams required of applicants.

Tuition and fee rates also affect access, as revealed in the fact that 80% of U.S. students enrolled in higher education attend a public institution even though 50% of all colleges and universities in the U.S. are private. However, various forms of financial aid are available, and the majority of students in both public and private institutions receive some form of financial assistance, although there is never enough to suffice completely.

Recent legislation concerning disabled Americans has also forced colleges and universities to implement or at least plan design changes and modifications in their facilities and physical plants in order to make them more accessible. And court decisions have made clear the responsibility of public universities to provide resources to students requiring special assistance who are unable to afford such services themselves.

Pollution is another concept affecting both rivers and universities. Animal excretions, toxic wastes, industrial discharge, agricultural pesticides, sewage spills from commercial development, and other contaminants often find their way into our rivers and streams, posing serious environmental hazards for affected life forms. As always, short-term thinking causes long-term problems.

Pollution from the broader society also crops up in universities from time to time. Memorable examples include faculty witch hunts during the McCarthy era, forced desegregation at some Southern universities, the exclusion of women from most universities until after the Civil War or even later, student unrest and campus violence during the 1960s and early 1970s, and numerous scandals involving athletic programs.

Individual rivers and universities are also part of a greater whole. They do not exist in isolation but instead are part of an interconnected network or system. Rivers are fed by smaller streams and in turn flow into a larger body of water such as another river, a lake, a sea, or an ocean.

Similarly, universities are nurtured by society and fed students from secondary schools as well as undergraduate and community colleges. A large portion of these students complete a degree, and some complete additional degrees. These graduates return to society better informed and better prepared to assume positions of responsibility and leadership.

Rivers and universities also share a transition theme. River travel is a variation of the journey motif in literature, whereby a plot change or character development in the form of a new setting, discovery, insight, identity, or other transformation is effected. Similarly, education is one of the few avenues available to many people for improving their social class and economic standing, so it attracts a large number of those who desire to rise above their circumstances and get ahead in life.

Further evidence of similarities is found in the beliefs, rituals, and uses associated with rivers and universities. In Judeo-Christian literature and Greco-

Roman mythology, the River Jordan and the River Styx, respectively, symbolize death and serve as a crossover or transition point, while in ancient Egypt the River Nile was a symbol of fertility.

Among the common uses of rivers have been boundaries, bathing, healing, baptism, washing clothes, watering livestock and other domestic animals, fishing, travel, adventure, irrigation, power to turn water wheels and electric turbines, and as a source of drinking and cooking water. And according to many scholars, apparently the "cradle of civilization" was near the confluence of the Tigris and Euphrates Rivers in what is now the Persian Gulf region of Asia.

Similarly, academic customs, symbols, and traditions have included the wearing of caps and gowns, the awarding of degrees and diplomas, lectures, examinations, seals, charters, a public defense of one's thesis, a convocation ceremony, commencement address, the carrying of a mace, academic freedom, faculty tenure, lay governing boards, and ecclesiastical titles such as chancellor, rector, beadle, master, and provost.

In summary, the many analogies which have been enumerated in this essay point to the fact that rivers and universities are valuable societal resources which have the potential to provide continual enrichment to their respective environments. However, there is a maintenance fee associated with each which requires an adequate level of investment to ensure quality and protect their infrastructure.

Society must not only protect and invest in, but harness both rivers and universities in order to receive maximum benefits. This does not necessarily call for more statutes and regulations, additional oversight groups, or a proliferation of

political agendas. Instead, it will require increased cooperation and collaboration between and among key players such as federal and state legislatures, oversight agencies, industry, foundations, donors, the media, trade associations, governing boards, and chief executive officers.

Such initiatives will require, among other things, more public involvement in strategic planning, decision-making, goal-setting, and policy formulation. They will also require more focused goals, better-defined missions, and adequate funding. Finally, such efforts will require a process of education and understanding among the parties involved, some agreement or consensus on what is best for the public good, and a willingness to place the public interest above personal, institutional, and/or sectorial concerns and agendas.

Society has many tools at its disposal to influence the nature and outcome of debate and public policy regarding both rivers and higher education. Some of these include: 1) federal and state legislation; 2) federal and state appropriations; 3) administrative agency requirements and rulings; 4) court decisions; 5) mandated oversight groups; 6) voluntary oversight groups; 7) service on policy and advisory boards, committees, and task forces; 8) attendance or participation fees; 9) lobbying by political action committees and trade associations; 10) taxing policy; 11) media commentary; 12) private sector, philanthropic donations and contributions; 13) letter and call-in campaigns, boycotts, sit-ins, marches, demonstrations, and other forms of citizen protest; and 14) organized information campaigns designed to educate the public.

Unfortunately, this last tool has been among the least-effectively utilized although it is potentially the most powerful. It was once thought that dams were

cost prohibitive until the cost of flooding and the benefits of hydroelectric power, drinking water, and irrigation were understood. Similarly, it has been said that the cost of education is high but inexpensive when compared to the cost of ignorance. Recognizing this, the public has demanded and received a system of free education for elementary and secondary students. However, society has yet to fully embrace this maxim and it is doubtful that long-term change in the financing of higher education will occur until this oversight or failure is redressed.

This essay has enumerated many similarities between rivers and universities and reflected at length upon their importance to society. As a result, it is hoped that such comparisons will provide deeper insight into the natures of each, including their ancient lineage, their potential value as a societal resource, their dependence upon the environment, their need for adequate investment, and the responsibility for society to harness them in order to receive maximum benefits.