

# Introduction

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The following papers each address an aspect of the subject of the twenty-third annual research policy retreat hosted by the Merrill Center: Challenges for Implementation of Cross-Disciplinary Research in the Big Data Era. We are pleased to continue this program that brings together University administrators and researcher-scientists for informal discussions that lead to the identification of pressing issues, understanding of different perspectives, and the creation of plans of action to enhance research productivity within our institutions. This year the focus continues to be on opportunities and challenges of big data for research in public universities.

Our keynote speaker for the event was Dr. Daniel Reed, Senior Vice President for Academic Affairs, the University of Utah. He called for an integrative, holistic perspective on the challenges and opportunities of the explosive growth of big data in our lives. Science, social structures, and commercial enterprise merge in unprecedented ways that demand our attention.

Benefactors Virginia and Fred Merrill make possible this series of retreats: The Research Mission of Public Universities. On behalf of the many participants over two decades, I express deep gratitude to the Merrills for their enlightened support. On behalf of the Merrill Advanced Studies Center, I extend my appreciation for the contribution of effort and time of the participants and in particular, to the authors of this collection of papers who found time in their busy schedules for the preparation of the materials that follow.

Nineteen administrators, faculty, and students from four institutions in Kansas, Arkansas and Nebraska attended in 2019, which marked our twenty third

retreat. Additionally, a librarian from the National Library of Medicine/National Institutes of Health attended this year. Though not all discussants' remarks are individually documented, their participation was an essential ingredient in the general discussions that ensued and the preparation of the final papers. The list of all conference attendees is at the end of the publication.

The inaugural event in this series of conferences, in 1997, focused on pressures that hinder the research mission of higher education. In 1998, we turned our attention to competing for new resources and to ways to enhance individual and collective productivity. In 1999, we examined in more depth cross-university alliances. The focus of the 2000 retreat was on making research a part of the public agenda and championing the cause of research as a valuable state resource. In 2001, the topic was evaluating research productivity, with a focus on the very important National Research Council (NRC) study from 1995. In the wake of 9/11, the topic for 2002 was "Science at a

Time of National Emergency"; participants discussed scientists coming to the aid of the country, such as in joint research on preventing and mitigating bioterrorism, while also recognizing the difficulties our universities face because of increased security measures. In 2003 we focused on graduate education and two keynote speakers addressed key issues about retention of students in the doctoral track, efficiency in time to degree, and making the rules of the game transparent. In 2004 we looked at the leadership challenge of a comprehensive public university to accommodate the fluid nature of scientific initiatives to the world of long-term planning for the teaching and service missions of the universities. In 2005 we discussed the interface of science and public policy with an eye toward how to move forward in a way that honors both public trust and scientific integrity. Our retreat in 2006 considered the privatization of public universities and the corresponding shift in research funding and infrastructure. The 2007 retreat focused on the changing climate of research funding, the development of University research resources, and how to calibrate those resources with likely sources of funding, while the 2008 retreat dealt with the many benefits and specific issues of international research collaboration. The 2009 retreat highlighted regional research collaborations, with discussion of the many advantages and concerns associated with regional alliances. The 2010 retreat focused on the challenges regional Universities face in the effort to sustain and enhance their research

missions, while the 2011 retreat outlined the role of Behavioral and Social sciences in national research initiatives. Our 2012 retreat discussed the present and future information infrastructure required for research success in universities, and the economic implications of that infrastructure, and the 2013 retreat discussed the increasing use of data analysis in University planning processes, and the impact it has on higher education and research. The 2014 retreat looked at the current funding environment and approaches which could be used to improve future funding prospects. The 2015 retreat addressed the opportunities and challenges inherent in innovation and translational initiatives in the time of economic uncertainty that have an impact on goals to enhance research productivity. The 2016 retreat focused on the building of infrastructure to meet the changing needs in research. The 2017 retreat topic and discussions were on university research planning in the era of big data. The 2018 retreat topic and discussions were on re-thinking and re-engineering incentives for scholarly activities across the research enterprise in an open access environment.

Once again, the texts of this year's Merrill white paper reveal various perspectives on only one of the many complex issues faced by research administrators and scientists every day. It is with pleasure that I encourage you to read the papers from the 2019 Merrill policy retreat on: *Challenges for Implementation of Cross-Disciplinary Research in the Big Data Era*.