My research interests fall broadly within multiple areas of Applied Microeconomics. I am especially interested in topics within Labor Economics, Economic History, Agricultural Economics, Environmental Economics and Health Economics. More specifically, my research has thus far followed three distinct paths, each relating to one or more of these different areas in economics. The first deals with public health education and poor relief, and determining both the absolute effectiveness of these programs, as well as their effectiveness relative to each other. I have been studying these in the context of early 20th Century American municipalities, as well as in the less developed rural areas. The second path looks at the ability of farm commodity markets to mitigate local weather shocks, and also at how government programs and market intervention may affect this. The last is a human capital study, and examines whether girls that attend predominantly female colleges fare better in the labor market.

Public Health Education and Poor Relief
Economic History, Labor Economics, Demographic Economics, Health Economics

This research is focused on the relationship between child and infant mortality, and public health and welfare spending in both urban and rural areas during the early 20th Century. In the early 1900s, infant and child mortality rates in the United States were among the highest in the developed world, but dropped significantly over the next few decades. Only part of the declines can be attributed to major sanitation and water projects in cities. Public health historians assert that one reason for the decline was improvements in public knowledge about simple health procedures like hand washing and boiling water, but as yet they have not been able to directly test the success of these programs. I am interested in testing the success of public health education programs implemented both within the large U.S. municipalities, as well as in the less developed rural areas. State and municipal duties usually involved the enforcement of health codes, sanitary regulations, research and containment of communicable disease, recording vital statistics, and sometimes sent out physicians to inspect school children and hold itinerant clinics. Rural areas lacked many of these benefits. Prior to the development of the county health organizations, when counties did employ health officers, they were part-time physicians with little incentive to take time away from their private practice to devote to public health matters. As such, examining both areas with public health departments, and those with the smaller, rural county health organizations, is important.

So far I have put together a panel data set with information on infant and child mortality and expenditures on public health education and poverty programs for 67 large American cities between 1923 and 1932. I stopped in 1932 to avoid the confounding effects of the large-scale infusion of federal spending of all during the New Deal. I have identified the effects the public health education and poverty relief programs using a combination of covariates, city and year fixed effects, and random city-specific trends. Fixed effects estimates suggest that the public health education was much more effective than the poverty relief spending at reducing mortality. After including city-specific trends, the relationship of mortality with poverty relief and public health education programs is greatly attenuated, likely due to there not being enough variation in the spending to identify the effects. Part of the reason for the attenuation of the public health education variables may also be that the diffusion of public health knowledge in the cities...
was influenced by the stock of knowledge provided in the early phases of the program. I am currently developing ways to measure these changes, as well as engaging in work to extend the panel to the years prior to 1923. Also, I have recently been awarded an NSF Doctoral Dissertation Improvement Grant for work on examining the rural counterpart to the public health programs occurring in the large cities.

**The Effects of Weather Shocks on Crop Prices in Unfettered Markets**  
*Agricultural Economics, Environmental Economics, Economic History*

This research examines the sensitivity of agricultural prices and output to local and non-local weather fluctuations over a large span of time in the United States. I am interested in estimating these effects for the staple crops cotton, corn, and wheat. I am also interested in analyzing the effects for hay, an important crop in local agronomic production. Corn and hay are crops with high transport costs and are used in local productive activities, while cotton and wheat are crops with relatively low transport costs and are primarily exported to non-local markets. I expect that when agricultural commodities have high transportation costs and are used in productive activities at the local level, prices will be sensitive to changes in local weather, while for commodities sold in non-local markets, prices will be robust to changes in local weather.

The research has so far looked at the period prior to 1932, when markets were relatively unfettered by farm programs. Most modern studies of agricultural price responses to weather shocks have been focused on these heavily regulated markets, but such studies provide little information on how unfettered markets, which may arise out of the current WTO trade negotiations, will operate. The results indicate that for crops sold primarily in international markets, changes in local weather have little effect on farm-gate prices, while changes in weather affecting the aggregate market play an important role. Crops with strong local markets such as corn and hay are much more sensitive to changes in state-level temperature, precipitation, and drought conditions.

**Labor Market Returns to Attending a Female Dominated School**  
*Labor Economics*

The final path is a study in the returns to different types of human capital endowments, in particular whether the qualities gained by girls who attend a college with predominantly females lead to higher wages in the labor market. Given the surge of interest in single-sex high schools and colleges, and the reversal of the college gender gap, it is important to determine if going to school with more girls affects future labor market outcomes. I have so far used the program evaluation framework to examine the differences in educational returns for women in different types of schools. Data on enrollments, institutional control (public versus private), and other school information have been gathered from the Integrated Postsecondary Education Data System and then combined with information from the 2003 follow-up of the Baccalaureate and Beyond survey. Results from suggest that attending a female-dominated school yields positive labor market effects on the order of about 15 percent upon first entry into the labor market.