

# Teacher-Scholar: The Journal of the State Comprehensive University

---

Volume 1 | Issue 1

Article 4

---

January 2009

## A Context for Extramural Funding at State Comprehensive Universities: Tilting at Windmills or Fighting the Good Fight?

John Falconer

University of Nebraska at Kearney, [falconerj@unk.edu](mailto:falconerj@unk.edu)

Follow this and additional works at: <https://scholars.fhsu.edu/ts>



Part of the [Higher Education and Teaching Commons](#), [Online and Distance Education Commons](#), and the [Scholarship of Teaching and Learning Commons](#)

---

### Recommended Citation

Falconer, John (2009) "A Context for Extramural Funding at State Comprehensive Universities: Tilting at Windmills or Fighting the Good Fight?," *Teacher-Scholar: The Journal of the State Comprehensive University*. Vol. 1: Iss. 1, Article 4.

DOI: 10.58809/IJYV4987

Available at: <https://scholars.fhsu.edu/ts/vol1/iss1/4>

This Article is brought to you for free and open access by the Peer-Reviewed Journals at FHSU Scholars Repository. It has been accepted for inclusion in Teacher-Scholar: The Journal of the State Comprehensive University by an authorized editor of FHSU Scholars Repository. For more information, please contact [ScholarsRepository@fhsu.edu](mailto:ScholarsRepository@fhsu.edu).

## A CONTEXT FOR EXTRAMURAL FUNDING AT STATE COMPREHENSIVE UNIVERSITIES: TILTING AT WINDMILLS OR FIGHTING THE GOOD FIGHT?

John Falconer  
Office of Sponsored Programs  
University of Nebraska-Kearney

Once upon a time, colleges hired professors to teach students. It was a simple world. But in the 1800s, the German model of higher education began to influence American higher education, and we embraced the notion of faculty members who would both develop knowledge and *transmit* it to students. This expanded the job of the professor considerably, although the spread of this model across higher education was gradual. Indeed, it is still underway. Despite the widely held notion that a faculty member who is engaged in his or her discipline offers more to a department and to students than someone whose professional development stopped upon completion of the Ph.D., there are still some academics who believe that research actually *detracts* from teaching. However, this view seems to carry less and less weight—at least where standards for tenure, promotion, and merit are concerned. In fact, there are few faculty positions where expectations for scholarly activity have not increased over the decades.

This evolution in the role of professors as researchers was supported by a new appreciation in policymaking circles that an expansion of knowledge was in the national interest. Following World War II, the federal government began to invest more heavily in research (Trow, 1997). The National Institutes of Health, which traces its roots to the 1700s, rapidly grew its extramural research program in the 1940s and 1950s. The National Science Foundation was created in 1950. In 1965, the National Endowment for the Arts and the National Endowment for the Humanities were created. Federal support made research more possible for scholars, especially for those activities that need substantial resources.

With extramural funding comes an imprimatur of quality, so it was not unforeseeable that prestigious institutions would want their faculty scholars to be supported by federal money. Yes, there are financial reasons why this was desirable, but the dollars also meant credibility. As with all things, there is a prejudice that the more an institution emulates the most prestigious of its kind, the more the public will estimate its quality. Thus the trend emerged that “good scholars” would have extramural funding, wherever they worked. At some types of universities, it is required that faculty members successfully pursue extramural funding if they hope to advance in the rank and tenure system. At others,

such as liberal arts colleges and masters comprehensive universities, the perception of extramural funding ranges from “nice but not necessary” to “essential for the publications we expect you to produce.”

In recent decades, the state share of support for public institutions has declined across the country as federal support for research and student aid has increased (McPherson and Shapiro, 1991). This has increased the need for extramural funding to support research infrastructure. To attract new faculty who want quickly to develop research programs, institutions need to have some combination of facilities, internal funding, and time assigned to scholarly work. But given the declining internal resources available for such things, institutions expect faculty to find the extramural funding for their own projects. Most campuses provide professional grant support through sponsored program offices, but the welcome mat often says “Congratulations, you have been hired to teach and do research. Also, you need to quickly become an expert fundraiser and grantwriter.” Graduate programs prepare people to research and teach—not to write grant proposals. And if you are working at a predominately undergraduate institution, the environment is probably quite different than your graduate school, where there were colleagues available to mentor new faculty in grantwriting. Whether you are a chemist writing a proposal to the National Science Foundation or a pianist who needs to replace 10 grand pianos, the reality is that there are some things you *have* to do to be able to do the things you *want* to do.

This article explores the context for extramural funding for faculty at predominantly undergraduate institutions in an effort to identify systemic issues, common challenges, and useful strategies. Most importantly, the reader will realize that the struggle to develop extramural funding, however lonely it may feel, is a struggle experienced simultaneously across the country.

### **Where the Money Is: Understanding the System**

There is a myth on most campuses that there is no money for art and humanities, and plenty for the sciences. This is not quite true, but there are clearly both more dollars and more opportunities for sciences and public health. The National Science Foundation (NSF) gave away over \$5 billion in Fiscal Year 2008 (NSF Annual Summary by State/Institution, 2008). The National Institutes of Health (NIH) awarded \$14 billion in FY 2008 (NIH Aggregate Data, 2008). By contrast, the National Endowments for the Arts spent \$106 million on programming in FY 2007 (NEA Annual Report, 2007), and the National Endowment for the Humanities has a programming budget under \$120 million for FY 2009 (NEH Budget Request, 2009). But there is significant funding for certain types of projects in the arts and humanities, particularly when

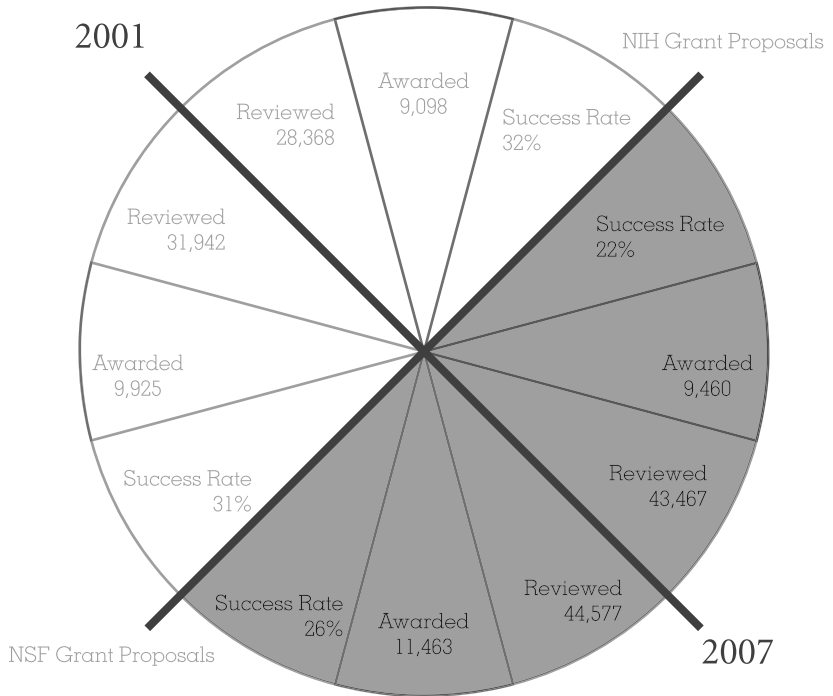
the project engages a broader audience. However, for writers or creative artists to do the things they are expected to do for promotion and tenure, internal resources remain the best prospect.

Federal money for research, defined narrowly in this instance, does not spread evenly across the country. Rather, it flows to a handful of states. In Fiscal Year 2008, 36% of funding from the NSF went to four states. In terms of numbers of grants, the top four states received 32% of the grants awarded by NSF (NSF Annual Summary by State/Institution, 2008). NIH had a similar pattern: The top five states got 46% of the funding and 49% of the grants awarded (NIH Aggregate Data, 2008). Furthermore, 83% of federal funding for research and development goes to major research universities (*Partnerships for Emerging Research Institutions*, 2009).

In some regards, this is a reasonable pattern. Major laboratory research requires significant infrastructure, which favors the research intensive institutions that have labs, equipment, and research staff. Obviously, they also have more scientists who are applying for more funding and winning more grants. But resources create reputations, and reputations influence resource allocation. Grants, like other historical events, are pathway determinants: One award can beget a pattern of resources. This creates a “rich get richer” environment.

The same holds true for private money in the arts and humanities, business schools, and educational programming. Large institutions have the reputations that can leverage extramural funding. Together, a set of subtle pressures that send large grants to big institutions in a handful of states can make the game more difficult for a scholar at a bachelors or masters comprehensive institution. This is not to say small institutions face conscious discrimination in the hallways of funding agencies, but the larger environment does them no favors.

Another complicating factor is the increased competition for federal and private funding. Granting agencies are receiving more and more applications. Whether this reflects a greater expectation for faculty at a broader range of institutions, increased research productivity at larger institutions, or simply a new generation of faculty who are prepared and willing to go after grants, it means that any proposal has to be that much better to receive funding. Figure One depicts the increase in the number of proposals received and grants awarded by NIH and NSF between 2001 and 2007. While the number of awards went up for each agency, the funding rate declined in both cases. Prior to new funding from the American Recovery and Reinvestment Act of 2009, this trend continued through 2008.



NIH Data from NIH Databook

NSF Data from "Report to the National Science Board."

## FIGURE ONE

The growth in competition for funding from NIH and NSF presents a challenge for applicants at institutions with less emphasis on research, because the advantages of time, space, equipment, and research staff become more important.

The impact of this increase in proposals can be understood by considering the decision process from the funder's perspective. A program officer from a private foundation once presented what he called the "OOPS" diagram, which shows the distribution of quality in the proposals he received (Figure Two).

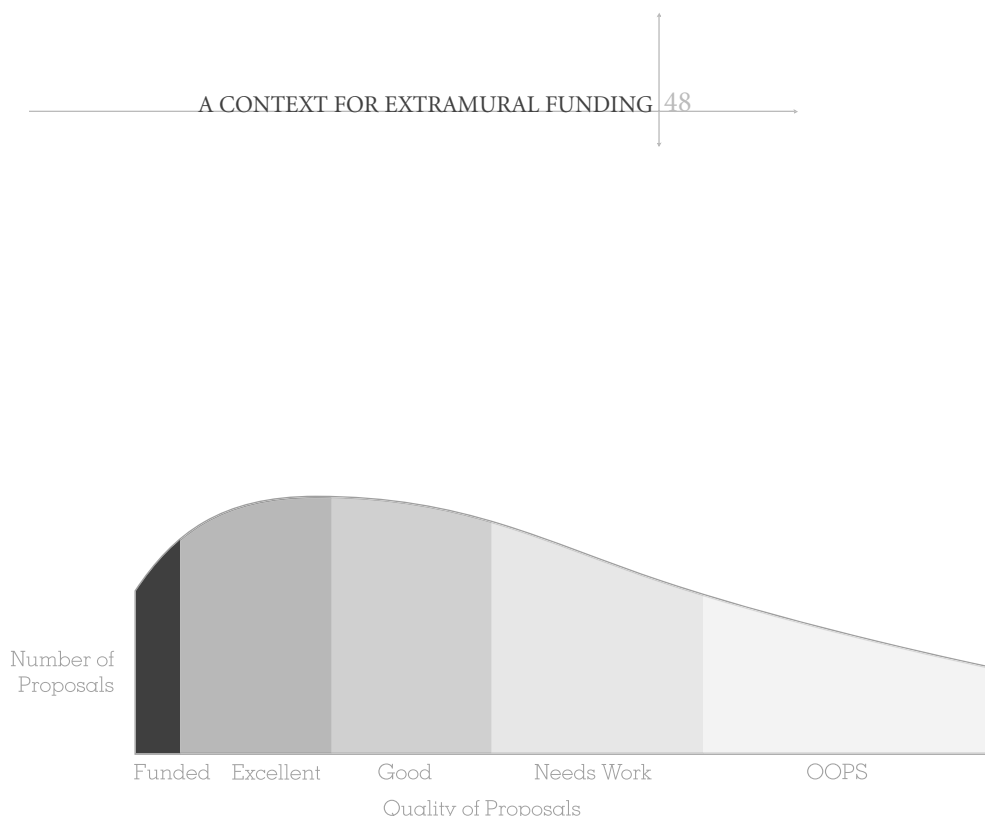


FIGURE TWO: THE OOPS CHART

Consider the “Good” section in the middle. This is where most proposals fall, and they are good enough to get funded if resources are not limited. To the right is the range of proposals that need some work before resubmission; they have some flaw that would bar them from funding. The “excellent” category marks the range of proposals that deserve funding. Unfortunately, resources are not sufficient to fund these worthy projects. Grant programs start at the far left (with the best proposal), and move to the right awarding money until the grant budget is spent. The lesson is that it is not good enough to have a great proposal; you must write a proposal that is better than the competition. Your proposal must fall to the left of the funding line, beating the competition. Affirmation of this approach can be found in the National Science Foundation’s use of funding from the American Recovery and Reinvestment Act (“stimulus package”): This funding will go toward supporting existing research proposals that highly rated but were not funded (Important Notice 131, National Science Foundation).

To the far right of Figure Two is the “OOPS” category, which gives the diagram its name. OOPS stands for “out of program, stupid.” Alas, many people who have earned a terminal degree in their field fail to read the guidelines, and they submit what may be a perfectly good proposal but the project does not fit the interests of the grant program. Out of program.

As the competition increases in number, it gets harder to fall to the left of the funding line. Whereas a few years ago, a young researcher would be told that 20% of first time proposals are being funded, that number has dropped to about 10%. This message has an important effect on new faculty members at state comprehensive universities. Such faculty members will teach three or four sections each semester, have service obligations, and will be measured for promotion by their publication record (not their funding record). Asking Assistant Professors to invest 20 or 30 hours in a grant proposal that has about a 10% change of success offers worse odds than a roulette table. When making decisions about how to best use their limited time, many faculty will choose activities with a higher likelihood of success.

Casual observers as well as those heavily invested in the landscape of extramural funding of higher education may consider what has been presented so far, and conclude that the situation is acceptable. That is, the institutions that focus more attention on research productivity are better prepared to compete for funding, and faculty at smaller institutions face internal and external barriers to developing and submitting grant proposals. If liberal arts colleges and state comprehensive universities focus more of their attention on undergraduate education, they should not be concerned about competing for extramural funding. There are, in fact, faculty members at these very institutions who see teaching and scholarship as a zero-sum game.

### **A Changing Landscape: Challenges Become Assets**

One argument for the importance of research and creative activity at any institution of higher learning has little to do with contributions to science, art, humanities, and the many more specific academic disciplines. Scholarly activity makes vital contributions to a campus regardless of the magnitude of the outcomes.

Professors have long known that engaging students in the process of discovery is an incredibly powerful pedagogical tool. In the mid 1800s, Benjamin Silliman helped Yale attract students interested in science by offering independent research and learning through the extracurriculum (Rudolph, 1990). Wooster College has required students to conduct independent scholarly projects for over 50 years. It is not a surprise that students who design, conduct, and disseminate their own projects under

the one-on-one guidance with a member of the faculty learn a great deal about their discipline. And they also learn a great deal about very important things that are not particularly related to their discipline, such as developing their own sense of values, self-confidence, independence, maturation, and other background issues that are powerful aspects of student development (Lapatto, 2003). The challenge, of course, is having the resources to develop meaningful projects for students on an individual basis.

The effort to make independent scholarship a more common part of the undergraduate experience is more recent. Organizations like the Council on Undergraduate Research (founded in 1978) and the National Conferences on Undergraduate Research (founded in 1987) have been working to increase resources and recognition for student research. The 1998 Boyer Commission Report on Reinventing Undergraduate Education brought more attention to the fact that undergraduate education should include independent scholarly activity.

Likewise, scholarly activity is important to the professional development of the faculty. All higher education constituencies have an interest in the ongoing development of faculty. Students benefit from instructors who are engaged in their academic fields, the public benefits from faculty who contribute their expertise to community or societal development, and institutions themselves borrow from the credibility of scholars who contribute to their disciplines. From the scholar's perspective, a career of working in his or her chosen area of expertise is much more stimulating than just talking about knowledge developed by others. Participating in the development of an academic field—even in a small way—maintains a current understanding of a field and enriches the experience of being on the faculty.

The concept of teacher-scholar is not new, but the connection to quality in undergraduate education has created more urgency. John Mateja, Director of Undergraduate Research and Scholarly Activity at Murray State University, has argued that undergraduate education in the United States—which ranks poorly on the international scene—should borrow from the model set by graduate education in the United States—which ranks at the top among other countries. That is, we need to find ways of moving undergraduate education from being lecture-focused to being research-focused, where students learn to solve problems rather than memorize material (Mateja, 2006).

But how can this be done, when research and individual mentoring are so expensive, and federal research funding flows mainly to a handful of states and large institutions? Part of the answer lies in adaptations by the major funding agencies. The NIH offers Academic Research Enhancement Awards (R15) that target young scholars and



institutions that are less competitive for large research awards. This enables public comprehensive universities and liberal arts colleges to apply for funding without competing against major research institutions. NIH also created the INBRE program (IDeA Network of Biomedical Research Excellence) to develop biomedical research infrastructure and to support new researchers starting their careers at smaller schools.

Likewise, the NSF has programs that enable smaller institutions to compete against each other for funding. Grant writers can designate their proposal with “PUI” (Predominately Undergraduate Institution), so that it is reviewed with an understanding of their context: Heavier teaching loads mean less work can be done in a year; less internal funding means the investigator will have less lab equipment; and smaller or non-existent graduate programs mean that undergraduates will be used in the work. NSF also has a Division of Undergraduate Education (DUE) that focuses on “strengthening STEM education at two- and four-year colleges and universities by improving curricula, instruction, laboratories, infrastructure, assessment, diversity of students and faculty, and collaborations” (About Undergraduate Education).

Both programs reflect a recognition of the importance of scholarly activity among both the faculty and students at comprehensive, baccalaureate, and two year institutions. These institutions enroll 18.8% of undergraduate students in the country, compared to 24.3% who attend public and private doctorate-granting institutions (*The Chronicle of Higher Education*, Almanac Issue, 2008-09, Volume LV, Number 1, page 17), but 36% of people who earned doctorates between 1997 and 2006 earned their baccalaureate degrees at masters and baccalaureate level institutions (NSF Survey of Earned Doctorates, 2006). To grow the quality and quantity of scholars in this country, it is fundamentally important that we invest in the research culture at even the smallest institutions.

Even at the super-agency level, there is growing recognition that the federal funding field tilts more towards major research institutions than may be in the best interest of the nation. The Federal Demonstration Partnership—which facilitates cooperation between federal granting agencies and universities in an effort to reduce the administrative burden of the research enterprise—created a group to focus on the challenges facing Emerging Research Institutions (ERIs). The National Academies of Science hosted the ERI group in September, 2007 to conduct a workshop on the particular challenges facing this segment of higher education. The issues identified include:

- Branding: Perceptions of research quality based on the scholar’s institutional reputation;
- Faculty Time: The amount of effort that a researcher at an ERI can invest in scholarly work;

- Institutional Resources: Internal funding, professional staff to support proposal development and manage sponsored projects; and
- Faculty Reward Systems: The incentives and recognition associated with faculty promotion and tenure, which do not necessarily encourage the pursuit of extramural funding. (*Partnerships for Emerging Research Institutions*, 2009)

The Council on Undergraduate Research, mentioned above, has been working since 1978 to support the development of research at non-research intensive institutions. Through a strong peer-support culture, members help each other address the challenges of being a teacher-scholar at undergraduate institutions through formal programs and informal collaboration.

The range of organized efforts to increase the competitiveness of PUIs in the extramural funding arena indicates that while there are indeed challenges for faculty members at state comprehensive universities, there are also solutions.

### **What is a Grant Writer to Do?: Successful Strategies**

Like fighting dragons, writing a proposal for extramural funding is not for the impulsive or faint of heart. Sponsored programs offices routinely encounter people who say things like “I just learned that there is great grant program for my project, but proposals are due next week.” And when they get rejected, they rationalize by saying “they won’t fund small institutions” or “they didn’t understand my project.” While these spontaneous approaches periodically work—which is why they are not deterred by sponsored programs offices—they do not reflect effective approaches any more than tossing a coin reflects data-driven decision making.

The first thing to do is develop an understanding of the funding program to which you want to apply. Read the guidelines. Do not talk to anyone before you have read the guidelines. People often infer a good match from the title of the grant program, but this is unsafe. Then, realizing that there are unwritten guidelines in addition to the written guidelines, talk to your sponsored programs office, which may have direct experience with the funding program. If you are still convinced that the opportunity is a good match with your interests, contact the program officer. Realize that public and private grant programs have budgets that they must invest in projects, so they are always looking for eligible projects. As you talk to the program officer, you can build his or her understanding of you and of your project. The more he or she knows about your work, the more he or she can fill in the gaps between the bits

of information you present in a proposal. More importantly, listen to what he or she says about the program and how your project might fit. There is a courtship process, and you need to be willing to adapt your idea. Program officers often have a great deal of experience relevant to your idea, and they may be able to help. For a small investment, you can often find a funded scholar in your field who is willing to critique your proposal. Other strategies include volunteering to be a proposal reviewer for a funding agency, collaborating with peers at other institutions, and participating in an intensive grantwriting workshop.

Once you have committed to a particular grant program, talk to the appropriate staff at your institution and find out what their issues are. Just because the sponsor has a July 15 deadline does not mean you can work on a proposal up until noon on July 15. There are typically internal approval processes, and prior to that you may want to take advantage of budget development and narrative writing services that may be available on your campus. A good proposal can take months to prepare, so find out the timeline early and plan your work.

At smaller institutions, it is rare to have specialized proposal-writing services. But you can still get important feedback from colleagues on your campus or at other institutions. Share your proposal and take the feedback seriously. This could be enough to move your proposal into consideration for funding. It is a bit hard to ask someone to spend months on a project that could be cranked out in a week, when the likelihood of success is about 10%. But realize that the proposals that bring down that average are the ones that were written without proper development.

When your proposal does get rejected, do not give up. The approval rate skyrockets on resubmissions, so the people who stop are those who never get funded. Submitting a proposal is just like submitting an article for publication. You have to go through the stages of grief. So claim the reviewers were incompetent (denial), get upset that your institutional context is holding you back (anger), think about ways you can conduct the project with small amounts of internal funding (bargaining), be sad that your proposal was not well-written (grief), then—and only then—read the reviewer comments seriously and decide how to improve your proposal (acceptance).

A scholar at a predominately undergraduate institution can indeed get funding from external sources. It happens all the time, and it is important that it happen. You simply have to commit to the goal, and approach it in a comprehensive way.

## References

About Undergraduate Education. National Science Foundation. <http://www.nsf.gov/ehr/du/about.jsp>. Accessed March 28, 2009.

Important Notice 131, National Science Foundation. <http://www.nsf.gov/pubs/issuances/in131.jsp>. Accessed March 30, 2009.

Lapatto, D. (2003). The essential features of undergraduate research. *Council on Undergraduate Research Quarterly*. March, 2003.

Mateja, J. (2006). Undergraduate Research: Needed more today than ever before. *CUR Quarterly*. 27, (1), 27-32.

McPherson, M., and Shapiro, M. (1991). *Keeping colleges affordable: Government's role in promoting educational opportunity*. The Brookings Institution, Washington, D.C.

NEH Budget Request, (2009). [http://neh.gov/whoware/pdf/NEH\\_Request\\_FY2009.pdf](http://neh.gov/whoware/pdf/NEH_Request_FY2009.pdf)

NEA Annual Report, (2007). <http://www.nea.gov/about/07Annual/AR2007.pdf>

NIH Databook: Success Rates and Funding Rates. Research Project Grants: Applications, awards, and success rates. Research Portfolio Online Reporting Tool. <http://www.report.nih.gov/NIHDatabook/Charts/SlideGen.aspx?chartId=124&catId=13> Accessed March 30, 2009.

NIH Databook: <http://report.nih.gov/reports.aspx?section=NIHdatabook&title=NIH%20Data%20Book>. Accessed March 31, 2009.

NIH Aggregate Data, (2008). <http://www.report.nih.gov/NIHDatabook/Charts/SlideGen.aspx?chartId=24&catId=2>. Accessed March 30, 2009.

NSF Annual Summary by State/Institution, (2008). <http://dellweb.bfa.nsf.gov/AwdLst2/default.asp> Accessed March 29, 2009.

NSF Award Data: [http://www.nsf.gov/nsb/publications/2008/nsb0847\\_merit\\_review\\_2007.pdf](http://www.nsf.gov/nsb/publications/2008/nsb0847_merit_review_2007.pdf) *Partnerships for Emerging Research Institutions*. (2009). Prepublication copy. Committee on Partnerships for Emerging Research Institutions. National Academies Press, Washington, D.C.

Report to the National Science Board on the National Science Foundation's Merit Review Process, National Science Foundation.

Rudolph, Frederick. (1990). *The American College and University*. Athens: University of Georgia Press.

Trow, Martin. (1997). American higher education: Past, present, and future. In Lester Goodchild and Harold Wechsler (Eds.), *The History of Higher Education*. New York: Simon and Schuster.