

CLIMATE CHANGE & CULTURE IN THE GREAT PLAINS

APRIL 1-2, 2021 | LINCOLN, NEBRASKA



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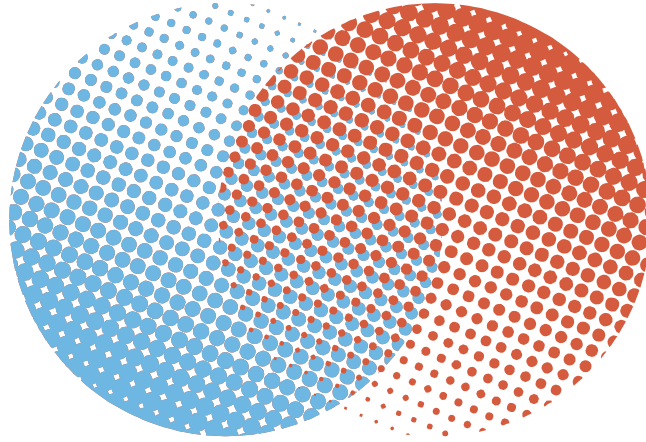
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CLIMATE CHANGE & CULTURE IN THE GREAT PLAINS

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ABOUT THE CONFERENCE

Ninety-seven percent of climate scientists agree that humans are causing global warming and climate change. Although questions remain about the speed, complexity, and consequences, scientific organizations around the world have agreed on this point, but why haven't everyday people?

Rather than engaging in a productive debate about how to address this issue, our national conversation has devolved into a culture war in which one side denies the very existence of the problem. The debate on climate change in 2021 could be seen as one piece of a larger division attached to partisan politics and driven by distrust of establishments and science. A global pandemic and the rise of conspiracy theories have pitted truth against opinion in a parallel way.

We know about greenhouse gases, rising average temperatures, increased coastal flooding, retreating glaciers, more frequent severe weather events, and other consequences that will upset and transform daily life. The Great Plains faces similar challenges. Agriculture is our region's largest industry, so we are intimately connected to the land and climate, with both short-term weather patterns and longer-term climate conditions affecting our daily decisions. Farmers and ranchers are, in a sense, first responders to the consequences of climate change already occurring. Indigenous communities, such as those along the Missouri River, are also disproportionately vulnerable to these changes. The Great Plains, long a region of weather extremes, will likely experience massive environmental impacts from future climate change with significant societal implications.

How did climate change become such a divisive issue? How does culture—meaning the beliefs, values, social practices, language, and attitudes by which we organize daily life—affect our understanding of climate change and limit or advance our possibilities for addressing it? Why have some embraced climate change denial and tried to delegitimize climate science? How can literature, art, history, politics, economics, psychology, language, and other social science and humanities disciplines bring new and constructive ways of communicating? *And how can we move beyond the cultural impasse over climate change?* These questions motivate “Climate Change & Culture in the Great Plains.”

Thirty years ago, in 1990, the Center hosted a conference called “Climate Change on the Great Plains,” which was described as “Looking Back from the Twenty-First Century at Impacts of Climate Change on the Great Plains.” We return to that topic three decades later.

Scientists track climate change, but we all will have to decide what to do about it. How can we focus national and regional attention on the key issues? This conference will examine the connection between climate change and culture through the Center for Great Plains Studies' unique regional and interdisciplinary lens.



The Center for Great Plains Studies is a regional research and outreach program established in 1976 at the University of Nebraska. The mission of the Center is to foster the study of and appreciation for the people, cultures, and natural environment of the Great Plains.

The Center is a four-campus entity with fellows from the University of Nebraska-Lincoln, Kearney, Omaha, and UNMC that operates in Lincoln, Neb. This is the Center's 45th annual Great Plains Symposium, an interdisciplinary event that looks at important topics in the region.

CONFERENCE SUPPORT



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This program is funded in part by Humanities Nebraska and the Nebraska Cultural Endowment.

CONFERENCE SCHEDULE

THURSDAY, APRIL 1

6:15 PM

Welcome and land acknowledgement: Colette Yellow Robe
Keynote introduction: Margaret Jacobs, Director,
Center for Great Plains Studies

6:30-7:15 PM

Keynote: Andrew Hoffman, University of Michigan
Holcim Professor of Sustainable Enterprise

How Culture Shapes the Climate Change Debate

Though the scientific community largely agrees that climate change is underway, debates about this issue remain fiercely polarized. These conversations have become a rhetorical contest, one where opposing sides try to achieve victory through playing on fear, distrust, and intolerance. At its heart, this split no longer concerns carbon dioxide, greenhouse gases, or climate modeling; rather, it is the product of contrasting, deeply entrenched worldviews. This presentation will examine what causes people to reject or accept the scientific consensus on climate change by synthesizing evidence from sociology, psychology, and political science. And, it will make the case for a more scientifically literate public, a more socially engaged scientific community, and a more thoughtful mode of public discourse.

7:15-7:45 PM

Q&A with Keynote Andrew Hoffman
Moderator: Margaret Jacobs, UNL

FRIDAY, APRIL 2

8:45 AM

Welcome and land acknowledgement: Colette Yellow Robe
Introduction: Margaret Jacobs, Director, Center for Great Plains Studies
Logistics: Katie Nieland, Center for Great Plains Studies

9-10 AM

Plenary: Ursula Kreitmar, University of Nebraska-Lincoln
Assistant Professor, Political Science

How to Design Climate Policy in a Polarized World

Culture is a main determinant of how we think and feel about climate change. As such, culture must be considered when designing mitigation and adaptation strategies to meet the rapid emission reductions necessary to avert the most damaging of climate impacts. Cultural cleavages, both domestic and international, threaten to mire us in political conflict when we need to be working collectively to address this major challenge. This talk uses culture as context to identify limits of current climate policy initiatives and to sketch out viable policy options that may be more palatable to individuals on different sides of the climate divide.

Q&A: 9:40-10 AM, moderator: Peter Longo, UNK

10-11 AM

Plenary: Jessica Thompson, Northern Michigan University

Professor, Public Relations

Let's Change the Conversation about Climate Change

The impacts of a rapidly changing climate are everywhere, yet we haven't figured out how to talk about climate change with our friends and neighbors. Since the 1980s public conversations about climate change have been dominated by the language of science and politics. Our own fears of scientific inaccuracy and uncertainty – or political disagreement – have censored us from talking about how to live on a changing planet. This talk presents a new frame for conversations about climate change – place – places that matter. We can change the conversation about climate change by connecting the issues to the places we love, while talking with the people we love.

Q&A: 10:45-11 AM, moderator: Margaret Jacobs, UNL

CONCURRENT 1: SESSION A

11:30 AM-12:30 PM

Jesse Bell, University of Nebraska Medical Center

Claire M. Hubbard Professor of Health and Environment

Health and Climate Change

Bell's research explores the relationships of extreme weather, climate variability, and climate change on natural and human processes. The climate that we experience controls much of the world around us. When our climate abruptly changes or gradually shifts, there can be related consequences to both our communities and our health. The goal of Bell's work is to understand these linkages between climate and health, so that we can help prepare our populations for climate- and weather-related disasters. To determine these relationships, Bell uses a variety of climate and environmental data sources to explore associations with human health outcomes.

Q&A: 12:15-12:30 PM, moderator: Liliana Bronner, UNMC

CONCURRENT 1: SESSION B

11:30 AM-12:30 PM

Panel: Bridging Science and the Humanities

Aubrey Streit Krug, Caleb Roberts, & Dan Uden

Graduates of the Center's Great Plains Graduate Fellows Program will speak about how big picture thinking about climate change should include cross-disciplinary teamwork. With Aubrey Streit Krug (The Land Institute), Caleb Roberts (Assistant Unit Leader at the Arkansas Cooperative Fish & Wildlife Research Unit), Dan Uden (UNL School of Natural Resources).

Q&A: 12:15-12:30 PM, moderator: Tom Lynch, UNL

12:45-1:45 PM

Daniel Wildcat, Haskell Indian Nations University

Director, Haskell Environmental Research Studies Center

The Climate Change We Need: The Case for a Cultural Climate Change

Worldviews are largely tacit and assumptive in character. Seldom stated explicitly or critically examined, the modern worldview of progress and technological accomplishment is a fundamental part of what needs to change today. Unless we foster a non-anthropocentric worldview, it will be difficult to successfully address the physical climate change problems humankind has produced. Making that shift might be easier than we think, my presentation suggests many Indigenous worldviews offer examples of the kind of cultural climate change we need to successfully address the deadly and destructive physical climate change humankind now faces.

Q&A: 1:30-1:45 PM, moderator: Margaret Jacobs, UNL

CONCURRENT 2: SESSION A

2-3 PM

Experts panel

Martha Shulski, Crystal Powers, Tonya Haigh, Mace Hack

What is it like working on climate change with such an intense culture clash surrounding the topic? Hear from experts in their field about what lessons they've learned and how it affects their work going forward. With Martha Shulski (UNL, Nebraska State Climatologist), Crystal Powers (Nebraska Water Center), Mace Hack (The Nature Conservancy), and Tonya Haigh (National Drought Mitigation Center).

Q&A: 2:45-3 PM, moderator: Tom Lynch, UNL

CONCURRENT 2: SESSION B

2-3 PM

Student Journalism Climate Project

Moderator: Joe Starita, UNL Journalism

Climate Change Nebraska Project

Climate change is both a humanity-scale issue and, when it impacts you, a deeply personal story. Hear from a team of University of Nebraska-Lincoln student journalists and their mentors who spent a year diving into what climate change looks like on the ground for the Climate Change Nebraska depth reporting project. Moderated by Joe Starita, UNL College of Journalism and Mass Communication with Jennifer Sheppard, UNL CoJMC.

Q&A: 2:45-3 PM

CONCURRENT 3: SESSION A

3:15-4:15 PM

The 1990 Conference

Moderator: Ken Dewey, Fran Kaye, Peter Longo, Clint Rowe

Climate Change 30 Years Later

Thirty years ago, in 1990, the Center hosted a conference called “Climate Change on the Great Plains,” which was described as “Looking Back from the Twenty-First Century at Impacts of Climate Change on the Great Plains.” We return to that topic three decades later with a panel of scholars who formed the backbone of that conference. What have they seen change in 30 years? With Ken Dewey (1990 conference co-chair, UNL), Peter Longo (Political Science, UNK), Fran Kaye (English, UNL), Clint Rowe (Earth & Atmos, UNL)

Q&A: 4-4:15 PM, moderator: David Vail, UNK

CONCURRENT 3: SESSION B

3:15-4:15 PM

Climate Change Lightning Round for Students

Back-to-back presentations

What Does Climate Change Mean to You?

Undergraduate and graduate students from many disciplines showcase what climate change in the Great Plains means to them in quick, back-to-back presentations. They can relate it to current research, classwork they have done, personal experience, even artistic interpretations.

Q&A moderated by Emily Rau, UNL

4:15-5 PM

Closing comments and speaker rooms

Margaret Jacobs, Center for Great Plains Studies

Spend additional time with a range of conference speakers to ask questions or discuss work.

SPEAKER BIOS

Andrew Hoffman is the author of *How Culture Shapes the Climate Change Debate*, one of 16 books and over 100 articles/book chapters he has written. In this work, he focuses on how environmental issues emerge and evolve under the influence of social and political ideas and the underlying cultural values that are engaged when people debate these issues. He is Professor of Sustainable Enterprise at the University of Michigan in the Stephen M. Ross School of Business and the School for Environment & Sustainability.

Jessica Thompson's research involves improving climate change communication through social science. She led a National Science Foundation project on building place-based climate change education tools for the U.S. National Park Service and U.S. Fish and Wildlife Service. Thompson is an expert on the social and cultural foundations for effective promotion of environmental policy with an interdisciplinary approach involving history, culture, government, and media. She is Associate Professor at Northern Michigan University and the founder of the Northern Climate Network. She also spent five years in the Human Dimensions of Natural Resources department at Colorado State University.

Daniel Wildcat writes on indigenous knowledge, technology, environment, and education. He is co-director of the Haskell Environmental Research Studies Center. A Yuchi member of the Muscogee Nation of Oklahoma, Wildcat recently formed the American Indian and Alaska Native Climate Change Working Group, a tribal-college-centered network of individuals and organizations working on climate change issues. In 2008, he helped organize the Planning for Seven Generations climate change conference sponsored by the National Center for Atmospheric Research. He is the author of *Red Alert! Saving the Planet with Indigenous Knowledge* and is Professor at Haskell Indian Nations University in Lawrence, Kan.

Jesse Bell's research explores the relationships of extreme weather, climate variability, and climate

change on natural and human processes. The climate that we experience controls much of the world around us. When our climate abruptly changes or gradually shifts, there can be related consequences to both our communities and our health. The goal of Bell's work is to understand these linkages between climate and health, so that we can help prepare our populations for climate- and weather-related disasters. To determine these relationships, Bell uses a variety of climate and environmental data sources to explore associations with human health outcomes. Much of his experience in this field comes from his previous position, where he created the first joint research position between the National Oceanic and Atmospheric Administration and the Centers for Disease Control and Prevention. The role of this dual appointment was to provide a mechanism to integrate NOAA climate and environmental data into CDC health projects. This work provided Bell firsthand experience that is now the foundation for his current research. In addition to this, Bell's participation as a lead author for the U.S. Global Change Research Program report "The Impacts of Climate Change on Human Health in the United States: A Scientific Assessment" that was released by the White House in 2016 has also shaped his professional interests.

Ken Dewey is a geographer at the University of Nebraska-Lincoln's College of Arts & Sciences. Dewey's main research and outreach interests are in severe storm climatology, climate variations, snow and ice studies, and drought impacts. His primary outreach activity is to bring information on severe weather and related safety tips to the public, in order to help them survive the storms. Dewey does a large amount of this through information posted on various web sites and through the Central Plains Severe Weather Symposium. He also does numerous interviews with the media and makes public presentations across the state. Dewey maintains and produces the content for the Lincoln Weather and Climate web site. This is a location that offers timely regional weather information so the public can keep up-to-date on droughts, major weather events and

trends, etc., and make better decisions related to weather and climate.

Tonya Haigh began working with the National Drought Mitigation Center in February 2009 as a research specialist. Haigh has worked for sustainable agriculture and environmental conservation organizations as a program director, community organizer, and grant writer over the last fifteen years. Since moving to Lincoln with her family in 2008, Haigh has also been taking courses in environmental planning and natural resource management at the University of Nebraska-Lincoln. Haigh's interests include permaculture, local food systems, resiliency, and spending time gardening, reading, and in the great outdoors with her husband and two daughters.

Frances Kaye began her career at UNL as an assistant professor in 1977 and rose to full professorship in 1993. She is a distinguished scholar and has been engaged in service to the university, as well as to outreach activities promoting social justice. Kaye's interdisciplinary focus on the cultural history and the literature and geography of the Great Plains has enhanced the university's reputation in Plains studies, environmental and ecological criticism and ethnic studies. Her work for 12 years as an editor for the *Great Plains Quarterly* and the *Encyclopedia of the Great Plains* elevated the scholarship of these important publications. Some of her most significant work has been in outreach to people incarcerated in the Nebraska state prison system, where she has run reading and creative writing circles for many years. In 2016, Kaye was presented with the Faculty Senate Louise Pound-George Howard Distinguished Career Award in recognition of her work.

Peter Longo joined the faculty at UNK in 1988 and is a professor in Political Science. He served as department chair from 1990-99 and 2003-07. Longo received a bachelor's in history from Creighton University (1980); a J.D. (1982) from the University of Nebraska-Lincoln College of Law and a Ph.D. (1986) in political science from UNL. He serves as the editor of "Great Plains Research." **Crystal Powers** is the Research and Extension Communication Specialist through the Nebraska Water Center. Her role is to be an open channel of communication with research and extension faculty throughout Nebraska's higher

education system. Powers would like it to be a two way path: what can we learn from each other and how we can best collaborate for larger impact. Powers came from working as an Extension Engineer in the Department of Biological Systems Engineering at the University of Nebraska-Lincoln. There Powers worked with faculty on improving air and water quality in livestock systems, primarily through extension programming, and also some teaching and research. Powers has a M.S. in Biological and Environmental Engineering from Cornell University and a B.S. in Biological Systems Engineering from UNL.

Caleb Roberts is a post doctoral research associate with the department of Agronomy and Horticulture in the Institute of Agriculture and Natural Resources (IANR) at the University of Nebraska-Lincoln. Roberts' work specializes in applied ecology. Roberts' doctoral thesis topic focused on quantifying multi-scale resilience landscape and community ecology. Roberts received a bachelor's degree in Biology and Creative Writing from Murray State University in 2011 and a master's of science degree from Texas Tech University in 2015. Roberts completed a doctorate of philosophy with a specialization in Applied Ecology in May of 2019.

Clint Rowe's major research area is in physical meteorology and climatology, specifically the fluxes of energy and mass between the surface and the atmospheric boundary layer. Much of his research has focused on radiative fluxes between vegetated surfaces and the atmosphere, but he has also conducted modeling and field studies investigating energy exchanges over the Greenland ice sheet and their impact on the amount and extent of surface melting. Rowe is currently involved in several research projects concerning land surface-atmosphere interactions in the Nebraska Sand Hills. One of these is investigating how the Sand Hills' unique soil properties affect generation of warm-season mesoscale precipitation over the Sand Hills and surrounding plains. The findings show that the Sand Hills have a complex set of effects on the atmosphere — in some cases acting to inhibit convective precipitation while in others acting to enhance convection and precipitation generation in

the region. These investigations were part of a large, multi-investigator NSF grant to study the Sand Hills as a complex ecosystem.

Martha Shulski is an associate professor of applied climate science in the School of Natural Resources at the University of Nebraska-Lincoln. Shulski serves as the Director of the Nebraska State Climate Office and State Climatologist for Nebraska. At the State Climate Office, their goal is to deliver science-based weather and climate information to inform decisions. Shulski joined the faculty at UNL in August 2009. Shulski's research interests are in the areas of climate variability and change and climate impacts. This involves understanding the causes and drivers of variability (on various time and space scales) and how this variability influences historical trends. Of great importance is also how these changes impact our society and environment. Many of the projects that Shulski has been involved with are interdisciplinary - bringing together researchers from various specialties to study an issue - and climate is a critical component to most all environmental issues. Shulski also has a strong interest in understanding information needs and often works closely with users of weather and climate information to deliver decision support tools.

Mace Hack has been the state director for The Nature Conservancy in Nebraska for the past 15 years. In this position, he leads a statewide staff of 24 in conserving the lands and waters on which wildlife and people both depend, ensuring that Nebraska's rich natural heritage remains healthy for future generations. Mace holds an undergraduate degree in ecology, evolutionary biology, and animal behavior from Princeton University and a doctorate in the same fields from the University of California at San Diego. Prior to joining the Conservancy, Mace worked for the Nebraska Game and Parks Commission as Assistant Administrator for the Wildlife Division. Mace also serves as an Adjunct Associate Professor for the School of Natural Resources at the University of Nebraska-Lincoln.

Aubrey Streit Krug is a writer and teacher in the environmental humanities who studies stories of relationships between humans and plants. Streit Krug is currently the director of Ecosphere Studies at The Land Institute in Salina, Kansas. Streit Krug earned her PhD in English (American U.S. & Indigenous literature) and Great Plains Studies at the University of Nebraska-Lincoln. Streit Krug is also a student of the Omaha language. Streit Krug likes collaborating on educational, interdisciplinary projects that build knowledge across communities and cultures.

Daniel Uden is a postdoctoral research associate in the School of Natural Resources and the Department of Agronomy and Horticulture at the University of Nebraska-Lincoln. Uden's research broadly addresses questions of spatial resilience in social-ecological systems, with emphasis on the food-energy-water nexus. Uden values team-based approaches to science, its application, and its communication. In addition to research, Uden's current research project stems from a cross-institutional collaboration that aims to link resilience theory, state-of-the-art landcover data, and cloud-based geospatial computing to map cross-scale vegetation transitions in rangelands of the western United States. For his Ph.D. research, Uden used a variety of spatial and statistical modeling techniques (e.g., species distribution models, graph theory, cellular automata) to examine the causes and consequences of landcover change in Nebraska landscapes. In his M.S. research, Uden used scenario planning to consider the potential effects of bioenergy development and climate change on wildlife and water resources in Nebraska's Rainwater Basin.

SPECIAL THANKS

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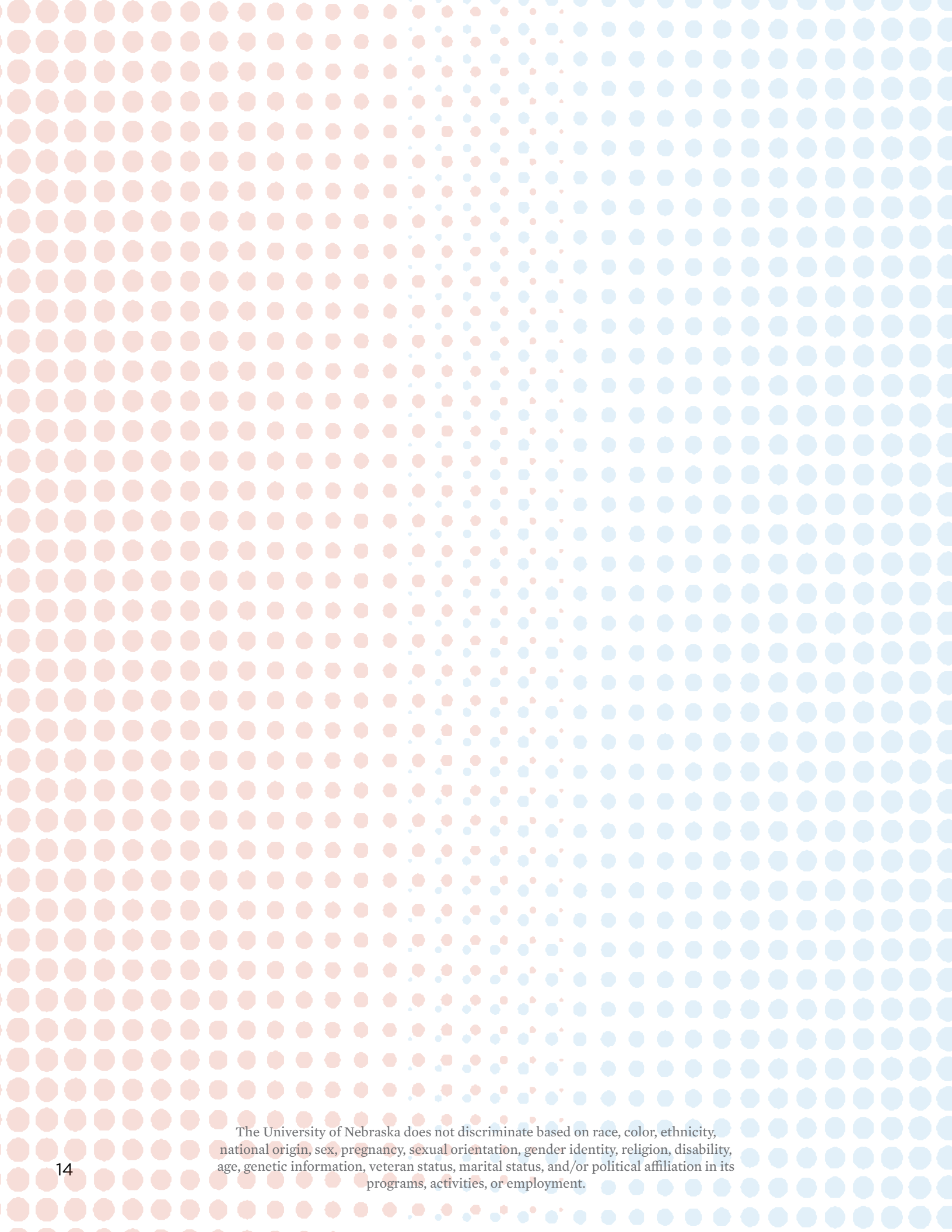
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