Climate Change and Conservation Planning in Minnesota

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Correspondence to the editor:
Michael D. Greco
CURA
University of Minnesota
330 HHH Center
301—19th Avenue S.
Minneapolis, MN 55455
curaedit@umn.edu

General inquiries:
phone: 612-625-1551
fax: 612-626-0273
e-mail: cura@umn.edu
web: www.cura.umn.edu

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In many regions of the world, planning is underway to cope with the consequences of climate change. Even if global carbon-dioxide emissions are curbed in the next few years, climatologists predict that the earth will continue to warm for nearly a century. According to many climate projections, the midcontinent of North America will be warmer and experience increased incidence of droughts. Temperatures will rise without a corresponding increase in precipitation to offset additional evaporative losses. These changes have the potential to significantly alter the character and quality of Minnesota’s environment. The Pew Center on Global Climate Change reports that as of March 2009, only eight states have included “adaptation” in their climate action plans. Twenty-four states, including Minnesota, have developed strategies to reduce carbon-dioxide emissions (i.e., mitigation), but have not considered what proactive measures are needed to sustain environmental quality in the coming decades.

Minnesota’s State Climatology Office has reported that the state’s climate has been changing much more rapidly in the past 20 to 30 years than in the previous century. Since the early 1980s, the average annual temperature in Minnesota has warmed 0.5–1°C (1–2°F) and that trend is accelerating. Increased average winter temperatures and overnight low temperatures contribute the most to these trends. Although the projected changes may seem minor, some of Minnesota’s plants, animals, and ecosystems are already “feeling the heat.” A decade ago, University of Minnesota researchers discovered that boreal forests of pine, spruce, and fir were being invaded by red maple, likely aided by a warming Minnesota climate.1 Other connections to climate change have taken longer to recognize. For example, Minnesota’s moose population has declined 50% in the past 20 years, even though its habitat has not substantially changed. State and federal wildlife researchers now suspect that pregnancy rates have declined dramatically because warmer winter temperatures have stressed the moose population, making them more vulnerable to parasites and subsequently to malnutrition. In addition, lake “ice-out” now occurs 3–5 days earlier than it did 20 years ago. The National Audubon Society recently determined that 64% of North American landbirds have shifted their winter distributions northward in

the last 40 years, including species such as the boreal chickadee, which may now be disappearing from Minnesota.  

Minnesota’s ecosystems will be altered by climate change, and managing its natural ecosystems based on past conditions may no longer be sufficient for conserving Minnesota’s biodiversity. Adapting conservation practices to a new climate reality requires not only comprehensive planning and coordination, but also developing consensus about how to respond to an unfamiliar future.

To stimulate climate-change adaptation planning in Minnesota, we have created climate-change projection maps of the state based on an ensemble of climate models, and used these projections to determine likely ecosystem responses. This information provided the background for a two-day workshop and public-policy forum we organized to allow Minnesotans involved in conservation research, management, policy, and advocacy to examine how the practice of biodiversity conservation needs to change at the regional and state level in response to climate change. This article presents a synthesis of the contributions of workshop participants and published scientific literature to provide a starting point for more detailed climate-change adaptation planning at the regional and state level. The senior author was the 2007–2008 Fesler-Lampert Chair in Urban and Regional Affairs. Funds from this appointment were used to support both the research on climate projections and analysis of likely impacts prior to the workshop, and the workshop itself.

**Projections of Minnesota’s Environment in 2069**

Our recent climate-model simulations projected that 60 years from now Minnesota will experience an increase of $3°C$ ($5°F$) in average annual temperature and a decrease of $6%$ in average annual precipitation. The models predicted that southern Minnesota will experience the greatest increase in summer temperatures, but the greatest decrease in winter temperatures (Figures 1 and 2). Our simulations also predicted that precipitation decreases for both winter and summer will be greatest for southwestern Minnesota. Considering average annual temperatures, these predicted conditions are analogous to current conditions in Lincoln, Nebraska, 250 to 300 miles to the south-southwest. These precipitation prediction data indicate that, statewide, wetlands will be drier for more of the year, those in western Minnesota will likely become more brackish, and peat bogs in the north may burn much more frequently. In terms of plant life, our simulations suggest that the present-day coniferous forests (historically jack pine, red pine, white pine, black spruce, and balsam fir) of northeastern Minnesota will continue to be replaced by red maples; hardwood forests will likely become savannas of widely spaced trees amidst grasslands. With less than 1% of Minnesota’s native prairies currently remaining, the species that will expand into forests may be invasive, exotic species of grasses that now cover ditches, road verges, and crop borders. In addition, small prairie remnants may be especially vulnerable to species loss, because some plants and animals that depend on these habitats will be unable to migrate in response to a changing climate.

The timing of these ecosystem changes will vary considerably. Some changes, like those linked to changes in wetland hydrology, may be more in synch with climate warming than shifts from forests to savannas or grasslands will be. The latter shifts are more likely to be episodic, following outbreaks of insects and diseases, windstorms, and fires. Until a major disturbance occurs, change in many ecosystems—especially those such as forests that are dominated by long-lived species—might lag behind the pace of climate change. Unfortunately, Minnesota’s remnant natural biodiversity conservation in a midcontinental region of North America,” *Biological Conservation* 142 (2009): 2012–2022.

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ecosystems are affected by other human-generated stressors, such as pollutants, habitat fragmentation, and invasive species. The prevalence of “multiple stressors” has led many ecologists to anticipate more rapid changes and less certain future conditions than might occur in less-intensively used regions of North America. For example, summer water stress, increased deer browsing, and invasive earthworms together will likely accelerate the conversion of forests to grasslands. Because biological monitoring is limited to a few species and ecosystems, how most ecosystems are responding to climate change is unclear.

Conservation Planning for an Uncertain Future: Workshop Outcomes

Identifying critical adaptation strategies for Minnesota will be challenging: extrapolating beyond the familiar, beyond what we have ever had the opportunity to observe, is inherently uncertain. Once identified, implementing many of these strategies will require broad public support; the aggregation of human-caused impacts to the environment means that the solutions will be complex and require integrated, coordinated actions. Coordinated climate-change adaptation will likely need to emerge, at least in part, from scenario planning, a tool that has been used for other complex environmental problems with high uncertainty. A scenario is a plausible depiction of the future based on a particular course of action. Because scientists develop scenarios deliberatively based on a shared understanding of how actions may affect future environmental conditions, constructing and comparing scenarios can be an effective way to reach consensus on sound solutions, despite uncertainty and complexity.

Before scientists and public-policy makers can undertake systematic scenario planning in Minnesota, the key issues and major barriers to action related to climate-change adaptation need to be identified. To identify such barriers, we organized a two-day science and public-policy workshop, *Climate Change Adaptation and Biodiversity Conservation: A Minnesota Response*, held June 4–5, 2008, at the Minnesota Landscape Arboretum. Through the workshop, we gathered input from researchers and conservationists during 10 roundtable discussions focused on sustaining biodiversity. The first four roundtable discussions involved 50 conservation scientists that we invited from Minnesota government agencies, nonprofit organizations, and universities. The remaining six discussions were open to the public; approximately 100 people attended these concurrent sessions. We also invited several leading conservation-science researchers to the workshop to provide a national perspective on adaptation. We asked participants to focus on climate-change adaptation within the next 60 to 70 years. Discussions focused on possible “on-the-ground” conservation responses in Minnesota and on policy. We present below the issues discussed at the workshop using a decision framework developed by researchers in California that distinguishes three kinds of responses: resilience, resistance, and facilitation.3 Workshop participants discussed the benefits, concerns, and obstacles of implementing the three conservation responses, focusing on key questions and knowledge gaps.

**Resilience.** Resilience strategies are conservation actions that bolster the capacity for ecosystems to respond to climate change on their own and not degrade. Resilience strategies are widely considered to be, in the long-term, more effective than resistance and facilitation strategies in terms of both cost and ecological outcome, although they often require high upfront costs and coordination to implement.

Natural disturbances, such as floods, fires, and droughts, periodically trigger major changes in ecosystems. Without

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disturbances, some plant communities, especially forests, can be slow to change and out of sync with environmental conditions. Disturbances create windows of opportunity, and the reassembled community will reflect what species survived onsite or can immigrate from nearby locations, as well as the prevailing environmental conditions. The extent to which an ecosystem recovers most of its predisturbance characteristics reflects its resilience.

Many species have withstood past episodes of climate change, demonstrating that some inherent resilience exists in the system. With increasing land conversion, remnant ecosystems can, however, lose resilience. Diminished resilience stems from the primary effects of lost recolonization sources resulting from habitat loss, as well as the secondary impacts of land conversion. Pollution and increased prevalence of invasive species frequently accompanies land conversion. Aggregated impacts of habitat loss, pollution, and invasive species are often most evident following disturbance because the altered conditions are unfavorable for the colonization of the previous inhabitants. Maintaining the resilience of relatively intact natural ecosystems is crucial so they will continue to support the establishment of a diverse array of plants and animals, and not only those that rapidly spread and aggressively grow (i.e., invasive species).

Scientists anticipate that the frequency and magnitude of disturbances, especially fire, drought, and major insect and disease outbreaks, will increase as the climate warms. In resilient ecosystems, these disturbances could be crucial opportunities for Minnesota’s native plants to “keep pace” with climate change. Without sufficient resilience, disturbances may instead accelerate the spread of invasive species.

In the workshop, roundtable participants identified six key issues associated with implementing resilience strategies for climate-change adaptations.

- **Links Between Land-Use Practices and Resilience.** Minimizing inputs of pollutants and invasive species into natural ecosystems from surrounding managed lands is widely considered crucial for maintaining resilience. Less-intensive land uses (e.g., grazed lands versus row-crop agriculture) adjacent to conservation reserves often function as buffers. Conversion of these buffers to urban, residential, or high-input agricultural use is of particular concern for maintaining resilience. In addition, land-use practices that either have high water demand or result in major hydrologic alterations need to be conservatively regulated in the vicinity of remnant natural ecosystems. Without a significant increase in precipitation to offset evaporative losses that accompany the warmer temperatures expected during climate change, maintaining groundwater and surface water supplies will become an increasing concern in Minnesota.

- **Methods to Promote Resilience during Climate Change.** Workshop participants observed that the establishment of plants following disturbances, which is integral to resilience, can be hindered by grazing animals, such as deer, or invasive species. This prevents even species well-suited to prevailing environmental conditions from regenerating or recolonizing. In Minnesota, high populations of muskrats and geese are preventing reestablishment of aquatic plants in many urban lakes in the state. Many of the state’s hardwood forests have become little more than a canopy of trees, with once-rich forest floors now bare soils from the combined effects of exotic earthworms and whitetailed deer. Some participants questioned whether it is worth managing herbivore and invasive species, but others noted that accommodating them poses a great risk to many ecosystems that are not yet degraded. One solution offered for prioritizing invasive species control is to base it on their likelihood of accelerating or recolonizing. In Minnesota, high populations of muskrats and geese are preventing reestablishment of aquatic plants in many urban lakes in the state. Many of the state’s hardwood forests have become little more than a canopy of trees, with once-rich forest floors now bare soils from the combined effects of exotic earthworms and white-tailed deer. Some participants questioned whether it is worth managing herbivore and invasive species, but others noted that accommodating them poses a great risk to many ecosystems that are not yet degraded. One solution offered for prioritizing invasive species control is to base it on their likelihood of accelerating or recolonizing.

- **Ways to Gauge Sustainable Resource Use.** The current approach for assessing land capability is to monitor ecosystem changes, especially vegetation, so conditions do not significantly depart from what is expected for a site’s physical environment (e.g., soils, slope, aspect). With climate change, workshop participants noted that land managers will need to shift their vision of what should be target vegetation. One suggestion is to find and examine forests in southern Minnesota that may be good ecological blueprints for future forests in northern Minnesota under a reasonable range of future climate scenarios. However, some warned that the effects of other stressors, such as invasive species, complicate the use of such ecological blueprints.

- **Targeting Resilience Strategies to Selected Ecosystems.** In landscapes that are highly fragmented, such as the
southwestern prairies of Minnesota, there was consensus that providing buffers between high-quality natural areas and intensively used lands is critical for improving resilience. Land use on these buffers may need to shift to more low-impact uses, although not necessarily dedicated for conservation. Participants also noted that for the extensively forested landscapes in eastern and northern Minnesota, promoting regeneration of a diverse assemblage of tree species through appropriate stand management is crucial, so that if some tree species decline due to the warmer climate, others may be able to fill the vacated niche.

**Prioritizing Conservation Land Acquisition to Maintain Biodiversity.** Workshop participants agreed that the best examples of Minnesota’s current ecosystems need to be protected because, on a per-area basis, they contain a disproportionate share of the biodiversity resources. For the past 40 years, the state of Minnesota has been acquiring and setting aside places with exceptional biodiversity, but many ecosystems and species are not yet protected. Many felt that filling these gaps in Minnesota’s natural area system should be a land-acquisition priority; these ecosystems and the rare populations contained in them may have a better chance of enduring climate change. However, a key recommendation from workshop participants is to expand the selection and configurations of these natural-area acquisitions from the current focus on small sites containing particular populations or especially pristine vegetation. In light of climate change, greater value needs to be placed on sites or boundary configurations that offer higher topographic and landform diversity, are well-buffered from future potential land-use impacts, and provide connections between remnant natural ecosystems. Although dedicating the core parts of natural areas to conservation will continue to rely on acquisitions and permanent conservation easements, participants thought a greater array of conservation tools for protection is needed. Suggestions included incentives for low-impact land uses adjacent to environmentally sensitive areas and temporary easements.

**Knowledge Gaps Related to Implementing Resilience Strategies.** Conceptually, resilience is well-grounded in both theory and in empirical evidence. However, workshop participants were troubled that for most ecosystems, information specific enough to guide management is lacking. In Minnesota, resilience is best understood for shallow lake ecosystems, but has not been specifically studied in most other ecosystems. Concerns were raised that, too often, advice is generic, leading land and water resource managers to conclude “we’re already doing that.” Managers need guidance in knowing how to detect resilience loss before it is so advanced that it causes the ecosystem to “flip” to a degraded state. Basic research on ecosystem recovery after disturbances that is sufficiently comprehensive to guide management is needed for nearly all of Minnesota’s ecosystems. Some of the key knowledge gaps noted at the workshop include species tolerance to temperature change, soil type and biotic relationships, and tolerance for multiple stressors such as exotic earthworms and insect pests.

**Resistance.** Resistance strategies are temporary measures intended to forestall the effects of climate change.
as long as possible. However, if over-relied on, resistance strategies will be like “paddling upstream” and not sustainable. As a long-term management approach, resistance may only be appropriate for particular places where a high value is placed on preserving historic conditions. Although promoting resilience is the most effective long-term strategy for climate-change adaptation, resistance strategies may be important for “buying time.” Removal of unwanted species and augmenting local water supplies were offered by workshop participants as resistance actions that may counteract small magnitudes of climate change. Many remnant natural areas within fragmented landscapes already are managed using resistance approaches to reduce the effects of land-use impacts. Because they treat the symptoms, not the cause, resistance actions need to be recurrent. In most cases, resistance strategies are also labor-intensive and too cost-prohibitive to pursue over extensive areas.

Roundtable discussions focused on three issues associated with implementing resistance strategies for climate-change adaptation.

**Setting Future Goals for Protected Areas.** In the short term, most participants felt that Minnesota’s remnant natural areas should continue to be actively managed so current populations of vulnerable species do not dwindle. Because protected areas typically are very species rich, they are concentrated collections of genetic resources that could serve as sources of genetic diversity, if climate change greatly outpaces migration. In addition, participants pointed out that protecting these areas gives natural selection more time to work so native populations genetically adapt in place to prevailing conditions.

**Changing Approaches to Invasive Species Management.** The rationale for controlling weeds and pest species outside of cultural landscapes (urban, agricultural) is that they are not native to the locale, spread aggressively, and may adversely affect native species and ecosystems. A few native species that capitalize on other human-caused changes, such as pollutant inputs, grow more aggressively now than they did historically and also are targets for control. Climate change could create some new “winners” among Minnesota’s native plants and animals. In addition, warmer winters will likely trigger an influx of new species from the south. Identifying which species should be considered “invasive” is not clear cut; limiting the spread of species that appear to fundamentally change the character of ecosystems or that hinder regeneration of other species is considered important to many conservation managers. Workshop participants indicated that they anticipate an increased need for integrated management; i.e., acting not only to reduce the prevalence of the invader but more broadly managing the ecosystem to reduce degradation, thereby minimizing the risks of reintroductions.

**Knowledge Gaps Related to Implementing Resistance Strategies.** In many parts of the world, risk assessments are being launched to anticipate which species will likely increase in geographic range and abundance in response to climate change, and which will decrease. Early detection and removal of these species as they spread to new regions will be crucial to stalling their advance. Early-detection systems will be most effective if they focus on surveillance for those species identified as the greatest risks. Given that Minnesota could experience some major shifts in vegetation by virtue of its location on the edge of the Great Plains, these assessments will be of critical importance to the state, despite concerns raised about the uncertainties of weed risk assessments.

**Facilitation.** Facilitation strategies may be appropriate in cases where building resilience is unlikely to be sufficient or where species cannot migrate to suitable habitat fast enough to keep pace with climate change. Facilitation practices represent attempts to mimic natural processes such as dispersal, migration, and changes to species composition. If Minnesota experiences climate-change impacts that are large and outstrip resilience or resistance strategies, facilitation will become important for avoiding species loss. Assisted colonization (or migration) is the practice of actively moving individuals of a particular species from one locale to another where they are likely better matched to the climate. As was pointed out at the workshop, moving species is not a new approach; horticulturalists, fisheries, and wildlife biologists routinely move economically important species beyond their native ranges. Nonetheless, debate at the workshop suggests this practice will be contentious as a conservation strategy in Minnesota. Some reservations stem from a belief that assisted colonization amounts to engineering nature. Others are concerned that some organisms will not thrive after sudden northward translocations because they may not be adapted to the prevailing photoperiod or other aspects of the environment that are novel to them.

Even as a last resort, many participants were wary of being able to predict when natural selection will not allow species to endure and where they should be moved. However, others noted that developing both policy and practice approaches for assisted colonization will take time and is unlikely to be soundly formulated in crisis mode. Consequently, one recommendation is to lay the groundwork for a sound decision-making process and action, while hoping it will rarely be necessary.

Roundtable participants focused on five key issues associated with implementing facilitation strategies for climate-change adaptation.

**Maintaining Genetic Diversity.** One of the most frequently debated issues in ecological restoration is whether it is important to acquire seed from sources very close to project sites (e.g., within a county) or use seeds from greater distances, even other regions of the country. Some conservation biologists favor using nonlocal seed because availability of local source seed is limited.
and costs are typically higher than for nonlocal seed. Conversely, a key reason to preserve local genotypes, even at significant additional cost, is that they are assumed to be best adapted for prevailing conditions. However, given climate-change predictions, today’s prevailing conditions will, not likely closely resemble those in the coming decades. Even though it initially seems counterintuitive, most workshop participants believe efforts should continue to preserve local genotypes. Research presentations at the workshop showed that maintaining the greatest amount of overall diversity of a species is a key reason to preserve local genotypes; doing so will be advantageous for long-term evolutionary change and reduce the risk of homogenizing the gene pool.

Identifying Candidates for Assisted Colonization. One of the invited experts, Malcolm Hunter from the University of Maine, described the profile of the highest priority candidates to be those that are endangered by climate change, have limited ability to move or disperse naturally, and are likely to fill a vacating niche at their destination. Workshop participants debated how best to identify these species, given that it will not be straightforward. Several factors were identified that should be considered, including whether a species’ decline is primarily a response to climate change rather than other factors, whether common species will be more feasible to assist or if there may be a more compelling need to focus on rare species, and whether a species is economically important. For noncommodity species, identification processes should not rely solely on scientific input, but also on the values and opinions of the public.

Augmenting Declining Populations. Adding new individuals to increase dwindling populations of wild plants and animals has been a particularly risky conservation practice because it can greatly reduce the vigor of the next generation. However, very small, isolated populations may need to be augmented if they lack the genetic background to adapt and if relocating them to keep pace with climate seems more risky.

Identifying Acceptable Recipient Sites for Assisted Colonization/Reintroduced Populations. How relocated species will actually function in their new ecosystems is unpredictable, leading many to prefer restored or managed ecosystems, rather than high-quality natural areas, as the initial recipient sites. Workshop participants observed that recipient sites allowing for future migration, such as road verges and riparian corridors, may have increased conservation importance over time. Unfortunately, these corridors may not provide suitable habitat if they do not have appropriate environmental
conditions or are regularly mowed. Consequently, assisted colonization may need to rely on “stepping-stone” recipient sites to avoid translocations that are too abrupt. Sites that have been managed to resist climate change could be especially crucial habitat for assisted colonization efforts.

Knowledge Gaps Related to Implementing Facilitation Strategies. Only a small fraction of Minnesota’s plants and animals are known well enough to be candidates for assisted migration, and most of these are common and not necessarily those most vulnerable to climate change. For example, approximately 10% of Minnesota’s 2000 plants are commercially produced in even small quantities, and nearly all of these are from prairie habitats. Workshop participants acknowledged that the ecology of nonwoody forest species is poorly understood, and yet these species may be especially vulnerable, given projections of the eastward shift of the boreal zone and prairie-forest border. A recommendation to initiate a 10-year research program to advance knowledge on climate-change adaptation and biodiversity conservation. First, a critical need exists to improve coordination among state agencies, local units of government, and nonprofit organizations to meet the challenges posed by climate change. A statewide response to climate change also requires coordinated application of resilience, resistance, and facilitation strategies to sustain biodiversity, so that efforts are synergistic, not counterproductive. Second, the linkage between conservation science and decision making needs to be improved, which will require effective and strategic monitoring of habitats and species likely to be vulnerable to climate change. Critical gaps in scientific knowledge, most notably basic information on many more of Minnesota’s native species and an understanding of resilience in more ecosystems, requires a comprehensive and goal-oriented approach, such as a 10-year science plan. Finally, scenario planning for all of Minnesota’s ecoregions must be pursued to identify key gaps in the natural areas network, locate landscapes that may be especially important as climate refuges, and make strategic investments to buffer and improve connections between remaining natural ecosystems. It may be difficult to garner public support for climate-change adaptation planning in advance of a crisis, yet waiting to plan will limit options and effectiveness. Perhaps the most compelling reason to pursue biodiversity planning and implementation now is that the conservation actions identified here will substantially improve the environmental quality of Minnesota, regardless of what the future holds.

Susan Galatowitsch is professor of horticultural science at the University of Minnesota and was the 2007–2008 Fesler-Lampert Chair in Urban and Regional Affairs. She was a founding fellow of the University of Minnesota’s Institute on the Environment. An ecologist by training, her research interests include restoration ecology, invasive-species biology, wetland ecology, and conservation biology. Lee Frelich is director of the University of Minnesota Center for Hardwood Ecology. His research interests include the impacts of large-scale wind and fire in the Boundary Waters Canoe Area Wilderness and the effects of exotic earthworm invasion and climate change in forests. Laura Phillips-Mao is a Ph.D. candidate in conservation biology at the University of Minnesota. Her research interests include the impacts of invasive species and postinvasion restoration of native-plant communities.

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All students should have the opportunity to engage in complex intellectual activities, such as those that support deep knowledge and build on their cultural and linguistic resources. Sadly, given the current emphasis on student testing that has resulted in remediation and lowered expectations, such opportunities are often lacking for students in high-poverty, urban high schools.\(^1\) Research in education, and the field of literacy in particular, demonstrates that students from diverse social backgrounds perform better academically when classroom features include analytic thinking, substantive conversations with real-world audiences, and connections to the world beyond the classroom. In particular, in English/Language Arts classrooms, students are able to engage in challenging literacy tasks when exposed to complex intellectual activities (see sidebar, page 12). Despite previous research that has identified complex intellectual activities as key features of effective English/Language Arts teaching and learning, additional research that explores how a rigorous curriculum plays out in classrooms as they function within high-poverty, urban high schools is needed.

The research we describe in this article seeks to fill that gap by closely examining student engagement in an English class with a rigorous curriculum in a high-poverty, urban school. Our research focused on a classroom in which the teacher is a veteran in the district who is committed to providing all students with opportunities for complex intellectual engagement.

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Complex Intellectual Activities

Complex intellectual activities engage students as thinkers and involve them in the production of knowledge. These activities are interactive and take place within the context of a rigorous and highly academic curriculum. Examples include discussion-based approaches that encourage exploration and multiple perspective-taking, and the creative and critical use of knowledge that draws on students’ identities. In the English classroom we studied, for instance, students were often asked to engage in and then critique various perspectives in discussions related to video texts such as Disney’s *Pocahontas* or Kiri Davis’ independently produced film *A Girl Like Me*. In another example, students were asked to build on an understanding of print narrative to produce a digital podcast memoir which included a complex layering of narrative and sound. Student performance is enhanced on academic tasks and on tests of basic skills when they engage in complex intellectual activities rather than those activities which merely require correct interpretations and predetermined conclusions.


Study Methodology

In this study, we observed a documentary film class in an urban high school in the Midwest during the 2007–2008 school year. The teacher was a White educator in a highly diverse English classroom in a school where 82% of the students qualified for free/reduced price lunch. The school was one of a number of low-status schools in this urban district and was nearly reconstituted, or given a “fresh start” with all new teachers, due to declining enrollments and low standardized test scores. The district enrolls more than 70% students of color and has one of the largest achievement gaps between White students and students of color in the nation.

The curriculum was not literature-based, but focused on media analysis and documentary film production in an urban high school classroom. Although the population of students in the documentary film class that we studied shifted throughout the year, the class consisted of about 20 to 25 juniors and seniors who were primarily African American, followed by Latino, White, and American Indian; only one-quarter of the classroom’s students were male. Many of the students in the classroom struggled in their other courses and attended an after-school program for low-income, first-generation college students. Of the nine focal students in our study, eight are currently attending a two- or four-year college—a higher percentage than for the general school population.

This study was qualitative in nature, and as participant-observers, we audio-recorded whole-class and small-group sessions three times weekly; video-recorded significant classroom events and projects; recorded field notes from each session; conducted formal and informal interviews with the teacher, students, and administrators; and conducted two focus-group discussions to include all students’ perspectives. The nine focal students represented a range of achievement and engagement levels (based on test scores and initial observations), as well as a fair sampling of males, females, and all racial groups represented in the classroom. In addition, we collected all classroom assignments, selected student responses, and school and district artifacts (e.g., curricular frameworks, professional development materials, and school-board transcripts) related to the research questions. Throughout the 2007–2008 school year, as the teacher and students became more comfortable with our presence in the classroom, both teacher and students asked for our input and assistance in classroom projects, particularly at the end of the year as students worked on their final documentary films.

Our data analysis was interpretive in nature and involved open, axial, and selective coding procedures. Open coding of the data allowed us to explore possible themes, while axial coding involved identifying the most salient categories from among those themes. During this stage, we noted connections and contradictions which led to the combining and deleting of categories, as well as the creation of sub-categories. Finally, selective coding involved systematically arriving at
core categories central to the research questions. Because we were interested in how the classroom context shaped learning and engagement, we next identified key and illustrative events that occurred in the classroom for analysis. Key events were those that research participants identified as particularly significant. These events often stood out as moments of crisis or intense involvement or emotion in the classroom. Illustrative events were those that illustrate patterns and themes that emerged during the coding process. To understand these events, we applied critical discourse analysis, which provides a method for examining language use and patterns of participation. We were interested, for example, in patterns of talk related to initiating, controlling, and shifting of topics, as well as students’ resistance to and acceptance of those language patterns. This close analysis of language allowed us to explore how the discourse of the classroom shaped social and power relationships, identities, and knowledge, and how each of these was shaped by the larger institutional contexts of school and community.2 We were interested in how both teacher and students characterize rigorous, complex knowledge as it relates to their identities and the larger context of schooling in this English/Language Arts classroom that was centered on the analysis and production of documentary films.

The Curriculum

We asked the teacher whose classroom we studied to describe her motivation and the purpose for her curriculum, along with the units of study she uses. In our interviews and in a presentation she gave to a group of literacy teachers, she described her process for planning curriculum.

I start by asking myself, what motivates kids? And then I create something to meet them where they’re at. I don’t really start with the literature, or if there’s a piece of literature I love and want to teach, I think first, will this motivate the kids and how can I teach this? ... I know I love it. I need them to love it because what is wrong in our educational system is that kids are dead like zombies in the classroom, and I can’t stand that. I have kids who say, “This is the only class I make sure to get my butt out of bed for because I know I need to be in this class.” Then that’s a good thing. That’s when you’ve got what you need to be doing.

The teacher created the documentary film class, then, not based on district standards or “best practices” in the English/Language Arts field (although we argue that she does align with findings in the field), but in response to the need for increased motivation, engagement, and attendance in her urban classroom. After 13 years of teaching, she moved from a literature-based curriculum to one focused on digital media and production, although she admitted to us in interviews that teaching through technology tools had never been her primary interest. Seeing how this shift motivated her students, however, encouraged her to develop a curriculum with several goals in mind:

- **Allow for a high degree of personal control.** Students chose topics for the production pieces throughout the year (collage, podcast, film, etc.), developed significant questions to ask in each project, identified their sources, and determined the best way to deliver their message. In our observations, students received this responsibility with thoughtfulness and care, particularly when it came to checking out equipment for their projects. Even more, students demonstrated a commitment to topics that mattered to their own identities. According to the teacher, “kids … steer towards things that they need to figure out related to their own identity.”

- **Allow students to build their own understandings.** Because the films emerged from students’ passions for an issue, the students often had biased notions of what they would discover upon researching a topic and interviewing community members. Yet, in almost every film group, students ended with a more complex notion of their topics than they initially had, and some even developed a thesis opposite to that with which they had begun. These moments were exciting for the teacher, and she described in an interview that the power of the course was in “creating your own truth rather than having someone tell you what to think.”

- **Allow students to collaborate in meaningful ways.** Students spent the last three months of the school year working together on their film projects, a collaboration that was unlike small-group work most had experienced in their other classes. They outlined for themselves the tasks to complete and the roles each would take toward meeting their goal. Although this process was accompanied by some frustration over the time they worked together, the authentic collaboration held them accountable to each other and to the purpose they had determined together.

- **Include authentic audiences and consequences.** The course culminated in a film festival at the end of the school year that parents, administrators, students, and community members attended. Although the teacher evaluated the film as part of the course requirements, students indicated in their interviews that having an authentic audience view and critique their work was a significant motivation and source of pride. As one student stated, “My family is coming and I want to feel proud of it. I did a movie with my group, right? I tried to work as hard as I could and make the best movie and everything so my mom will be proud of me.”

- **Create real-world connections for students.** Many teachers talk about making real-world connections for their students without ever leaving the classroom walls. In the last months of school in the documentary

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The course was the most intellectually challenging one they have had.

The course was the hardest work they have been asked to do in school.

They felt respected and believed in.

They valued the authentic audience and feeling of competence when they met their goals.

They felt empowered to connect with their identities, communities, and interests outside of school.

Hard Work and Intellectual Challenge. In comparison with their other courses, students described the documentary film class as the most intellectually challenging and hardest one they had taken in their years of schooling so far. Throughout interviews, both individual and focus groups, students described their thinking in the class as “deep,” as “looking beyond,” and as “going farther.” Those responses reflected exactly the kind of thinking that the teacher explained that she expected from her students from the start of the year. This language of “depth” of thinking, as well as the course being special and “sacred,” to use a term from the teacher, became instilled in students’ thinking, and more importantly, in their literacy activities. Participants stated:

Yeah, it makes you think harder because ... every step of the way, she makes you think ... It’s so many steps to get to where you’ve got to go, so it keeps you thinking. You’re never bored in that class; basically, you work and work — she never just tells you to be quiet ... and read a book, or something. She don’t. She ... always uses the example, “Don’t just scratch the surface ... dig deeper,” as “looking beyond,” and as “going farther.” Those responses reflected exactly the kind of thinking that the teacher explained that she expected from her students from the start of the year.

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With these curriculum goals in mind, the process that the teacher used for each unit in the first several months of the school year was similar. Students first accessed multiple media texts and genres that served as examples, such as David Isay’s Ghetto Life 101 for the podcast memoir and Mark Achbar’s The Corporation for documentary film. Second, students critically analyzed those texts for how technical elements position viewers to believe, feel, or think in certain ways. Often, these discussions engaged students around controversial topics, such as corporate ethics or racial representation, and the teacher used a form of “accountable talk,” which emphasizes the use of evidence and active participation/listening to help students develop ways of discussing issues with multiple, often emotional positions. Third, students created, shared, and reflected on their own media projects (visual art, essays, photography, audio diaries, and film). Each aspect of this curriculum scaffolded technical, artistic, and critical-thinking skills, and focused on analytic thinking and deep knowledge, with the intention of developing a complex intellectual base for the culminating creative project of the year: the documentary film.

Study Findings

This section summarizes our findings from interviews with individual students and focus groups related to student motivation and engagement in academically challenging literacy tasks. We have discussed findings from key events and classroom interaction in other reports of this research.3

Throughout the coding of our data, the following themes emerged in student responses to our interview questions about the documentary film class:

1 Have a high degree of rigor, which encourages critical and creative thinking. Students moved from critically analyzing media throughout the year to producing their own documentary films. This partnering of the critical with the creative throughout each aspect of the curriculum encouraged students to view themselves in the world differently and to take a participatory role in the production of messages and images for larger consumption. Furthermore, as students incorporated their historical research into the films, they had to rethink and re-engage earlier discussions from the course around questions of history, truth, and art.

With these curriculum goals in mind, the process that the teacher used for each unit in the first several months of the film class, on any given day a group of students might be out in the community conducting an interview, filming at a location related to their topic, or making calls to set up their next appointment. Many students expressed that this interaction with community members, many of whom were respected professionals in their fields, was both one of the most challenging and one of the most rewarding aspects of their project, and one that we believe empowered them as active community members.

3 C. Lewis and J. Dockter, “Mediascapes and Social Worlds: The Discursive Construction of Critical Engagement in an Urban Classroom,” paper presented at the National Council of Teachers of English, San Antonio, TX, 2008; and C. Lewis and J. Dockter, “Identity, Media, and Institution: The Shaping of Critical Engagement in an Urban Classroom,” paper presented at the National Reading Conference, Orlando, FL, 2008. Both papers are available from the authors upon request (Jessica Dockter at dockter005@umn.edu or Cynthia Lewis at lewis@umn.edu).
go deeper.” It’s kind of like you are digging a hole and you’re planting something.

She hands out more questions, and she asks questions that most people wouldn’t ask so that you can, like, look at different parts of it, and she has students say what they think ... and then everybody says something different and then you, like, look past what you think.

This notion of going deeper reflects the curriculum goals, but also stems from a particular disposition of the teacher and a goal to “create thinkers.” Although students joked in focus groups about having to rewrite papers and start projects again, they also indicated that they would not change this about their teacher or their class.

Believing in and Respecting Students. The students’ perceptions of the intellectual challenge of the course and the prospect of hard work go hand in hand, we found, with the teacher’s belief in and respect for the abilities and identities of her students. When we asked students why they felt the teacher had pushed them so hard in the course, several of them described her understanding that they could “do more” than had previously been expected of them. One participant shared:

I think she’s tough on us because she knows that we can do more than what people probably have done in the past. So she’s trying to get that out of each individual student, to get their—the capability. I think that’s what she really likes, because she’s a pusher. She wants everything to come out through deep expression, feeling, you know?

This deep expression and feeling ties back not only to the curriculum goals of the course and the students’ responses regarding the course’s intellectual challenge, but also to what one student described as “pushing,” which meant that the teacher made her work beyond the point at which she would otherwise give up or felt she had completed a project. Another student stated:

I mean, she made you work. She’s not going to settle for less and she’s going to get the best out of you. I think that’s a good thing. But yeah it’s a real tough class. You’ve got to be there.

Here, this student implied that the rigor of the course and the teacher expecting—and getting—the best out of him meant having to “be there.”

The students’ perceptions were in keeping with the teacher’s intentions. Respect was key to this teacher, and she believed that the documentary film class provided the students a chance to respect their own abilities. As she put it:

When they get the camera and they get out there, they start to feel very powerful and they feel like they can actually participate, and it’s hard for teenagers to feel that way because they don’t ever get respect out in the real world.

As mentioned earlier, the school’s low status based on declining enrollments and test scores intensified the need for students to feel respected. The teacher’s keen sense of this broader institutional context served as an important backdrop to her strong belief that her students were intelligent, creative, and able to achieve. Her classroom talk often referenced the need for students to confound the expectations of others by challenging themselves to work harder and with more passion than they typically might in school. She told her students during the first week of school:

If your teachers let you do nothing and get a passing grade, you are being disrespected.... You shouldn’t be mad at me right now, you should be grateful because I expect something of you, because I know you can do it, OK?

She often explained to students that this class offered them opportunities not typical of most urban schools but rather more akin to the kind of course offered in suburban schools, thus using that institutional context to propel the push and the tough stance that the students referenced in interviews.

Authentic Audience and Feeling Competent. As mentioned earlier in this article, a significant aspect of the documentary film class revolved around producing products for authentic audiences. Not only was this a motivating factor for the final films, but it also played out in students’ interactions with community members and in their desire to represent themselves and their school in positive ways. Students indicated that having an outside, real-world audience view and critique their work allowed them to display their competence and demonstrate their abilities to those who had perhaps, at other times, dismissed them as apathetic and incapable of complex thinking. In interview responses, students stated:
Well in a film, you feel like you are just letting it out in a different way [from writing] ... You expect what you’re trying to send out to the audience to actually come out and alter their different senses so they can react from it. In writing it’s very different—it’s just brain stimulating.

[The podcast] was motivating because it was very exciting and I wanted it to be just about perfect because it was going on the Internet. You want to try and do your best if it’s going to be on the Internet because you wouldn’t want something to be—you wouldn’t want to embarrass yourself.

Ms. [teacher’s name], she’s a very good motivator. She motivated me about this class. Just the thought about what’s going to come out in the end of it—just thinking about, “Oh, when the movie is done, what if I go into a film festival? What if I won an award?” I can show this to a college, and maybe I can get a scholarship ... I’ve been thinking about that a lot; maybe I could use this movie. I could put on my transcript that I’ve taken literature and film ... I can tell that I made a movie. Then I can send them the movie and they can see what kind of good work I do.

Photo courtesy of Delainia Haug

Students chose their own topics for the film projects, and often their focus would shift as they gathered and analyzed footage together.

Audience meant something different for each of these students, but they communicated in their own words how the film project allowed them to demonstrate competence and change the way outside viewers think about issues, as well as the students themselves.

Agency, Identity, and Interests. A final theme that emerged from students’ interviews was the significance of agency (students’ capacity to act and make choices), identity, and students’ interests. Each of the topics for the final films developed from students’ concerns in their families, communities, school, and lives. One student, for example, made connections across texts and assignments to her own life. Recalling her reading of Brent Staples’ essay, “Black Men and Public Space,” she articulated the impact of the piece on her film project (living with disabled family members) and her own experience as a teen mother. She stated:

You can’t predict everything. You can’t, because we were predicting bad about this man ... He wasn’t even a bad person. He was a regular, nice man that was in the Army and we predicted everything. Like how they predict [about] the disabled kids. Like something’s really wrong with them, but when they get to know them, they’re just like us. They’ve just got something different, and ... people just judge me a lot in this world, and it’s crazy. Like when people say, you’ve got a baby already and you’re only 16. If that’s what I wanted to do—I didn’t try to, but it happened, so I can’t change it now. And then, like, so I don’t care what people say no more.

As a young African American woman, the article challenged her to question her own assumptions about the Black man she read about, while also pushing her to challenge others’ assumptions through the products she created. In this way, the texts, projects, and students’ identities aligned in critical and creative ways to empower students as both consumers and producers of media.

We also found in our observations and interviews across each of these themes that the teacher used language that represented her students as strong and able to act in the face of disempowering discourses related to the school’s marginal status and the perception of the students as “at risk.” In interviews, students responded positively to
the teacher’s consistent and frequent language about rigor and imagination, the responsibility to take up opportunities often not available in underresourced schools, the pride of showing others what you can accomplish (especially those who do not believe in you), and the importance of having passion for issues and ideas. Each of these, along with the critical and creative goals of the course, suggested to students that they had the resources, skills, and passion to contest negative public and community discourses related to urban schools and poverty.

Redefining Academic Rigor: Critical (Media) Literacy

Given an increasingly visual and global culture, young people must develop the capacity for critical citizenship so that they can “read” the linguistic, visual, and aural signs and symbols that inundate their lives, both public and private. Preliminary findings from our study indicate, we believe, the need for English/Language Arts curricula in urban classrooms that actively involve students in the production of knowledge through complex literacy tasks, such as:

- critical analysis of media related to students’ identity negotiations;
- digital media production for authentic audiences of peers and adults in the community;
- patterns of classroom interaction to communicate high expectations and accountability to the classroom community; and
- detailed and rigorous feedback at critical moments to support student learning and the belief in their own capacity to achieve.

Each of these tasks must be accompanied by new definitions of what can be considered a text and new ways of responding to texts using digital tools. More and more, youth expect that the texts they read will serve the purposes they imagine themselves as allies in antiracist and social justice work. Therefore, the teacher’s consistent and frequent language about academic rigor and imagination, the responsibility to take up opportunities often not available in underresourced schools, the pride of showing others what you can accomplish (especially those who do not believe in you), and the importance of having passion for issues and ideas means more access to what Jenkins called participatory culture.

A course such as this one required a considerable amount of work on the teacher’s part, as well as a consistent belief that her students would respond to academic rigor that challenged and supported their talents and abilities with real-world consequence for their success. Other educators interested in a similar curriculum focused on digital media production must consider available resources and time, as the teacher we studied wrote several grants each year to obtain funds for needed technology. Additionally, we believe strongly that such a curriculum was successful because the teacher viewed technology as a vehicle to students’ critical engagement, not as an end in itself. Based on our active involvement as participants and observers in this classroom, the school principal (at the urging of the teacher and a dean) asked us at the end of our study to direct the university part of a partnership between the high school and the University of Minnesota. We have helped to start a small learning community, initiated in the fall of 2009, that focuses on a college preparatory curriculum through the use of digital media analysis and production in four core subject areas. Teachers and University partners in the program work as a team to create interdisciplinary multimedia projects at each grade level to encourage authentic learning and real world application of skills and knowledge across the curriculum. Our aim was, and continues to be, to increase student engagement and achievement in a high-poverty urban high school, with the goal of using best practices to promote educational equity and relevancy. Through this new program, we hope to engage diverse students in rigorous reading, writing, critical thinking, and creating through the use of digital media for authentic purposes and audiences.

Jessica Dockter is a Ph.D. candidate in literacy education in the Department of Curriculum and Instruction at the University of Minnesota. Her research focuses on how literacy practices shape white racial identities with an interest in helping white students imagine themselves as allies in antiracist and social justice work. Cynthia Lewis is professor of literacy education and director of graduate studies for the Department of Curriculum and Instruction at the University of Minnesota. Her research focuses on the social, cultural, and critical dimensions of literacy, particularly related to social identities, digital media, classroom discourse, and learning.

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It was a hot and humid Labor Day morning. Across the United States, people were making the most of the last days of their summer vacations by heading to the beach, grilling in their yards, and shopping for school supplies. In St. Paul, Minnesota, however, Republican Party delegates were gathering for the Republican National Convention (RNC) and to confirm Arizona Senator John McCain as their presidential candidate.

A few blocks away from the convention center, crowds gathered outside the Minnesota State Capitol, assembling for what organizers predicted would be the largest demonstration of the four-day convention. The event did not disappoint: the St. Paul police estimated that 10,000 people marched from the capitol to the convention center to express their opposition to the war in Iraq and their nonsupport for candidate John McCain.1 Before the march, we sat at Key’s Café, the restaurant a few blocks from the state capitol that the owners had graciously allowed us to use as the headquarters for our team of surveyors. By noon, a line of police sport-utility vehicles was idling at the blocked-off parking meters that lined the sidewalk next to the cafe. Soon after, police officers emerged from the vehicles and began to don riot gear. Although somewhat jarring, the officers’ preparations were not surprising: The previous weekend, several members of the facetiously named RNC Welcoming Committee had been arrested in home raids in Minneapolis and St. Paul, and police were anticipating the possibility of violent confrontations with them.

Rewind a week, to the Democratic National Convention (DNC) in Denver, Colorado, where Democratic Party delegates had gathered to confirm Illinois Senator Barack Obama as the Democratic candidate for president. The opening protest was held on August 24, a day before the convention was to begin, when a small crowd of approximately 300 activists gathered outside the Colorado State Capitol for an event organized by “Recreate ’68,” a group that hoped to recapture the spirit of the protests that occurred outside the 1968 Democratic National Convention in Chicago. Small protests and other events continued throughout the week, led by groups such as World Can’t Wait and Students for a Democratic Society. Police maintained a constant presence, making some arrests in response to small disturbances. The largest and most well-organized protest event was organized by Iraq Veterans against the War (IVAW) and took place on Wednesday, August 27. IVAW had worked closely with the police and other activist groups as well as with the musical group Rage Against the Machine (RATM) to plan their event. Following a free concert by RATM, IVAW led a march of approximately 5,000 people to Denver’s Pepsi Center. At the conclusion of the protest, several IVAW members were granted a meeting with representatives of Democratic presidential nominee Barack Obama.

The preceding scenes will be familiar to anyone who has attended a political or protest event in the last several decades. Marches, rallies, and other forms of protest have become somewhat normalized since the height of the movements of the “long 1960s,” as have conflicts between participants in protest activities and the police. Although such events and conflagrations are a regular feature of the American political landscape, political scientists have devoted scant attention to examining political protest in the United States or understanding the reasons why, among the many outlets available to them for political dissent and expression, some people choose to protest. To answer this question, we collected information at the 2008 national conventions in Denver and St. Paul and compared the protesters at the two events.

A confluence of factors—including low levels of presidential approval; the

1 Police and organizer estimates of protest attendance are notoriously contentious, with organizations generally claiming that official counts are too low. These protests were no different; organizers estimated far larger crowds—between 20,000 and 50,000 people—participated in the march.

A Tale of Two Cities: The 2008 National Party Conventions Study and the Politics of Protest

by Dara Z. Strolovitch, Joanne Miller, Michael T. Heaney, and Seth Masket
salience of and intraparty divisions over issues such as the war in Iraq, immigration, and the brewing financial and mortgage crises; differences in the civic and political environments of the host cities; and the dynamics of each party’s nomination processes—made the 2008 conventions particularly ripe for examination and provided a unique and exciting opportunity to illuminate critical questions about political protest. In addition, the Democratic Party saw the closest presidential nomination race in modern history. Not only did the contest involve all the state primaries and caucuses as well as the superdelegates, but it was the first to feature both an African American man and a White woman as the two major contenders for a major party’s presidential nomination. The 2008 Democratic primaries were also widely considered to be among the most acrimonious national nomination contests in the modern era. According to a late March 2008 Gallup poll, 28% of Hillary Clinton’s backers said at that time that they would support the Republican in the general election rather than vote for Barack Obama. The Republican Party, on the other hand, experienced a far less controversial nomination process, with John McCain clinching the nomination just two months after the first contests. Although McCain’s nomination was considered all but certain before the nominating convention, the Republican Party faced other challenges, including record-low approval ratings for then-President George W. Bush and growing dissatisfaction with Republican management of the wars in Iraq and Afghanistan and the U.S. economy.

The combination of these and other factors stimulated many questions. Would significant numbers of Republicans be so frustrated with their party that they would vote for a Democrat in the general election, or perhaps sit it out? Would Clinton supporters break with their party and actively protest its nominee Barack Obama? Would excitement about the Obama nomination lead many of those who might have otherwise protested at the DNC to express their concerns about the ongoing wars and the worsening economy to instead lend their support to his campaign?

To explore the research opportunities highlighted by the foregoing questions, we designed a unique two-part study: the first component consisted of a survey of protesters at each convention, and the second component was a survey of delegates to each convention. This article describes our findings from the protestor survey. The research upon which this article is based was supported in part through a grant from CURA’s New Initiative program. Additional funding was provided by the National Science Foundation.

Study Methodology
To conduct the study, we hired two teams of student surveyors—16 in Denver and 46 in St. Paul—and trained them to use a sampling technique modeled on a procedure similar to one employed by media outlets to conduct exit polls. In brief, each surveyor looked out into the crowd at a protest event and identified a person at random without concern for age, gender, race, or other personal characteristics. The surveyor did not survey that initial person, but instead, using that person as an “anchor,” counted five persons to the right or the left of the anchor and invited this fifth person to participate in the study. The surveyor approached the potential respondent and said, “I am conducting a survey of the people participating in today’s event. The survey will take about 15 minutes to complete. Would you like to fill one out?” If the respondent declined, the surveyor thanked the individual and moved on to the next potential respondent. After conducting the first survey, the surveyor then counted five people to the right of the initial respondent and invited that person to participate, repeating this process until three people had completed the survey. Then, the surveyor selected a new anchor and repeated the procedure. Surveyors noted the race and gender of each person who declined to participate on nonrespondent sheets so that we could estimate response rates for each survey. Although there may be biases in the initial selection of the anchors because of the spatial grouping of activists, selecting individuals close to the anchors rather than the anchors themselves and distributing the surveyors widely throughout the crowds substantially reduces these biases.

We spread out the surveying process over the course of each of the four-day conventions to avoid biasing our sample based on the idiosyncrasies of which protesters attended a protest on a specific day or time (we also conducted surveys on the Sunday prior to the RNC but not on the Wednesday during the DNC, when no protest events were scheduled). We also surveyed attendees at a rally for Texas Congressman and Republican presidential candidate Ron Paul in St. Paul and at events for Independent presidential candidate Ralph Nader in both Denver and St. Paul. Both Nader and Paul are notable, in part, for being strong antiwar advocates on the left and right sides of the political spectrum, respectively. Both have cultivated a strong personal following of people dissatisfied with the Democratic and Republican parties. Nader had launched previously unsuccessful bids for president as a member of the Green Party, and Paul ran in the Republican primary in 2008 and has a strong following among self-described libertarians. As outspoken critics of the two-party system in general and the Iraq War in particular, we surmised that the Paul and Nader events would attract attendees who were also likely to be protesting at either the RNC and the DNC.

The survey instrument was five pages long, and took approximately 15 minutes to complete. It included a range of multiple choice, short answer, open-ended, and agree/disagree questions about the ways in which respondents were participating in the convention, their motives for participating, their attitudes about politics, and their demographics. We collected information from 412 respondents in Denver and 990 in St. Paul, for a total sample of 1,402 respondents. The combined response rate for the two surveys was 73% (the individual response rates were 65% for the DNC survey and 77% for the RNC survey).
Results: A Portrait of Two Protests

Based on survey responses, 62% of the protesters in Denver lived in the city of Denver and 75% of the protesters in St. Paul lived in the Twin Cities. The confluence of factors described earlier suggests a host of reasons why people might have participated in protests at the 2008 conventions, including support for or opposition to a range of issues associated with the war on terror, support for or opposition to immigration reform, and support for or opposition to a particular candidate. Although people turned out for these and many other political reasons, it is important to note that, even in the context of the heated environment of the 2008 election season, not all of those assembled near the convention sites intended to engage in protest behavior. Many of those assembled in the environs of the convention venues were there not to participate in marches and rallies but rather to gather at “observer galleries” where they could, for example, observe the scene, cheer the delegates, sell water, or listen to music. Given that the unpopular incumbent president was a Republican, however, it is not surprising that the DNC in Denver drew far smaller crowds than did the RNC in St. Paul, and that a smaller proportion of those assembled outside the DNC intended to participate in protest-related activities (Figure 1).

Whereas 81% of respondents in St. Paul reported that they were at the Republican convention to protest, only 58% of those in Denver said they were there for that reason. Approximately 11% of those who said they planned to protest intended to do so at both conventions. For Denver respondents, this was aspirational, but for the 10% of protesters who gave this answer in St. Paul, it was likely true (because the DNC convention was the prior week). Our discussion below focuses on the subset of respondents who indicated that they intended to protest at one or both conventions.

**Demographic Characteristics.** In addition to differences in respondents’ reasons for assembling in each of the two cities, several demographic differences also distinguished the protesters in Denver from those in St. Paul. Some of these differences reflect the racial and ethnic compositions of these two metropolitan areas. For example, mirroring the populations of the Denver and Twin Cities regions themselves, a statistically significant larger proportion of the protesters at the DNC in Denver were Latino (10.6% at the DNC, 4.87% at the RNC), whereas a statistically significant larger proportion of those at the RNC were White (83.87% at the DNC, 88.54% at the RNC) and African American (1.84% at the DNC, 5.01% at the RNC). The differences in percentage of Asian Americans (2.76% at the DNC, 1.84% at the RNC) and American Indians (2.76% at the DNC, 3.56% at the RNC) were not statistically significant between the two groups.

Protesters at both conventions were more likely to have obtained a college degree than were the residents of the two metropolitan areas. Specifically, whereas 35.6% of Denver residents 25 years of age and older have a bachelor’s degree or higher, 53.52% of the protesters in that city had a bachelor’s degree. Similarly, whereas 36.3% of Twin Cities residents 25 years of age and older have a bachelor’s degree or higher, 60.33% of RNC protesters had college degrees.2 (Note, however, that there are differences between the residents of Denver and Twin Cities and the general U.S. population, among whom only 26% over the age of 25 have bachelor’s degrees.)

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Once or twice a month  Almost every week  Every week

less straightforward (Figure 2). On one another, the differences between the two conventions are marked, with the general population, of which only 22.7% never attend religious services and 31.7% attend services every week or more, according to the 2006 General Social Survey.

We also observed some notable similarities in the gender, age, and employment status of the two groups. Among DNC protesters, 51% were male, compared to 47% of the RNC protesters, although this difference is not statistically significant. The median age of the RNC protesters was 35 years old and the median age of the DNC protesters was 31 years old, compared with a median age of 36.7 years for the general population.

Among DNC protesters, 51% were male, compared to 47% of the RNC protesters, although this difference is not statistically significant. The median age of the RNC protesters was 35 years old and the median age of the DNC protesters was 31 years old, compared with a median age of 36.7 years for the general population, based on U.S. Census Bureau estimates from the 2006–2008 American Community Survey. Almost equivalent proportions of the RNC protesters (67%) and the DNC protesters (68%) were employed either full or part time. In both cities, their figures are higher than the 60.7% of those 16 years and older who are employed in the general population.

The differences between the religiosity of protesters in the two cities were less straightforward (Figure 2). On one hand, a statistically significant greater proportion of DNC protesters in Denver, 55%, said that they never attend religious services, compared with 47% of RNC protesters who gave this answer. However, among the DNC protesters, a statistically significant larger proportion said they attend religious services every week (14%, compared with 10% of RNC protesters). Protesters at both conventions are less religious than the general population, of whom only 22.7% never attend religious services and 31.7% attend services every week or more, according to the 2006 General Social Survey.

Other differences mirror the cities’ dissimilar cultural and political environments. For example, reflecting Minnesota’s relatively strong union environment, a statistically significant larger proportion of the RNC protesters were from union households (34% of RNC protesters, compared with 25% of DNC protesters). However, in light of the fact that approximately 17% of the general population was from union households (in 2004) and that only 12.4% of all wage and salaried workers were union members in 2008, it seems clear that unions turned out members at high rates at both conventions. Similarly, reflecting the Twin Cities’ status as a gay/lesbian/bisexual/transgender (GLBT) hub in the upper Midwest, protesters at the RNC were more likely to identify as gay or lesbian (17%) than those at the DNC (10%), a difference that is statistically significant. Although estimates of the percentage of the American population that is GLBT-identified vary quite widely, gay/lesbian/bisexual-identified comprised 4.8% of American National Election Study respondents in 2008 and 2.7% of General Social Survey respondents in 2008, suggesting that, once again, the differences between the two groups of protesters are less marked than those between the protesters and the American population more generally.

The differences between the religiosity of protesters in the two cities were less straightforward (Figure 2). On one hand, a statistically significant greater proportion of DNC protesters in Denver, 55%, said that they never attend religious services, compared with 47% of RNC protesters who gave this answer. However, among the DNC protesters, a statistically significant larger proportion said they attend religious services every week (14%, compared with 10% of RNC protesters). Protesters at both conventions are less religious than the general population, of whom only 22.7% never attend religious services and 31.7% attend services every week or more, according to the 2006 General Social Survey.

We also observed some notable similarities in the gender, age, and employment status of the two groups. Among DNC protesters, 51% were male, compared to 47% of the RNC protesters, although this difference is not statistically significant. The median age of the RNC protesters was 35 years old and the median age of the DNC protesters was 31 years old, compared with a median age of 36.7 years for the general population, based on U.S. Census Bureau estimates from the 2006–2008 American Community Survey. Almost equivalent proportions of the RNC protesters (67%) and the DNC protesters (68%) were employed either full or part time. In both cities, their figures are higher than the 60.7% of those 16 years and older who are employed in the general population nationwide, based on data from the 2006–2008 American Community Survey.

Political Characteristics. Our survey data also demonstrated some notable partisan differences between the two groups of protesters. Although majorities of protesters at both conventions identified themselves as Democrats, more of the DNC protesters identified as Republicans (15%) than did the RNC protesters (2%), a difference that is statistically significant (Figure 3). Ideological differences similarly distinguished each group. Whereas majorities of protesters at both conventions identified themselves as liberal, the DNC protesters were more likely to identify themselves as conservative than were the RNC respondents (18% compared to 3%), a difference that is statistically significant (Figure 4). According to the 2008 American National Election Study, 29% of U.S. adults identified as Republicans and 51% identified as ideologically conservative.

The fact that a large majority of the protesters at the Republican convention were Democrats or liberals is not surprising. However, the fact that a majority (albeit a smaller majority) of protesters at the Democratic convention were also Democrats or liberals was somewhat counterintuitive. We suspect that this finding reflects a combination of four factors:

- the liberal ideology and “protest” roots/culture of several Democratic party constituencies (i.e., that outsider activities such as protesting are more typical forms of political behavior among Democrats/liberals than among Republicans/conservatives);
- the strong anti-administration and antiwar attitudes among liberals and
Democrats, and the consequent desire to take any opportunity to express those views on a national stage; dissatisfaction among liberal Democrats with the Democratically controlled Congress’ handling of the Iraq war and the economy since it took control in 2006; and residual dissatisfaction among Hillary Clinton supporters with the nomination of Barack Obama.

Interestingly, DNC protesters were more likely to be members of political organizations (64%) than their RNC counterparts in St. Paul (56%), a difference that is statistically significant. This finding may reflect the fact that the DNC protests were more centrally organized; event information was communicated to individuals largely through political organizations, and many political groups organized bus trips for their members to attend the protests. Protesters in both cities, however, were more likely to be members of political organizations than are members of the general population (48%).

**Attitudinal Characteristics.** Given the demographic, partisan, and ideological differences between the two groups of protesters, we wanted to explore if they held different political beliefs. When we asked DNC and RNC protesters about their attitudes toward government, we found that RNC protesters expressed more confidence in the U.S. system of government than did DNC protesters (i.e., they expressed higher levels of agreement with the following statements: “elections are effective at bringing about constructive policy change,” “elections are effective at holding leaders accountable for the decisions they make in office,” and “the 2008 presidential election offers a real choice among competing candidates”) (Figure 5). RNC protesters also expressed more trust in “other people” than DNC protesters, and they also agreed more strongly that women and African Americans face workplace discrimination (these differences are all statistically significant). DNC and RNC protesters did not differ in their support for third parties, their views about grassroots protests, and their views about their ability to participate in political activity. DNC and RNC protesters also expressed similarly strong levels of agreement in assessing how often politics make them feel anxious, hateful, and frustrated.

**Motivations for Protesting.** As we suggested previously, individuals had many possible motivations for protesting at each of the 2008 conventions. We asked protesters at each convention about seven possible proactive or reactive reasons for their attendance (Figure 6). Taken together, the respondents’ stated reasons suggested some motivational similarities and differences between the two sets of protesters. A majority of both DNC protesters and RNC protesters said that they had attended the convention to express their “dissatisfaction with the current U.S. political system.” However, the proportion professing this “reactive” motivation was higher for the RNC protesters (74%) than it was for those at the DNC (62%). RNC protesters were twice as likely as DNC protesters to report that they came to the convention “to help prevent a candidate from winning this year’s presidential election” (20% of RNC protesters, compared with 10% at the DNC). In contrast, compared with RNC protesters, DNC protesters were more likely to profess “proactive” motivations, including that they had come to the convention because it was their “responsibility as a member of a political party” (13% DNC, 7% RNC), “to hang out with friends.

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or make new friends” (18% DNC, 13% RNC), “to learn more about the political process” (15% DNC, 9% RNC), or “to help a candidate win this year’s presidential election” (14% DNC, 10% RNC). All of these motivational differences are statistically significant.

A total of 25% of RNC protesters compared to 18% of DNC protesters indicated that the most important reason they were attending the convention was to express their views on an issue or issues, although this difference is not statistically significant. Not surprisingly, a majority of those who claimed to be motivated by an issue mentioned they came to protest the war in Iraq (60% of DNC protesters and 68% of RNC protesters; this difference is statistically significant). Protesters at the DNC, however, were slightly more likely than those at the RNC to say that they came to the convention to support the troops (3% DNC, 1% RNC; this difference is not statistically significant).

Although these motivational differences are not surprising given the differences between the two major parties, examining these variations begins to illuminate the dynamics of political dissent and the ways in which protest activity can be motivated by different reasons depending on the context of the event. Specifically, the proactive nature of the motives of the (largely Democratic/liberal) protesters at the DNC reflected their desire to reinforce their party’s agenda and help to ensure that their candidate would be elected. In contrast, the reactive nature of the motives of the (also largely Democratic/liberal) protesters at the RNC reflected their desire to express strong disapproval with the direction the country had taken during the eight years of a Republican administration, and to work to prevent that party’s candidate from being elected.

Future Directions

Although preliminary, the similarities and differences among the protesters at the 2008 Democratic and Republican National Conventions revealed in our analyses suggest some potentially intriguing implications for and characterizations of the contemporary politics of protest. Although people are more likely to engage in protests and rallies to express dissatisfaction, few intend their activities to be disruptive, and many participate in unconventional activities for affirmative reasons such as support for an issue or candidate. In addition, our analyses suggest some ways in which protesters are different from the general population and from those who participate in more conventional political activities. For example, protesters at both events were more likely than other Americans to identify as GLBT and to have college degrees. They were also much more likely than the general populations to be from union households and to be members of political organizations, suggesting that political involvement begets intensive forms of political activity. That even protesters at the DNC in Denver were almost twice as likely to be from union households than members of the general population suggests that unions continue to play a unique role in mobilizing their members and sympathizers. Although protests are no longer the exclusive territory of the

Figure 5. Protesters’ Attitudes toward Government

Note: These data were gathered using a 5-point Likert scale, where 1 = disagree strongly with the statement, 2 = disagree somewhat, 3 = neither agree nor disagree, 4 = agree somewhat, and 5 = agree strongly.
left, liberals and Democrats are more likely to express their dissent through such activities than conservatives and Republicans.

Although differences between the protesters we surveyed and the general population are pronounced, our results also suggest that the local civic and political environment affects the nature of protesters, even at ostensibly national events that take place within a single month. For example, Minnesota’s extraordinarily high levels of civic participation, political engagement, and politicization are reflected in the fact that RNC protesters expressed more trust in the political system (in stark contrast to previous research that has generally found that protesters tend to be less trusting of the political system), but were also more likely to believe that women and African Americans face workplace discrimination. This combination of trust in the system in general but dissatisfaction with specific policies or outcomes is a potent force that compels some to engage in unconventional forms of participation such as protesting, but to do so in a way that has the potential to be constructive, not violent or disruptive.

In future work, we will examine the “feedback effects” of political protest. For example, does political protest increase political knowledge, interest, and the likelihood of future activity? By comparing the data from the protester surveys with data from the survey of convention delegates that we conducted simultaneously, we will also be able to explore the relationships between social movements and party politics by examining what distinguishes “outsiders” who protest “in the streets” from “insiders” who engage in more conventional, but no less demanding, participation in partisan politics. In particular, we will examine whether liberal- and Democratic-identified protesters at the DNC were motivated in part by their belief that even the election of a Democrat would not produce significant changes.

Dara Z. Strolovitch is associate professor of political science at the University of Minnesota. Her research and teaching focus on interest groups and social movements, political representation, the causes and consequences of American political inequalities, and the politics of race, class, gender, and sexuality. Joanne Miller is associate professor of political science at the University of Minnesota. Her research and teaching focus on the direct and indirect effects of the media on citizens’ political attitudes and the impact of psychological motivations on citizens’ decisions to become politically active. Michael T. Heaney is assistant professor of organizational studies and political science at the University of Michigan. His research and teaching focus on organizational processes in American politics and public policy, with particular attention to social networks, social movements, interest groups, and political parties. Seth Masket is assistant professor of political science at the University of Denver. His research and teaching focus on political parties, state legislatures, local party organizations, and electoral campaigns.

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In metropolitan areas throughout the United States, the benefits of urban growth contrast with concerns about the fiscal, environmental, and quality-of-life costs of that growth. The default form for most new development is suburban. The U.S. Census Bureau noted that 86% of the new privately owned housing units completed in 2007 were single-family detached residences (SFRs), which typify the suburban model. This model amplifies the costs of growth through the need for new infrastructure and the loss of open space. Replication of the suburban model continues, in part, because of standardization in finance, planning, development, real estate, and resource-production practices. After more than seven decades of suburban development, this model is embedded in the daily lives and imaginations of the population as well. Therefore, fostering support for alternative models remains challenging. Proposals for higher density, mixed-use, and compact neighborhoods are often met with opposition—especially in peripheral communities on the outskirts of developing metropolitan areas—despite their potential to reduce many of the costs of development and meet the growing interests of many stakeholders.

Recent market downturns have provided the opportunity for re-envisioning urban growth. Market downturns historically impact the periphery to a greater extent than other parts of the urban landscape, posing both challenges and opportunities for edge communities. As housing inventories throughout metropolitan areas increase, prices decline and buyers find...
they no longer have to trade longer commutes for less-expensive housing (i.e., “driving to qualify”). The time may be right for deeper conversations about alternative forms of development in peripheral areas, as communities look to the future and seek ways to ensure continued growth while avoiding the high costs of that growth.

Against this backdrop of change, we sought to understand housing dynamics on the periphery of metropolitan areas and develop tools to help communities manage change and envision sustainable futures. We focused on two cities in Dakota County, Rosemount and Farmington, to understand how well recent growth outcomes in these cities met the needs of existing populations. Each of these cities is in the final stages of adopting its 2030 comprehensive plan. We began by reviewing each city’s plan to see if projected plans for future development matched well with desired growth and the needs of prospective future populations, especially in light of recent shifts in the economy and housing market. We then developed a template for a community growth options toolkit to help policy makers and community members envision possible alternative development trajectories. The toolkit template includes two approaches for envisioning sustainable development. The first focuses on creating alternative long-term comprehensive land-use maps using geographic information systems (GIS). The second centers on a staged approach for educating and interacting with community members to build support for plans that include more walkable, livable, and affordable communities (see sidebar, p. 33).

This article reports on our investigations and our creation of the template for a community growth options toolkit. We give greatest attention to our findings and assessment of each community’s needs; the gap between these needs, current housing inventories, and plans for future development; and our development of alternative long-term comprehensive land-use maps. We also offer a brief outline of suggestions for strengthening public engagement and public support of alternative development models to help readers envision what the complete toolkit might look like. The development of the toolkit template described in this article was supported by a grant from CURA’s Community Growth Options (U-CGO) program.

**Methods**

We began our investigation with conversational interviews with the lead planners from Rosemount and Farmington to discern their understanding of development successes and their main concerns about each community’s needs in relation to future growth. To further develop our understanding of each city’s characteristics and possible issues, we gathered federal demographic data and county foreclosure and transit data. We conducted fieldwork to gain an understanding of how these two cities looked on the ground, and we examined current land uses in each city, as well as each city’s new long-range plans. We conducted an extensive literature review of development models, including the standard suburban model and its alternatives, and reviewed the literature pertaining to community outreach to assist us in developing constructive community education and interaction suggestions. We also examined the Twin Cities metropolitan area housing stock, seeking alternative forms of existing housing in older, denser neighborhoods in an effort to provide local examples that could be incorporated into the community outreach portion of the template.

**Cities on the Edge: Rosemount and Farmington**

Rosemount and Farmington are cities in Dakota County, south of the Twin Cities (Figure 1), that have seen two decades of rapid growth with its attendant benefits and costs. Each city experienced dramatic increases in population and new housing construction since the early 1990s. Each consists of a mix of subdivision tracts, neighborhood retail centers, and some campus-park and industrial employment centers surrounding older housing and struggling small-scale downtowns. Each community is also rimmed by agricultural fields separating it from nearby small towns and suburbs (Figure 2).

Rosemount and Farmington have both drawn on their “room-to-grow” appeal to market their cities. On their city websites, Rosemount boasts a community rich in undeveloped land, and Farmington similarly notes its abundance of new-growth housing areas. Moreover, each city has successfully attracted development and homebuyers. In the last two decades,
Figure 2. Map of Generalized Land Use, Rosemount and Farmington, 2005

Source: Twin Cities Metropolitan Council, Generalized Land Use, 2005
Rosemount has grown in population by 134% and Farmington has grown by 250% (Table 1). Rosemount added more than 4,500 housing units and Farmington added more than 4,800 units during that time period. For both cities, the majority of growth occurred in single-family homes located in very low density suburban development zones, which are characterized by homes with a mean square-footage of about 2,500 on lots of about one-third of an acre.

Rosemount and Farmington are largely commuter communities. Approximately 76% of each city’s working population has more than a 15-minute commute to work, suggesting that the majority of residents are leaving the area for their place of employment each day. Transit corridors such as I-35 and U.S. Route 52 connect these commuters from exurban Rosemount and Farmington to employment in Minneapolis, St. Paul, and Twin Cities suburbs via 25- to 35-minute average drive times.

In our conversations with the senior planner from each city, we gained insight into their community’s past growth dynamics and expectations for the future. Both planners described recent efforts to increase the number of multifamily units, while noting that multifamily development is difficult because developers on the periphery prefer to build SFRs. Furthermore, they indicated that communities are wary of higher density development, preferring to maintain a perceived “country” image. However, each planner was concerned about a dearth in housing inventories, because they foresaw an imminent increase in their aging populations and expected declines in family household size. They were unsure if empty nesters would choose to age in place and shared a concern about the inability to attract young single professionals to their cities.

Some differences between the two communities emerged against this larger backdrop of shared concerns. Rosemount’s planner felt that rental apartments should be built to attract young professionals, suggesting that units located near stores and bars could bring younger residents back to the community after college, or keep them in the area as they leave their parent’s homes. Farmington’s planner also saw a need for rental apartments for these young professionals, but expressed a need to appeal to an even broader population with multiunit rentals by appealing to the growing number of lower income immigrant households as well. The most significant difference between the cities related to developing agricultural lands. Rosemount’s planner did not see the city as an agricultural community, but rather envisioned it as a suburban city instead. Growth projections therefore considered agricultural lands, beyond those preserved in perpetuity through conservation easements, as developable. Farmington’s planner expressed a stronger desire to maintain agricultural activity, noting its economic importance and how it is integral to the city’s image. Two families control ownership of a substantial amount of farmland in Farmington and currently do not intend to sell or develop their properties. The sustainability of this form of preservation is fragile, however, so it is conceivable that both Rosemount and Farmington will actively develop their agricultural areas in the future, despite a difference in ideology.

Today, both planners indicated that development activity had substantially declined, and each saw this loss of development interest as an impediment to their ability to guide growth in their respective communities. For example, a Rosemount subdivision has placed development of hundreds of SFR units on hold because 200 completed homes remained unsold. In Farmington, the number of new housing construction permits under review was 14 in mid-2008, down from a peak of 645 in 2005. The planners noted that their larger goals to develop housing to meet demographic and housing challenges will remain difficult to achieve. Developers are awaiting market change and are less inclined to build nonstandard (e.g., nonsuburban) housing in a high-risk environment.

Beyond housing concerns, both planners acknowledged that commute times and traffic are disincentives for residents. Each city seeks to increase employment opportunities within their borders, which is a slow process. Commutes and traffic congestion will likely remain well into the future, in part because the addition of freeway lanes, park-and-ride sites, increased bus services, and even commuter-rail links

<table>
<thead>
<tr>
<th></th>
<th>1990</th>
<th>2007</th>
<th>2030</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rosemount</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>8,622</td>
<td>20,207</td>
<td>45,400</td>
</tr>
<tr>
<td>Housing units</td>
<td>2,866</td>
<td>7,431</td>
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<tr>
<td><strong>Unit type:</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>SFR (pct. of total)</td>
<td>87.0%</td>
<td>68.9%</td>
<td>54.6%</td>
</tr>
<tr>
<td>MFR (pct. of total)</td>
<td>13.0%</td>
<td>31.1%</td>
<td>45.3%</td>
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<tr>
<td>Housing unit size</td>
<td>—</td>
<td>2,247</td>
<td>—</td>
</tr>
<tr>
<td>(mean square footage)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lot size (mean acreage)</td>
<td>—</td>
<td>0.30</td>
<td>—</td>
</tr>
<tr>
<td><strong>Farmington</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>5,940</td>
<td>20,768</td>
<td>32,000</td>
</tr>
<tr>
<td>Housing Units</td>
<td>2,124</td>
<td>6,991</td>
<td>12,500</td>
</tr>
<tr>
<td><strong>Unit Type:</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>SFR (pct. of total)</td>
<td>79.0%</td>
<td>72.0%</td>
<td>64.0–68.0%</td>
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<tr>
<td>MFR (pct. of total)</td>
<td>21.0%</td>
<td>28.0%</td>
<td>32.0–36.0%</td>
</tr>
<tr>
<td>Housing unit size</td>
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<td>2,853</td>
<td>—</td>
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<td></td>
</tr>
<tr>
<td>Lot size (mean acreage)</td>
<td>—</td>
<td>0.46</td>
<td>—</td>
</tr>
</tbody>
</table>

Sources: Data compiled from U.S. Census, Rosemount 2030 Community Plan, and Farmington and Rosemount parcel data

Note: SFR stands for single-family residence, and MFR stands for multifamily residence.
are subject to funding and implementation decisions made at the regional and state level. Rosemount can offer an alternative to private-vehicle commuting, having access to a park-and-ride site and express-bus service, whereas Farmington lacks a designated park-and-ride site. In either case, the limited scope of bus service means that the needs of only a small percentage of each city’s population can be met by this alternative to the automobile.

In summary, the development of the past two decades has created problems for Rosemount and Farmington, but the planners argue that there has been little opportunity available to deal with them. Rosemount’s and Farmington’s previous comprehensive plans, which were completed in the 1990s and guided this recent and dramatic growth era, were more readily adapted to the standard practices of suburban subdivision development. For example, 72% of Rosemount’s land designated for residential development in their previous plan was zoned as 2.75 dwelling units per acre (du/ac), a typical suburban density. In that plan, mixed-use, a very compact and pedestrian-friendly alternative form of land use, was described as “not yet supported in the marketplace.” Amid the rush of interest from developers and homebuyers during the economic and construction boom of the past two decades, each city viewed alternatives to the standard suburban model as a risk. Would requests by city planners for nonstandard development deter developers more comfortable with building SFRs in low-density settings? Would buyers be deterred from buying nonstandard homes in the periphery? Because development equates to property-tax revenues, each city chose not to promote alternative forms of housing provision.

Overreliance on the suburban model is now implicated in many of the planners’ concerns about the future. Each city’s monochromatic landscape appeals to predominantly middle-income family households who prefer to reside in owner-occupied SFRs. This cohort is becoming smaller, however, and these peripheral cities lack the housing-stock diversity perceived as necessary to withstand future demographic shifts. Young professionals, seniors, and empty-nesters may not be interested in Rosemount’s and Farmington’s single-family housing stock. Cause for alarm increases in downturn markets as well. As the price of SFRs in closer-in communities decreases, there is greater competition for the smaller pool of family households as buyers choose to purchase homes closer to their workplaces in the urban core. Peripheral communities, meanwhile, lose some of the benefit of competitive home prices relative to closer-in communities, while still having the disadvantage of a long work commute.

2030 Comprehensive Plans

Our review of each city’s foreclosure data, in conjunction with demographic and transit data and our conversations with the planners, revealed another issue resulting from the rapid and suburban-style development that took place over the past two decades in Rosemount and Farmington. In addition to being monochromatic and plagued by traffic concerns, each city’s predominantly SFR landscape is also unaffordable for many, as indicated by the largely dispersed foreclosure activity (Figure 3). Smart-growth planning, which advocates for a greater variety of housing types and sizes in more compact settings, could help each city achieve its desired population diversity and housing affordability goals by shifting the trajectory of housing development from the suburban model to a more sustainable alternative. We examined the draft 2030 Comprehensive Plans for Rosemount and Farmington to determine if the existing challenges would be mitigated, and if the needs of future populations would be met, through more sustainable forms of development.

Each city drafted their new plans to include features of smart-growth development. For example, each city is seeking to increase development of multifamily residences such as townhomes, condominiums, and apartment buildings. Multifamily housing constituted 31.1% of Rosemount’s total housing stock in 2007, and its 2030 draft plan will increase the proportion to 45.3%. In Farmington, multifamily housing constituted 28.0% of the total housing stock in 2007, and its 2030 draft plan will increase the proportion to between 32.0 and 36.0% (Table 1). This increase in housing-type diversity will be achieved through changes in each city’s land-use zoning districts.

Rosemount’s and Farmington’s plans were crafted within the larger smart-growth framework promoted by the Metropolitan Council, a regional governing body that coordinates parks, sustainable transportation, and regional development. Rosemount will be achieved through changes in each city’s land-use zoning districts. Rosemount’s and Farmington’s plans were crafted within the larger smart-growth framework promoted by the Metropolitan Council, a regional governing body that coordinates parks, sustainable transportation, and regional development.
regional transportation, and community development. One Met Council goal is to manage peripheral growth by placing limits on the extent to which peripheral municipalities can expand services, such as sewer systems. This goal is guided by the Met Council’s Metropolitan Urban Services Area (MUSA). Although Farmington and Rosemount have adopted a more sustainable approach in their 2030 plans that includes an increase in multifamily units, they will still exhaust the land suitable for residential development within a few decades, requiring the conversion of more agricultural land for residential development.

In large part, this projected outcome results from the majority of each plan still being dedicated to the development of SFRs, in suburban-styled landscapes. Much of this planned development reflects densities that are still considerably low when compared with nearby cities such as Minneapolis. A low-density designation in Minneapolis is defined as 8 SFR du/ac or 4 to 8 duplex du/ac (Table 2). Low-density housing is defined as 1 to 5 du/ac in Rosemount and 1 to 3.5 du/ac in Farmington. In Minneapolis, the high-density housing designation, which is subdivided in terms of low-, mid-, and high-rise complexes, ranges from 16 to 100+ du/ac. In their 2030 draft plans, our study cities of Rosemount and Farmington propose only a low-rise high-density option of 10 to 24 and 12+ du/ac, respectively. If each city achieves only the low end of the range in each zoning category, the resulting low-density development will not reflect the type of housing diversity projected in new development paradigms such as smart-growth planning. Although the density standards for smart growth can vary, they are more akin to the City of Minneapolis’ density categories. Therefore, Rosemount’s and Farmington’s
zoning categories almost ensure that each city will reach their Met Council MUSA regulatory limit and fall short of their planner’s desires to provide for a diversity of household types.

Community Growth Options Toolkit Template
Our goal in this project was to provide a two-part toolkit template to civic leaders and planners in the peripheral cities of Rosemount and Farmington to help them overcome limitations in envisioning and implementing plans for more sustainable forms of development. The first part of the template is focused on developing alternative futures of growth, achieved through zoning changes that will allow for a greater diversity in housing types, sizes, and price ranges. The alternative zoning plans we created will promote a higher level of housing affordability, appeal to a more diverse and changing population, and withstand future economic shifts that impact economic development. Of particular importance are zones that encourage higher density ranges and mixed-uses in areas near commercial corridors, as well as zones for more compact neighborhoods composed of a mix of lot sizes and housing sizes and types.

We first describe the alternative mapping overlays we developed for Rosemount and Farmington, which offer a range of “fixes” to the long-term comprehensive plan as demographic and economic shifts warrant. We then briefly discuss what might be included in the second part of the template, which is still under development—namely, tools to help civic leaders and planners communicate the costs and benefits of different plans to the public while allowing the public to articulate their own ideas about development. Notably, the concerns and issues found in Rosemount and Farmington mirror those of many peripheral communities, so the toolkit template described below has relevance for both developing communities on the edge of the Twin Cities metro area and other growing metropolitan areas.

Part I: Developing Alternative Futures of Growth. In developing the first part of the toolkit template, we considered that the 2030 draft plans for each city have many features that each community values, but they also predominantly reflect a standard suburban model of growth, which could be problematic in light of the current economic trends, expected future demographic shifts, and MUSA limitations on development. Rather than suggesting the 2030 plans be permanently altered, we used map overlays to suggest the potential incorporation of more smart-growth alternatives.

A map overlay is the digital equivalent of a map that can be draped over an existing map, where some portions are transparent and allow the existing plan to be seen, while other portions of the new plan cover the existing plan. We developed three overlays for each city. Civic leaders and planners could incorporate into their plans the land use strategy suggested in the most appropriate overlay, on an as-needed basis, as economic and demographic trends dictate. By creating the overlays in advance, the cities avoid delays (drafting, community discussion, adoption) in implementing development as community needs or demographics shift.

At present, seeking project-by-project exceptions to a long-term plan zoning regulation can be done on a case-by-case basis, but this is often a time-consuming and costly process for the developer of smart-growth–oriented projects. The preapproved alternative zoning districts in the overlay maps, however, could be enacted immediately to encourage developers to consider producing these projects when asked, and peripheral cities can market the ease of this “exceptionless” process to attract even more smart-growth developers.

We drew upon current land-use data to develop a base map for each city, and the overlays we created used existing land-use designations, such as single-family dwellings or parkland, to ease the planning process. As noted above, each overlay retains much of each proposed 2030 land-use designation, but offers an alternative zoning designation for certain areas in each community. We have made suggestions for how the “residual” land (i.e., land that remains undeveloped by compacting development in another area of the city) can be utilized (e.g., added reserve land),

Table 2. Comparison of Densities for Land-Use Designations Used in Minneapolis, Rosemount, and Farmington

<table>
<thead>
<tr>
<th>Land-Use Designation</th>
<th>Minneapolis</th>
<th>Rosemount</th>
<th>Farmington</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural Residential</td>
<td>n/a</td>
<td>0.2 du/ac</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1 du per 5 acres)</td>
<td></td>
</tr>
<tr>
<td>Transitional Zone</td>
<td>n/a</td>
<td>0.2–3 du/ac</td>
<td>n/a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(1 du per 5 acres nonsewered, 1–3 du/ac sewer)</td>
<td></td>
</tr>
<tr>
<td>Low Density</td>
<td>Single-family: 8 du/ac</td>
<td>1–5 du/ac</td>
<td>1–3.5 du/ac</td>
</tr>
<tr>
<td></td>
<td>Duplex: 4–8 du/ac</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low-Medium Density</td>
<td>n/a</td>
<td>n/a</td>
<td>3–5.6 du/ac</td>
</tr>
<tr>
<td>Medium Density</td>
<td>Fourplex: 10–24 du/ac</td>
<td>5–10 du/ac</td>
<td>6–12 du/ac</td>
</tr>
<tr>
<td></td>
<td>Side-attached: 12–35 du/ac</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stacked townhome: 25–45 du/ac</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High Density</td>
<td>Low-rise: 16–80 du/ac</td>
<td>10–24 du/ac</td>
<td>12+ du/ac</td>
</tr>
<tr>
<td></td>
<td>Mid-rise: 26–120 du/ac</td>
<td></td>
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<tr>
<td></td>
<td>High-rise: 100+ du/ac</td>
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Note: du/ac stands for dwelling units per acre.
but each city is free to choose the most advantageous use. After our review of the smart-growth development literature, we developed three overlays representing alternative development scenarios, each of which is discussed below.  

Infill-First Scenario. The first scenario adopted the guiding principle of “infill-first,” which suggests that each city place higher density developments within already developed regions to produce housing that will appeal to young professionals and aging populations who seek smaller units in close proximity to existing amenities. Areas zoned for medium-density development near industrial or commercial land, along major corridors, or in the downtown area were converted to higher density designations. The suggested densities in these rezoned areas will not produce high-rises, as they could in Minneapolis, but instead result in low-rise complexes with 10 to 24 du/ac or 12+ du/ac in Rosemount and Farmington, respectively. The residual land, no longer needed as a repository of lower density SFRs, was re-envisioned as reserve land that joined existing natural resource areas, increasing each community’s green-space amenities. In Rosemount, this residual land also enabled the elimination of a proposed leapfrogging residential development in the eastern portion of the city. In sum, the first scenario focused on increasing density in already developed regions to increase land reserves and open space.

Expanded Higher Density Zone Scenario. The second scenario built upon the first by expanding higher densities out from the newly designated higher density zones near industrial and commercial, corridor, and downtown areas. In Farmington, we converted the areas surrounding the new higher density zones from low density to medium density and from low-medium density to medium density. In Rosemount, we applied this same pattern, converting low density to medium density when it adjoined our new higher density zones proposed in the infill-first scenario. In Rosemount, we re-established the proposed low-density development in the eastern portion of the city and applied the new residual land from this second scenario to produce larger reserve areas. In Farmington, this approach also achieved more open-space reserves than the approach in the first scenario. Overall, the second scenario used higher density to help achieve, to a greater extent, the goals planners expressed for a greater diversity in housing while also continuing to expand open-space areas throughout each city.

Maximum Proposed Density Scenario. The third scenario incorporated proposed 2030 land uses but adopted the maximum proposed density in each zoning category and eliminated the range of proposed densities. In Farmington, for example, the low-density range of 1 to 3.5 du/ac was converted to a zoning category of 3.5 du/ac, whereas in Rosemount the high-density category was converted from 10 to 24 du/ac to 24 du/ac. This scenario created a large reservoir of residual land in Farmington that eliminated the proposed leapfrogging residential development in the northeastern portion of the city and expanded the city’s existing open space reserve areas. In Rosemount, the leapfrogging development could not be eliminated, but we suggested using the residual land in this new development area for public infrastructure, such as schools and a local park, to reduce car trips within the city.

The three scenarios gave planners basic principles with which to extend their base 2030 plans: infill first in commercial and downtown areas, and along busier corridors; scale out from new higher density zones second; and third, replace ranges for proposed densities with the maximum density. Each city could adjust where the residual lands are applied and where conversions might take place. The benefits of these three models were measurably identifiable on each proposed overlay map in given locations: although overall the diversity in housing sizes and types was increased, open spaces were created, environmentally sensitive areas were expanded and preserved, gaps in developed areas were filled, and disconnects in development were reduced or eliminated (Figure 4).

Importantly, each alternative land-use scenario enumerates advantages that can be tailored to specific goals and concerns. For example, the alternative forms of new residential development will meet the needs of today’s young professionals, empty nesters, and aging households, ensuring continued demand for homes in Rosemount and Farmington, and thereby ensuring continued growth and investment. More housing choice also equates to greater affordability for a diversity of households. Other economic benefits to the city could be realized as a result of decreasing the need for new infrastructure in previously undeveloped areas (greenfields). Because infill projects concentrate on already-developed areas, they reduce each city’s responsibility to provide expanded sewer, water, electric, road, and sidewalk networks. Eliminating expanded and sprawling development also reduces the need to expand school, police, and fire services. Although all of these benefits improve the quality of life for residents in each city, green-space expansion also reduces...
Figure 4. Alternative Scenario Map for Farmington

- Commercial
- Industrial
- Low Density
- Low Medium Density
- Medium Density
- High Density
- Mixed Use (Commercial/Residential)
- Park/Open Space
- Public/Semi-Public
- Restricted Development
- Urban Reserve
- New Reserve (Scenario 1)
- New Reserve (Scenario 2)
- New Reserve (Scenario 3)
The community growth options toolkit template is envisioned as a planning guide that includes two models: one for developing smart-growth land-use map overlays using GIS, and another for effective community education and interaction around the issue of smart-growth development.

**Map Overlays:** Map overlays are digital equivalents of a map that can be draped over an existing community map to demonstrate how different land-use designations can impact community growth patterns. These overlays can be used to show alternative zoning configurations in conjunction with a city’s comprehensive plan to create the variety of housing types and sizes necessary to meet shifts in the economy, household types, and housing preferences. The overlays can be used to demonstrate benefits of alternative forms of growth, such as:

- **A smaller residential development footprint.** A smaller footprint increases the potential for affordability, helping to maintain the viability of the community in downturn markets, as well as increases the opportunity for pedestrian landscapes, reducing infrastructure costs and the cost and stress of commuting.

- **Preservation of agricultural land and open spaces.** Increased open spaces increase the opportunity for local agriculture, recreational amenities, and preservation of species and habitats.

**Community Education and Interaction Tools:** These tools are strategies to assist civic leaders and planners in educating community members about the costs of various forms of development, the needs of the community, and the long-term sustainability of the community. Planners can draw on local and nonlocal data (such as municipal costs of infrastructure development and maintenance, demographic data, housing inventories and value data, foreclosure data, and environmental resource information) to educate communities about the true costs of conventional, suburban-style development. Planners can also provide opportunities for community members to consider the benefits of infill, new-urbanist, and older compact neighborhood designs.

First, we suggest seeking ways to clearly define the costs of suburban development strategies. For example, a city may wish to “open the books,” so to speak, by letting community members know the cost of producing new infrastructure (such as roads, sewers, and sidewalks) versus maintaining existing infrastructure. The academic and planning literature include numerous studies that provide cost comparisons for infill, mixed-use, new-urbanist, and suburban-greenfield projects.

The literature also extensively covers other costs, such as commuting and environmental costs, that civic leaders and planners can present in an interactive community meeting. We recommend drawing on examples from the literature that mirror characteristics in the presenting community and using the alternative maps created in part I of the toolkit to demonstrate the appeal of an alternative. For example, when discussing the time and operational costs of commuting, civic leaders and planners can indicate how a mixed-use project in an area rezoned for higher density development can house neighborhood stores, reducing the time and gasoline expense associated with traveling outside the community to make purchases.

Civic leaders and planners can also use an analysis of a city’s foreclosure data to demonstrate the need for a variety of housing sizes and types. Civic leaders and planners can show residents what constitutes the current housing stock and how this monochromatic stock can be impacted in a market downturn through the use of maps showing foreclosures in the community. Presenters can exhibit payment options on a variety of housing prices to demonstrate what diversity might look like in terms of affordability, and can supplement the discussion with images of alternative housing options.

Another useful approach is to offer an introduction to new models of development, such as new urbanist and mixed-use infill projects. Civic leaders and planners can use images of proposed and completed projects available from around the country to familiarize community members with how these projects look and what amenities and benefits they provide. Presenters can supplement the discussion with a dialogue about how communities altered their zoning codes to accommodate such projects, drawing details from the adopted plans described and available for review on the Congress of New Urbanism’s website (www.cnu.org/search/projects).

Although numerous national examples of new-urbanist and mixed-use infill projects exist, alternatives such as townhomes, patio homes, and condominium complexes also provide alternatives to the SFR. Civic leaders and planners can present images of such developments from neighboring communities in the area. Presenters can address concerns about density by clarifying the difference between density categories in peripheral areas and more urban areas, and by demonstrating how a mix of SFR sizes can mitigate concerns over higher densities via smaller lot sizes. For example, when we searched the parcel data for the city of St. Paul, we found numerous smaller homes on smaller lots in older neighborhoods, with home sizes ranging from 588 to 2700 square feet on some streets. Images of these well-established...
and charming communities could serve as examples in community meetings, assuaging fears about mixed-size homes in diverse compact neighborhoods. Civic leaders and planners could even consider arranging a tour of these neighborhoods in nearby communities.

Civic leaders and planners also need to reinforce the significance of housing affordability in the face of projected demographic shifts, explaining how this will impact their community by making it more or less desirable to new buyers. When discussing demographic shifts, presenters can refer to the alternative housing forms mentioned above and discuss why these types of homes might appeal to diverse households. Presenters can ask residents to envision members of their community or household as potential occupants of the various housing types. For example, a condominium in a mixed-use complex, which is likely to be appealing to a young professional just getting started in the working world, can be envisioned by a parent as a place that enables a grown child to remain in the community. Similarly, a community member can envision the privacy and proximity of a small patio home as a place for an aging parent to dwell that is near family.

In our brief outline for part II of the toolkit template, we have suggested ways that civic leaders and planners can engage with members of the community in a comprehensive discussion about the true costs of continuing to build in accordance with the suburban model. Effective methods for communicating economic, environmental, and quality-of-life costs of past building practices are readily available in the literature, but we encourage civic leaders and planners to draw upon their own data (foreclosure, demographic, commuting, housing inventories) as well. We also propose using the GIS-based maps we developed in part I of the toolkit to visually demonstrate important points about costs and benefits of building a variety of housing types and sizes. The maps can demonstrate to community members how areas zoned for one use might be re-envisioned for another use, or a mix of uses. The process can conclude with a focus on where the residual land that no longer needs to be set aside for future housing can be applied and a discussion of the “bonus” amenities this can provide to the community, such as more park space or buffers around sensitive ecological features.

Summary
The contrast between the benefits and costs of urban growth are most pronounced at the urban-rural edge, where civic leaders and planners struggle in a transitional environment to build local capacity and community support for economically and environmentally sustainable development. Although market downturns historically impact the periphery to a greater extent than other areas of the metropolitan region, they also represent opportunities for implementing meaningful change in edge communities. Given the current market downturn, the time may be right for a deeper conversation about alternative forms of development at the Twin Cities’ edge. After examining data for the cities of Rosemount and Farmington, and conducting interviews with their lead planners, we determined that the dramatic growth of these cities over the past two decades has led to many socioeconomic and environmental challenges. In light of present and future concerns, we developed a template for a community growth options toolkit that civic leaders and planners could employ to garner the support from community members to apply more sustainable development practices to the future plans for each city.

The two-part toolkit template includes a model for developing flexible, smart-growth–oriented land-use overlay maps and suggestions for a model of constructive community education and interaction. The overlay maps, produced using GIS tools, offer different ways to envision future development with reduced fiscal, environmental, and quality-of-life costs. The alternative land-use configurations displayed in the overlay maps promote development of a greater variety of housing types and sizes, which will help mitigate each city’s concerns about serving a wider range of household types and creating affordability to ensure the future economic viability of each community through continued attraction of new residents and investment. The constructive community education and interaction suggestions demonstrate ways to engage community members, increasing the capacity of civic leaders and planners to implement a vision for a more sustainable future.

We intend to present our toolkit template to the city planners in Rosemount and Farmington for their use, and will discuss with them how their place-specific goals and data prompted the land-use changes we proposed for each city, as well as our suggestions for community education and interaction. Although we focused on these two cities for this study, our approach for gathering, analyzing, and re-envisioning future plans on the periphery is applicable to any developing community on the metropolitan edge, many of which share the same concerns and issues. Some communities may seek to appeal to different demographic groups, may have experienced a greater impact from foreclosures, or may have other ideas for how to use the residual land made available through smart-growth approaches. The toolkit template remains flexible enough to accommodate different inputs and outcomes, but the end goal of a sustainable future for edge communities remains constant.

Brenda Kayzar is assistant professor in the Department of Geography at the University of Minnesota. Her research focuses on issues of equity in housing provision and the impacts of policy on development outcomes, from the periphery to the center city. Steven Manson is associate professor in the Department of Geography at the University of Minnesota. His research focuses on geographic information science, modeling land change in rural and urban environments, global climate change, socioeconomic vulnerability, and understanding complex systems. Heather Sander earned her Ph.D. in conservation biology from the University of Minnesota in 2009. She is currently a postdoctoral researcher with the U.S. Environmental Protection Agency’s National Exposure Research Laboratory, conducting research pertaining to the impacts of different agricultural environmental policies on ecosystem services in the Midwestern United States. Nancy Young is a Ph.D. student in the Department of Geography at the University of Minnesota. Her work focuses on rural area development, impacts to recreational uses such as hunting, and existing understandings about access and trespass.

The research upon which this article is based was supported by a grant from CURAS Community Growth Options (U-CGO) program, with funding from the McKnight Foundation. U-CGO provides applied research and technical assistance to help growing communities on the edge of the Twin Cities metropolitan area manage growth and development effectively.
Project Funding Available from CURA

The Center for Urban and Regional Affairs supports community-based research projects through several different programs. If you represent a community organization or agency and are unsure which program listed below is most suitable for your project proposal, simply complete a general Community-Based Research Program Application Form at www.cura.umn.edu/Programs/curaappform.html and we will route your request to the appropriate program.

■ The Community Assistance Program (CAP) matches community-based nonprofit organizations, citizen groups, and government agencies in Greater Minnesota with students who can provide research assistance. Eligible organizations define a research project, submit an application, and if accepted, are matched with a qualified student to carry out the research. The application deadline for summer semester 2010 assistantships (early June through August) is March 15, 2010. For more information, contact CAP coordinator Will Craig at 612-625-3321 or wcraig@umn.edu, or visit www.cura.umn.edu/cap.php.

■ Neighborhood Partnerships for Community Research (NPCR) provides student research assistance to community organizations in Minneapolis, St. Paul, and metro area suburbs that are involved in community-based revitalization. Projects may include any issue relevant to a neighborhood’s or community’s needs and interests, including planning, program development, or program evaluation. Priority is given to projects that support and involve residents of color. Applications from organizations collaborating on a project are encouraged. The application deadline for summer semester 2010 assistantships (early June through August) is March 15, 2010. For more information, visit www.cura.umn.edu/npcr.php or contact NPCR program director Jeff Corn at 612-625-1020 or jcorn@umn.edu.

■ The Community Geographic Information Systems (CGIS) program provides technical assistance in mapping, data analysis, and GIS to community-based organizations and nonprofits in the Twin Cities metropolitan area. CGIS staff specialize in parcel-level mapping, demographic analysis, and Internet-based GIS technologies. There is no formal application process or deadline to apply. Project requests are taken by phone or e-mail, and generally can be turned around within two weeks. For more information, to discuss potential projects, or for assistance with data needs, contact CGIS program coordinator Jeff Matson at 612-625-0081 or jmatson@umn.edu, or visit www.cura.umn.edu/CGIS.php.

■ The Minnesota Center for Neighborhood Organizing trains people to work effectively in organizing and staffing neighborhood organizations. It trains new organizers and increases the skills of existing neighborhood staff through internships, workshops, and other programs. For more information about the program and the training opportunities available, contact Jay Clark at 612-625-2513 or clark037@umn.edu, or Margaret Kaplan at 612-624-2300 or mkaplan@umn.edu.

■ The Neighborhood Partnership Initiative (NPI) provides direct financial support to foster innovative, effective partnerships that increase involvement of immigrant, underrepresented, and youth constituencies in solving neighborhood problems and improving the community for everyone. Partnerships applying to NPI must include at least one nonprofit organization with a defined neighborhood service area in the Minneapolis–St. Paul Metropolitan area whose governance body is elected by all residents of the neighborhood served; and at least one organization with nonprofit status focused on youth, immigrants, people of color, or the arts. The neighborhood-based organization should be the lead partner. The program will provide grants of up to $10,000 in direct financial support to successful applicants. The application deadline for 2010 projects is January 15, 2010. For more information about NPI, visit www.cura.umn.edu/NPI.php or contact Jeff Corn at 612-625-0744 or jcorn@umn.edu.

■ Northside Seed Grants support community organizations that operate programs serving residents of Minneapolis’ Northside community by providing student research assistants and faculty researchers to carry out neighborhood-initiated and neighborhood-guided projects. The application deadline for summer semester 2010 assistantships (early June through August) is March 15, 2010. For more information, visit www.cura.umn.edu/NSG.php or contact program director Kris Nelson at 612-625-1020 or ksn@umn.edu.

■ The University-Neighborhood Network (UNN) links community organizations to course-based neighborhood projects that students carry out as part of course requirements at a Twin Cities college or university. Organizations that participate in the program identify projects with which they need assistance. UNN then locates faculty who teach courses that meet the organization’s needs, and students who have an interest in the proposed project. Participation in UNN is coordinated through a web database system. For more information, visit www.cura.umn.edu/unn/, or contact UNN coordinator Jeff Corn at 612-625-0744 or jcorn@umn.edu.

■ The Faculty Interactive Research Program is designed to encourage University of Minnesota faculty to carry out research projects that involve a significant issue of public policy for the state or its communities, and that include interaction with groups, agencies, or organizations in Minnesota involved with the issue. Ideal projects will have an applied orientation, as well as serve the research interests of the faculty member. Awards cover the faculty member’s salary for one month during the summer, and support a half-time graduate research assistant.
The New Initiative Program accepts project proposals from community organizations, government agencies, and University of Minnesota faculty and students for projects that are inappropriate for or unrelated to other CURA programs. CURA is always looking for a good new idea, and supports many new projects outside of our existing program areas. The best approach is to call us to discuss the idea; if it looks worthwhile, we will encourage you to write a brief proposal. For projects supporting government agencies, we usually seek matching funds. Maximum support for a project is generally a half-time graduate student research assistant for one academic year; support for one semester is more typical. For more information or to discuss a project idea, contact CURA director Ed Goetz at 612-624-8737 or egoetz@umn.edu.

 CURA Director Tom Scott Retires

by Peggy Rader

You’ve directed a highly visible and successful research and engagement center at the University of Minnesota for 30 years. What do you say at the time of your retirement? If you’re Tom Scott, a low-key political scientist who has just stepped down as director of the Center for Urban and Regional Affairs, you say with a smile, “I didn’t expect to do it for so long.” When asked to list the highs and lows over his 30 years of leadership at CURA, he continues in that low-key vein. “Not any huge peaks and valleys. To me, the important thing is what the University is doing and what CURA is doing to support that. I like the land-grant mission—good teaching, good research, and connecting those two activities through work with the community. Every time we can accomplish something in that broader context, we’ve done well.”

In some ways, the mere survival of CURA is a feather in Scott’s cap. It has remained viable and well-respected through sometimes tempestuous politics both within and outside the University, as well as survived occasional bouts of indifference to urban issues that might have done in a center with less gravitas. Other similar centers have been established across the United States, and almost all, like CURA, were founded during the years of urban unrest in the 1960s when universities were called upon to help bring the vision of civil rights into reality. Over time, almost all of these centers have disappeared, sometimes through lack of funding, both local and federal, or by being incorporated into other university units, often design schools or urban planning units. CURA has followed the opposite path under Scott’s leadership.

Innovative initiatives have bloomed within CURA and then been adopted by external organizations or other University units where they could be sustained. “We hosted early biomass research and geographic information systems work,” Scott says. “We did a video on agricultural pollution in southeast Minnesota and an environmental course catalog. We were pioneers on some of these issues and now the University has an entire Institute on the Environment.” Other research areas that gained traction in CURA during Scott’s tenure include the study of aging, a field now housed in the School of Public Health, and public design, now in the College of Design. “It’s gratifying to see how today the University has many, many, many more centers and activities focused on urban issues than when CURA was begun,” Scott says.

He characterizes CURA as an “oddball” structure within the University and has fought to preserve its unique status as it has been moved from one vice president to another, usually on the academic side of the University. Currently it is situated in the Office of the Senior Vice President for System Academic Administration, and Scott’s successor, Professor Edward Goetz, reports to Andrew Furco, associate vice president for public engagement. “To me, it was essential that we remain linked closely to research and teaching,” Scott says. A critical part of Scott’s strategy has been strong faculty involvement in CURA’s work—not too surprising for a professor who has headed the University’s Faculty Consultative Committee and served as a department chair. “I used what I call the seduction model to get faculty to do projects with us,” he says. “I would tell faculty members that coming here to do research would be good for them, good for our community partners, would help educate a graduate student, and contribute to the teaching standards of the University.” As a result, faculty support has remained steady and, Scott says, the administrations that have followed that of Malcolm Moos, who was president of the University of Minnesota when CURA was founded, have been supportive “because we’ve done enough kinds of things to create linkages with faculty from across the University.”

Professor Esther Wattenberg, a nationally known researcher in child welfare and a policy and program coordinator at CURA, says working with Scott has always been full of surprises. In addition, she notes, “Along with his clear-headed knowledge of complicated
systems both inside and outside of the University, Tom was usually ready to add sharp and witty observations on the political scene, ecclesiastical calls for moral duty, and quick solutions to the frailties of the human condition.” Scott is valued not only by internal colleagues but many external partners, too. Mike Brinda, former director of the Minneapolis Neighborhood Employment Network, remembers his work with Scott as a time when important linkages were created between academics and public workforce policy. “The importance of basing public policy on a solid research footing is often overlooked in favor of the politically expedient,” Brinda says. “Tom always advocated for the step back, the second look. He was always ready to identify the real problem, assemble a team that could address the problem, and then work with us to provide practical solutions.”

Scott initially became involved in the center through his urban-studies research as a political scientist. “I wasn’t particularly involved in getting CURA started,” he says. “It had a very activist focus in its early years and I wasn’t interested in activism. John Borchert was CURA’s first director. But after I stepped down as department chair, I took a half-time position in CURA.” Then Borchert began a phased retirement from CURA, and Scott found himself phasing into the leadership role, a position solidified after the search for Borchert’s replacement put him in the director’s chair. “Working here has been fun because of the opportunities to work with geographers, sociologists, civil engineers, designers—that cross-disciplinary kind of work is great,” Scott says.

In the past decade, Scott says, the University and community research partnerships have been redefined and restructured more than once. “The nature of our work is always in a process of change,” Scott says. Most recently, “the term ‘engagement’ hit the streets. It’s a shift in how we think about our work, and the emphasis on the value of public engagement, community engagement, has given what we used to call ‘outreach’ more legitimacy in relation to research and teaching. And that’s good for faculty who really want to do their research in partnership with communities.”

Scott sees the drive to provide more commitment to and higher visibility for engagement activities on campuses across America to be partly due to politics. “In a time of increased accountability, public universities need to answer questions from the public, who are asking: ‘What are we getting for our money?’ That climate is very different from what it was four decades ago when CURA was founded. When I came here in 1962, the U was it. It was the only player in the state and whatever we did was fine. People loved the U. I think engagement is perhaps a way to retrieve that sense of good will for the University.”

The bottom line for Scott, as he readies to leave his office for time with children and grandchildren, is that “We’ve usually done what we’ve set out to do, and that’s been valuable enough.” The value of Tom Scott’s contributions to CURA, the University of Minnesota, and community partners statewide cannot be overstated, and we wish him well in his retirement.

**Peggy Rader is communications coordinator for the Office of the Senior Vice President for System Academic Administration. A version of this article originally appeared in The Brief.**

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**Sustainable Development Research Opportunity Program Launched at UMD**

The University of Minnesota at Duluth (UMD) has launched the Sustainable Development Research Opportunity Program (SDROP), which provides students an opportunity to work closely with a variety of northeast Minnesota communities on sustainable development projects. Student participants will gain valuable research, project design, and project implementation experience working on community-initiated projects, and community partners will benefit from the community service provided by UMD’s finest students. The program will be housed at UMD’s Center for Sustainable Community Development.

Program directors Dr. Michael Mageau, Dr. Okey Ukaga, and Michelle Hargrave will maintain an evolving database of interested students and community projects, and will match students to projects based on interest and qualifications. Students will be expected to spend a minimum of 120 hours on a project over a one-year period for a $1,500 stipend. The first projects are scheduled to begin in spring 2010. Each year, the program plans to sponsor a project fair on campus to highlight SDROP community projects.

The program originates from Mageau and Ukaga’s work with numerous community partners through the Center for Sustainable Community Development and the Northeast Region Sustainable Development Partnership. Based on these efforts, the two saw an opportunity to involve students in community projects anchored around the theme of sustainability. Meanwhile, Olaf Kuhle, interim dean of UMD’s College of Liberal Arts, had community service learning as a key item on his agenda. Together, the three raised the funds to get the new program off the ground.

Projects beginning this spring will include work on local food and energy systems, energy conservation and efficiency, recycling, sustainable tourism, urban and regional planning, environmental geographic information systems (GIS) applications in transportation and land use studies, eco-industrial development, environmental education and restoration, and economic impact analyses. Community partners on these projects include local city and county governments, nonprofit organizations, UMD facilities and operations staff, environmental learning centers, and small businesses.

The program is being funded by the UMD College of Liberal Arts and the University’s Northeast Region Sustainable Development Partnership, with additional funding from CURA and administrative support from the UMD Office of Civic Engagement. For more information about the SDROP program, visit www.d.umn.edu/cs/csd/sdrop/main/index.php.
The candidacies of Hillary Clinton and Sarah Palin in the 2008 election are evidence that women are making progress politically. Minnesotans can be proud that women constitute almost 35% of the state legislature, the fourth highest level in the country. Alongside this good news, however, are more sobering numbers. Women continue to be underrepresented in elected office at the national, state, and local levels, whether one compares their numbers with the population as a whole or to the qualified labor pool. In 2009, a record number of women were serving in the U.S. Congress, yet women constituted only 17% of its membership. According to the Inter-Parliamentary Union, the United States ranks 71st in the world for the percentage of women serving in the lower legislative chamber, ranking behind Iraq, Pakistan, and China. In the United States, women are more likely to serve in the state legislature; yet according to the Center for American Women and Politics, only 24% of state legislators in the United States are women. Although 14.8% of Minnesota’s mayors and 27.3% of its city-council members are women, half of Minnesota’s county commissions include no women.1 The evidence shows that progress has been made, but also that there is still a long way to go. More worrying, however, is that that progress seems to have stalled. Although increases in the number of women in Congress can be celebrated, the percentage increased by only 1% in 2008. Similarly, in Minnesota, the number of women in the legislature (70) plateaued from 2006 to 2008 (Figure 1). During the past decade, women have gained only 8 seats out of 201 in the Minnesota legislature.

Gender shapes campaigns for all offices, but in different ways, depending on the level of office, the regional demographics, and the electoral rules. For example, research by the Barbara Lee Family Foundation has shown that...
women have more success seeking legislative than executive office. In Minnesota, women enjoy more success seeking some local offices (school board and city council) than others (county commissioner and mayor). Systematic analysis of all congressional districts reveals that certain types of districts are more “women friendly” than others. Women’s representation in state legislatures varies enormously, from a majority in the New Hampshire Senate to zero in the South Carolina Senate. Moreover, our observations suggest that the pipeline itself may be gendered. The path to mayor for a man may be through the city council, yet women may not enjoy success through the same pathway. Finally, gender differences in party gatekeeping and recruitment may vary by constituency and office; parties may recruit women for urban but not rural seats, and for legislative but not executive offices.

Voter discrimination against women no longer explains women’s underrepresentation in elected office, although candidates and analysts allege gender bias in particular races (most recently, Hillary Clinton’s run in the 2008 Democratic presidential primary). Extensive research across multiple elections demonstrates that when women are candidates in congressional primaries, and run in general elections as challengers, incumbents, and open-seat contestants, they win at the same rate as men, when accounting for incumbency. No systematic analysis has determined whether these gender-neutral results hold in Minnesota’s state legislative races.

We analyzed an original, comprehensive set of candidate-level data for Minnesota legislative campaigns since 1997. This dataset allows, for the first time, the opportunity to analyze whether gender affects electoral success in the state of Minnesota. The research upon which this article is based was supported in part through a grant from CURA’s New Initiative program. Additional funding was provided by the Women’s Foundation of Minnesota, the University of Minnesota’s Grant-in-Aid of Research, Artistry and Scholarship Program, the Hubert H. Humphrey Institute of Public Affairs; and the Department of Political Science at the University of Minnesota.

Methodology
We created the Minnesota Legislative Candidate Database to analyze Minnesota state legislative campaigns from 1997 through 2008. The candidate-level data set contained 2,780 candidates running in state legislative elections from 1997 to 2008, all primary candidates, and candidates who filed but dropped out before their primary election in each legislative-election cycle over the 11-year period, along with candidates in a handful of special elections. Of the 2,780 candidates running in state legislative elections from 1997 to 2008, 735 were women (26.4%). Our unit of analysis was candidate-year, so the data set included many of the same candidates in multiple election years. Although Minnesota elections often include third-party candidates, 2,516 candidates (90.5%) in our data set were major-party candidates, i.e., Democrats (DFL) or Republicans (GOP). We conducted our analysis only on candidates from these two major parties.

We compiled the initial list from all candidates who registered their campaign committee with the Minnesota Campaign Finance and Public Disclosure Board. We augmented this list with information from the Minnesota Secretary of State Election Results and Statistics website to ensure that we included all candidates receiving votes in primary and general elections in the full data set. We collected vote share, party identification, and incumbency status from the Minnesota Secretary of State and the Minnesota Legislature online resources. We ascertained candidate gender through name identification and online searches of local media surrounding the campaign. We identified candidates who ran in the preprimary stage as those registered with the Minnesota Campaign Finance and Public Disclosure Board, because neither state officials nor local political parties collect or maintain endorsement information. We obtained campaign-finance

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data from the National Institute on Money in State Politics. We also collected district-level information for each candidate in the data set. Minnesota has 67 Senate districts, each of which is subdivided into 2 subsidiary House districts. Elections for the Minnesota House occur biannually (in 1998, 2000, 2002, 2004, 2006, and 2008 in our data set), whereas Senate elections occur every four years, except two years after redistricting (in 2000, 2002, and 2006 in our data set). We compiled demographic information describing each district from U.S. Census data (including district racial diversity, constituent education level, and median income). Minnesota legislative districts represent a great diversity of urban, suburban, exurban, and rural geographies. Using information from the Politics in Minnesota guide, we categorized each district as rural, urban, suburban, or mixed to analyze regional differences in the gender dynamics surrounding legislative elections. We included a measure of district partisanship based on presidential vote share in each House district in the 2000, 2004, and 2008 elections.

These data allowed us to explore longitudinal and cross-sectional trends in Minnesota legislative elections. We augmented this longitudinal data with an in-depth survey (the 2006 Minnesota State Legislative Candidate Survey) of the 2006 legislative candidate cohort. In the summer and fall of 2008, we surveyed all 527 major-party candidates who ran for the Minnesota House or Senate in the 2006 election cycle. Our survey gathered additional information regarding the candidates’ political experiences prior to running, their experiences with the endorsement process, and their opinions regarding gender dynamics in their campaign. We conducted the survey initially by mail, including two follow-up mailings through the early fall of 2008. We then contacted nonrespondents via e-mail with an online response option, and then via telephone. These multiple contact attempts yielded 247 responses and 37 refusals. The response rate was 47% when not including refusals, and was 54% when including survey decliners. Survey respondents were reasonably representative of the 2006 cohort population. Respondents roughly mirrored the 2006 candidate population at large in terms of gender (49% of women candidates responded, 45% of men), party (59% of Democrats responded, 38% of Republicans), and legislative chamber (49% of House candidates responded, 42% of Senate candidates). Republicans were slightly underrepresented, particularly Republican women.

Results

The Number of Women Candidates Running for the Minnesota House Has Stagnated. From 1997 to 2008, the overall number of women running for the state legislature in Minnesota increased, although the rise has been uneven and recently the number has slightly fallen (Figure 2). Women’s candidacies in House general elections peaked in 2004 and declined in the two subsequent elections. In 2000, 71 women ran for the House, compared with 85 in 2004 and 76 in 2008. In general elections for the Senate, however, women’s candidacies have increased in the past decade. In 2000, only 33 women ran, but in both 2002 and 2006, 41 women ran for the Senate. Our data included 268 Republican women candidates (9.6% of all candidates in our data set) and 432 DFL women candidates (15.5% of all candidates).
candidates in our data set). DFL women significantly outnumbered Republican women in every election cycle, but the decline in women’s candidacies from 2004 to 2008 occurred in both parties. These large partisan differences in women’s candidacies foreshadow partisan differences in women’s experiences as candidates that we found from our candidate survey and detail below.

*When Women Run, Women Win.*

Women have a long way to go from 34.8% of the 2008 Minnesota legislature to reach equal representation. Women’s current underrepresentation, however, is not the result of gender differences in party endorsements, primary competition, general election votes, or fundraising. In each of these stages of the electoral process in Minnesota, we found either gender-neutral outcomes or that women had small advantages.

*Party Endorsement.* Several features of Minnesota’s electoral system may hinder women’s candidacies more than men’s. In studies of women’s under-representation, political parties have emerged as a key culprit. In perhaps the largest study of the effects of parties on women’s candidacies to date, one researcher found that strong party organizations have a negative effect on women’s representation; fewer women ran for and held state legislative office where parties were more engaged in gatekeeping activities.6

Minnesota’s unusually strong party system, marked by its caucus system and preprimary endorsement process, provided us with the opportunity to test the effects of party recruitment, endorsement, and gatekeeping on women’s candidacies. In Minnesota, party caucuses choose delegates who endorse candidates at conventions months before Minnesota’s September primary elections. Candidates who do not receive the endorsement face considerable pressure to drop out of the race. Party conventions and subcaucuses that endorse candidates typically ask them whether they will abide by the endorsement process. Anecdotal evidence from Minnesota, such as the difficulty Joan Growe had in securing the DFL endorsement for U.S. Senate in 1984, and, more recently, Judi Dutcher’s failure to win the DFL endorsement for governor in 2002, has suggested that the endorsement process may hinder women’s candidacies. However, prior to our study, no one had systematically tested for the effects of parties on women’s bids for the Minnesota legislature. Using our Minnesota Legislative Candidate Database and our 2006 Minnesota State Legislative Candidate Survey, we explored whether women were less likely to receive their party’s endorsement than men.

To test whether the party endorsement process forced women out, we analyzed preprimary dropout rates for male and female legislative candidates. Overall, 13% of DFL and Republican candidates dropped out before the party primary; indicating that these were the candidates who did not receive their party’s endorsement. Men (13.7%) were slightly more likely to drop out of their race before the primary than women (12.7%). However, we found that this difference in dropout rates between genders was not statistically significant; only incumbency status and running in a rural district were statistically significant in decreasing the likelihood of a candidate dropping out before the primary election. This evidence, then, does not suggest that the parties are hindering women candidates in the endorsement process.

Because not all candidates who do not receive the party endorsement drop out, the analysis presented above may not include the entire universe of candidates denied the party endorsement. Therefore, we also analyzed a more direct measure of party endorsement from our 2006 Minnesota State Legislative Candidate Survey. Our survey specifically asked about the party endorsement process, and the results confirmed our analysis of our data set regarding preprimary dropout rates and party endorsements. We asked candidates to describe their decision to seek their party’s endorsement, whether or not they obtained endorsement, and what type and amount of competition emerged in their contest. We found that the most significant predictors of endorsement were party and incumbency status, not gender. When we controlled for factors such as incumbency and competition, our findings of gender neutrality for the endorsement process held. Therefore, through analyses of both our data set and survey data, we found that women were as likely as men to receive their party’s preprimary endorsement.

*Party Primary Elections.* We next analyzed gender dynamics in primary competition. The overwhelming majority of candidates in our data set ran unopposed in their primaries (Table 1). Although a majority of candidates run unopposed in primary legislative races nationally, Minnesota’s preprimary party endorsement process may be more likely to depress primary competition in many races. Only 13.5% of candidates in our data set faced any opposition in the primary (10.5% of women and 14.7% of men).

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Party and chamber matter; DFL women in both the House and the Senate were less likely to face primary competition than were men (a difference of 6.6% and 10.9%, respectively), whereas Republican women in the House were 0.5% more likely to face competition than men and Republican women in the Senate are 4.3% less likely to face competition than men. When we controlled for factors that would likely affect primary competition, including the candidate's incumbency status, whether the candidate is running in an open seat, which chamber a candidate is running for, and district characteristics (urban versus rural), we found that women were significantly less likely to run in competitive primaries than men. In addition, Republican men and women were also significantly less likely to face competition than Democratic men. The evidence does not support the notion that women were more likely to face primary challenges than men; in fact, the opposite was true.

When we analyzed our data set to determine outcomes for candidates competing in primaries (including those running unopposed), we found that women won primaries to compete for state legislative office in the general election at slightly higher rates (95.9%) than men (91.1%). DFL women won at the highest rate (96.3%) when compared with DFL men (89.5%), Republican women (95.3%), and Republican men (92.5%).

When we analyzed the data after applying the controls described above, as well as a variable indicating a candidate ran unopposed, DFL women were not advantaged. Republican women, however, were significantly more likely to win primaries than DFL men, and no statistically significant difference existed between the primary victory rates of Republican men and DFL men. We found the same outcome when looking at primary victories among only candidates who faced competition. Party primaries clearly did not hinder women's chances to make it to the general election, and they actually seemed to help Republican women.

**General Election Results.** Research has shown that women and men win general elections at the same rate nationwide. We wanted to examine if the same held true for legislative elections in Minnesota. Our analysis of our data set revealed that women were slightly more likely (52.1%) than men (50.2%) to win in a general election contest, and women received, on average, a slightly higher percentage (51.1%) of the vote share than men (49.2%). Republican women's edge appeared to drive these differences; on average, Republican women won 47.3% of the time (1.2% higher than Republican men) and DFL women won 55.1% of the time (0.2% less than DFL men). However, when we controlled for incumbency, running in a House election, election year, and fundraising, we found no statistically significant

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**Table 1. Comparing Minnesota State Legislative Election Competition, by Gender, Party, and Chamber, 1997–2008**

<table>
<thead>
<tr>
<th></th>
<th>Total Candidates</th>
<th>Unopposed in Primary</th>
<th>Dropped Out Preprimary</th>
<th>Primary Victory Rates</th>
<th>General Election Victory Rates</th>
<th>Fundraising Means</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GOP Women</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House</td>
<td>208 (10.7%)</td>
<td>159 (88.3%)</td>
<td>28 (13.5%)</td>
<td>171 (95.0%)</td>
<td>73 (42.4%)</td>
<td>$24,198 ($13,077)</td>
</tr>
<tr>
<td>Senate</td>
<td>60 (10.7%)</td>
<td>46 (85.2%)</td>
<td>6 (10.0%)</td>
<td>52 (96.3%)</td>
<td>33 (63.5%)</td>
<td>$42,654 ($22,838)</td>
</tr>
<tr>
<td><strong>GOP Men</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House</td>
<td>763 (39.3%)</td>
<td>602 (88.8%)</td>
<td>85 (11.1%)</td>
<td>633 (93.4%)</td>
<td>313 (49.4%)</td>
<td>$24,199 ($16,409)</td>
</tr>
<tr>
<td>Senate</td>
<td>210 (37.4%)</td>
<td>140 (80.9%)</td>
<td>37 (17.6%)</td>
<td>135 (86.0%)</td>
<td>51 (32.7%)</td>
<td>$35,598 ($24,890)</td>
</tr>
<tr>
<td><strong>DFL Women</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House</td>
<td>344 (17.7%)</td>
<td>276 (91.4%)</td>
<td>42 (12.2%)</td>
<td>290 (96.0%)</td>
<td>154 (53.1%)</td>
<td>$26,432 ($13,710)</td>
</tr>
<tr>
<td>Senate</td>
<td>88 (15.7%)</td>
<td>66 (88.0%)</td>
<td>13 (14.8%)</td>
<td>73 (97.3%)</td>
<td>46 (63.0%)</td>
<td>$42,626 ($22,303)</td>
</tr>
<tr>
<td><strong>DFL Men</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House</td>
<td>628 (32.3%)</td>
<td>462 (84.8%)</td>
<td>83 (13.2%)</td>
<td>494 (90.5%)</td>
<td>267 (53.9%)</td>
<td>$22,870 ($13,887)</td>
</tr>
<tr>
<td>Senate</td>
<td>199 (35.5%)</td>
<td>121 (77.1%)</td>
<td>42 (21.1%)</td>
<td>154 (89.0%)</td>
<td>82 (60.3%)</td>
<td>$37,765 ($23,526)</td>
</tr>
</tbody>
</table>

Note: Except for the fundraising column, cells contain numbers and percentages. The fundraising column reports means per candidate, with standard deviations in parentheses. The data represent 1,943 House candidates and 561 Senate candidates running from 1997 to 2008.

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7 In all three instances, results were statistically significant.
differences in victory rates between DFL women and DFL men.

When we disaggregated Minnesota House and Senate results, striking differences emerged among Republicans. Republican women won Senate elections at a rate of 63.5%, whereas Republican men won Senate elections at a rate of 32.7%. However, Republican women only won House seats at a rate of 42.4%, whereas Republican men won House seats 49.4% of the time. We found that both DFL men and women were more likely to win Senate races than House races. These disparate victory rates merit further investigation, especially because increases in women senators over the last few years have ameliorated the overall stagnation in women’s representation in the state legislature as a whole.

**Fundraising**. Raising money is an important component of any legislative race, even in Minnesota where campaign-finance laws tightly restrict how much money citizens can give and how much candidates can spend. We measured candidates’ campaign expenditures in two ways. First, we included a measure of the total number of dollars that a candidate raised. Second, we calculated the proportion of money each candidate raised in a legislative district in that election cycle (including the primary, because the campaign-finance data were collected throughout the course of the entire election cycle).

In terms of campaign fundraising, our results showed that women outraised men (Figure 3). On average, women raised $29,550 and men raised $26,686. When we disaggregated the results by party affiliation, we found that DFL women raised the most money (an average of $30,486) in the districts where they competed, followed by Republican women, DFL men, and Republican men (who raised the least, $27,648). When we controlled our analysis for incumbency, the chamber, and the year, DFL women’s financial advantage was still statistically significant: DFL women, but not Republican women or Republican men, raised a significantly higher proportion of money than DFL men. Although our data did not tell us where the candidates’ money comes from, women’s groups in Minnesota are quite active in funding female candidates, particularly pro-choice, DFL candidates. Anecdotal evidence suggests that women’s group fundraising contributes to DFL women’s advantage, both in political action committee contributions and, in some cases more importantly, in bundling contributions—that is, gathering contributions from many individuals and presenting the sum to targeted candidates. Women were not underrepresented in the Minnesota Legislature because they fail to raise money, or cannot raise as much money as men.

**Where Women Run: Regional and Partisan Variation**. The slow and uneven growth of women’s candidacies in Minnesota notwithstanding, the results we have presented so far reveal that, as at the federal level, when women in Minnesota ran for the legislature, they were just as likely to win as men. Indeed, women’s overall experiences in the past decade suggest that a woman considering a candidacy in Minnesota has no reason to think that her electoral outcomes will be worse than those of a similarly situated man. In some cases, women have good reason to run for the legislature because they are a significant minority of the population.
to think they will outperform men. Our aggregated results, however, may mask important regional and partisan differences.

Previous research has uncovered systematic differences in the types of districts represented by congresswomen and congressmen. Scholars have identified districts that were liberal, urban, racially diverse, educated, and wealthy to be “women friendly,” based on findings that white congresswomen tend to represent districts with these characteristics more often than their male counterparts. A district’s or city’s political environment—including its propensity to elect women generally—may also shape a female candidate’s perceptions of how voters, parties, and the media will respond to her campaign. For example, an analysis of election data from the 1970s found that women were more likely to run for the state legislature in states with a history of electing women to the state legislature. Many of the best-known and longest serving women legislators in Minnesota have represented urban constituencies. We therefore expected that women would be more likely to run in urban areas in Minnesota, where higher proportions of women were already serving in office, for many reasons: the larger pool of candidates with electoral experience in these areas, party organizations that were more accustomed to recruiting and supporting women, and voters who had demonstrated a willingness to elect women.

As we expected, we uncovered partisan differences in women’s candidacies and differences in the types of districts where women ran. Female candidates were significantly more likely to be Democrats overall. Contrary to our expectations, however, we found that among Democrats, women were most likely to run in suburban districts (45.4%) (Figure 4). This result was not simply an artifact of the high number of suburban districts in Minnesota. Although nearly half of Minnesota’s districts are categorized as suburban, we identified a 13.5% gap between the share of Democratic women (45.4%) and the share of Democratic men (31.9%) who ran in suburban districts. Democratic women also often ran in urban districts (24.3%), but not significantly more than Democratic men did (21.4%). Our most striking finding was how infrequently Democratic women ran in rural districts (13.7% of Democratic women compared with 26.5% of Democratic men).

When we analyzed the data for Republican candidates, we found that Republican women were particularly likely to run in suburban districts (51.5%, compared with 39.2% of Republican men). Republican women were only slightly less likely than Republican men to compete in urban districts (16.0% versus 18.1%). Rural districts did not attract many women from either party; only 13.1% of Republican women (compared with 22.8% of Republican men) ran in a rural district. Overall, when we controlled for other predictors of candidacy, including education level in the district, presidential vote share, incumbency, number of candidates in the race, election year, and chamber, we found that women of either party were significantly less likely to run in rural districts than men. These results raised important questions for future research. Are rural voters less likely to support women? Do party gatekeepers in rural districts deter women candidates? Are women’s groups that recruit and fund women less likely to operate in rural areas?

We also wanted to assess whether women were less likely to run in districts that advantage their party. Early research on women as candidates for elective office indicated that parties recruited women to be “sacrificial lambs” in unwinnable districts. More recent research at the federal level has shown that Republican men were more likely than women to run in districts that had voted Republican in the presidential election. Our research on candidacy for the state legislature in Minnesota revealed the opposite, that women in both parties were more likely than their male counterparts to run in districts where the partisan makeup helps their candidacies. We found that DFL women competed in districts with a higher Democratic vote share (as measured by presidential vote in the year closest to the election) and Republican women ran where Republican presidential vote proportions were higher. Perhaps Minnesota’s party endorsement process attracts more conservative Republican women than emerge at the federal level, because to gain the endorsement in Minnesota one must prove one’s ideological credentials to a smaller, more knowledgeable party caucus audience. In sum, our results demonstrated that women in each party were more likely to run in favorable

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8 See note 2 above.

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districts than men; they are party favor-ites, not sacrificial lambs.

**Perceptions of Gender Advantage.**
Women may win at rates equal to their male counterparts, but that does not mean that gender is irrelevant nor that discrimination no longer exists. Beyond analyzing the structural influences on elections themselves, we also wanted to determine candidates’ perceptions of the electoral environment.

A recent Pew Foundation study showed that 4 in 10 people thought men hold women back in politics, although 48% of women held this view compared with 37% of men. Women may be more likely than men to perceive gender discrimination, for example, in the difficulty women candidates have being taken seriously, which may account for some reluctance to run. Biased treatment of women by the media has been well documented and was on display in the last presidential election. Although having women run for president and vice president may inspire some women, women also saw Hillary Clinton called horrible names by pundits, observed hecklers telling Clinton to “iron my shirts,” and watched Sarah Palin’s family life dissected.

Previous research has shown that, although women win congressional races at the same rate as men, women must have more experience and raise more money. We could not discern with our Minnesota data whether women have to be better candidates and work harder to enjoy the same success as men. We must, therefore, take seriously the gender and partisan differences that emerged from our survey results. We found considerable partisan and regional variation in perceptions of women’s candidacies, as we detail below.

The survey data we collected on the 2006 cohort of legislative candidates provided us with insight into gendered dynamics of Minnesota legislative elections that were not discernible from the candidate database. The rich survey data allowed us to analyze information about candidates’ previous political experience, their decision to run for office, their experiences in the party endorsement process, interest group involvement in their endorsement, their reasons for ending a campaign, and their opinions regarding which gender has an electoral advantage in campaigning. In this analysis, we focused on candidate perceptions of gender bias in legislative campaigns, with attention to regional and party variation.

We analyzed respondents’ perceptions of a gender advantage in elections. Specifically, we asked whether men, women, or neither have an advantage in legislative campaigns. We controlled for incumbency status, running in a rural district, running in an urban district, the level of Republican partisanship in the district (as measured by vote share for George W. Bush in the 2004 election), and a variable indicating whether or not the respondent believed their political beliefs were in sync with that of their district. These results indicated that, all else being equal, Democratic women perceived an electoral disadvantage for women. This finding was particularly striking considering our earlier findings of electoral success for Democratic women during the past 11 years. Although our longitudinal data supported a finding of gender neutrality

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(or, in some cases, women’s advantage), our survey results indicated that Democratic women were unlikely to perceive this process as one that favored them. Our survey findings also reinforced our earlier findings regarding regional variation. The women we surveyed were less likely to run in, and win in, rural districts. It is not surprising, then, that candidates in rural districts were more likely to perceive that men have an advantage in electoral politics.

In another model we used, compared with Democratic men (our base category), we found that both Republican women and Republican men were significantly more likely to perceive that women have an electoral advantage. Republican women were particularly likely to perceive an advantage for women. Democratic women, however, were significantly less likely to perceive an advantage for women. The majority of Democratic men believe that neither men nor women have an advantage, and among those respondents who perceived a gender advantage, more Democratic men thought that women have an advantage over men. We need to explore further why DFL women believe they are disadvantaged.

Interestingly, incumbents (men and women) were significantly more likely to think that women have an advantage, controlling for rural and urban district status, incumbency, and presidential vote share. Those candidates who have already experienced, and triumphed in, the electoral process—and gone on to observe women succeed inside the legislature as well—believed that women have an advantage, all else being equal.

Conclusion
Research on women’s candidacies has generally focused on the U.S. Congress. We analyzed women’s path to the Minnesota state legislature with particular attention to unique features of Minnesota legislative elections, especially the preprimary party endorsement process. We systematically analyzed gender differences in electoral competition and outcomes at every stage in legislative races from 1997 to 2008.

We found some encouraging news suggesting that women candidates for elected office were making progress toward equality. When women ran for elected office in Minnesota, they won at the same or higher rates than men. We looked carefully to see if women disproportionately failed to secure their party’s endorsement, were more likely to be challenged or defeated in primaries, or were running in less winnable seats. We found that at various stages in the process, women actually outperformed men. For example, Republican women were significantly more likely to win their primaries than Republican men. DFL women had a clear edge in fundraising, outraising all other candidates. Women’s groups that raise money through political action committee contributions and bundling for pro-choice women candidates in Minnesota have largely closed the funding gap between men and women. Our data, however, cannot tell us whether to achieve these outcomes women candidates had to make twice as many calls, for example, to raise the same amount of money as men, or whether they needed to be better candidates to win.

Our aggregate results masked important variations in the types of districts and races in which women compete and succeed. Democratic women candidates outnumber Republican women by a nearly 2-to-1 margin. Republican women’s electoral success is rooted in the overwhelming success of Republican women Senate candidates, who won at a rate of 63.5% from 1997 to 2008. Republican women running for the House, on the other hand, only won 42.4% of the time. We have yet to explain these differences. We also found important regional variation. Women in rural areas were significantly less likely than men to run for office, a finding that calls for further research.

When women run in Minnesota, women win. But the number of women legislative candidates is too low to ensure great progress in women’s representation. More women candidates must enter the electoral arena, particularly in rural areas of Minnesota, if Minnesota is ever to reach gender equality in its state legislature.

Sally Kenney was professor of public affairs and law and director of the Center on Women and Public Policy at the University of Minnesota at the time this research was conducted. As of January 2010, she is the executive director of the Newcomb College Institute and Newcomb Endowed Chair at Tulane University. She has more than 30 years of experience teaching, writing, and working in the area of women and electoral politics. Kathryn Pearson is assistant professor of political science at the University of Minnesota. Her research focuses on the U.S. Congress, congressional elections, women and politics, political parties, and public opinion. Debra Fitzpatrick is the director of the Center on Women and Public Policy at the University of Minnesota. She has coordinated several collaborative research projects at the University, most recently the Women’s Path to Political Office Research Project and the Status of Minnesota Women Project (in partnership with the Women’s Foundation of Minnesota). Elizabeth Sharrow is a Ph.D. student in political science at the University of Minnesota. Her research and scholarship focus on women and electoral politics.

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CURA
University of Minnesota
330 HHH Center
301—19th Avenue S.
Minneapolis, MN 55455

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