Collective Action Events, Public Opinion, and Public Policy in the U.S. Women’s Movement

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**Abstract**

In this paper we argue for the importance of looking at changes in public opinion as a social movement outcome, particularly in the case of the U.S. women's movement. There is considerable evidence in the case of the women's movement that a significant portion of movement collective action focused on changing public opinion. We use quarterly time series data ranging from 1960 to 1995 on public events of the U.S. women's movement and public opinion about gender attitudes in the United States to analyze the relationship between social movements and public opinion. Using the error correction model framework we demonstrate that social movement events cause collective opinion about gender attitudes to move more in-line with the women's movements attitudes. We show that a single event held by the women's movement has persistent influence on attitudes, shaping opinions for several years after the event.
In the last ten years there has been an explosion in literature examining the question of how much and whether social movements can influence policy (for a great review of this literature see Amenta et al. 2010). Social movement scholars have gone a long way in examining what other factors are related to these policy outcomes (political mediation model), examining the different stages of policy and social movements influence on it (King et al. 2005; Soule and King 2006). In recent years many analyses have either controlled for public opinion as they explored social movement outcomes or examined the intersection of social movement action and public opinion. At the same time within political science, there has been extensive growth in a literature that examines how much and whether the mass public opinion determines public policy in democracies (see for example, Burstein 2006; Erikson, MacKuen Stimson 2002; Kellstedt 2003; Page and Shapiro 1983; Wlezien 2004, 2). While this literature has on occasion paid lip service to the role of social movements (see for example Carmines and Stimson 1989: 71), generally their models have not considered seriously the role of social movements, even when the focus is on areas that are traditionally related to social movements.

In this paper we argue for the importance of looking at changes in public opinion as a social movement outcome, particularly in the case of the U.S. women’s movement. There is considerable evidence in the case of the women’s movement that a significant portion of movement collective action focused on changing public opinion. We examine whether there is any evidence that collective action events influenced public opinion and then discuss the implication of our results for understanding social movement outcomes. In making this argument we are aided by methodologies that allow us to build more complete time series of public opinion on social movement issues. We then look at the implications of the analysis for understanding public policy as an outcome.

The paper proceeds as follows. We begin by discussing the literature on social movement outcomes and its relationship to public opinion. In doing so, we discuss specifically the U.S. women’s movement and its relationship to public opinion, focusing on what factors
might explain changes in public opinion on feminist issues. We then discuss the data that we utilize. We then use an error correction model (ECM) to assess the relationship between collective action events associated with a women’s movement and public opinion about gender attitudes and expectations. We conclude by discussing the implications of our findings for studying the policy outcomes of social movements.

**Social Movement Action and Public Opinion as an Outcome**

As the interest in explaining social movement outcomes has risen in recent years, social movement scholars have increasingly come to include public opinion at least as a control variable in their models (Agnone 2007; Costain and Majstorovic 1994; McAdam and Su 2002; Soule and Olzak 2004). Much of this is a result of Paul Burstein’s continued implorations that public opinion be included (Burstein 2006, 1999; Burstein and Linton 2002). Most commonly, public opinion is seen as an alternative variable to social movement activity (see for example Costain and Majstorovic 1994). In this view, public opinion exists outside of social movement action, which is implicitly perceived as the action of a smaller non-representative minority of the population. However, the findings on the role of public opinion and social movement activity are largely mixed. While increasingly social movement scholars of outcomes understand the importance of controlling public opinion’s effect on policy, there doesn’t seem to be much of a consensus on whether protest or public opinion is more significant (Olzak and Soule 2009; Burstein 2006).

A few have argued however that the relationship between public opinion and social movement activity may be more complex (Agnone 2007, Banaszak and Ondercin 2009, Guigni 2004, 2007, McAdam and Su 2002). McAdam and Su (2002) examine whether social movement protest mobilizes public opinion, which then influences legislation. They find that public opinion influences Congressional voting on the war and they do not find public opinion influenced by protest. On the other hand, Guigni (2004, 2007) looking at the environmental, antinuclear and peace movements in the U.S. (2007) and more comparatively (2004) finds few effects of social
movement activity on opinion but finds some relatively weak empirical evidence that public opinion and social movement events work jointly to influence political outcomes. Similarly, Agnone (2007) looking at the environmental movement finds that protest events influence legislative outcomes even when public opinion is included in the model. Public opinion’s only effect, however, occurs when it is magnified by the simultaneous occurrence of social movement protest. Agnone calls this the amplification effect and argues that public opinion’s only effects are when events occur or when it is an election year. All three of these authors face serious statistical issues in the analysis of public opinion because they lack many observations of public opinion. Agnone (2007) has the largest number of cases at 39, while McAdam and Su (2002) and Guigni (2004, 2007) have even fewer.

All of these papers are focused on explaining the creation of public policy as a social movement outcome. Banaszak and Ondercin (2009) take a different tack, by looking at the endogeneity between public opinion and social movement events. Using Granger causality tests, they focused on whether attitudes about gender roles resulted in increases in protest events or whether protest events influenced public opinion. They find strong evidence that both pro- and anti-feminist events influenced public opinion, but there was only weak evidence that public opinion moved before protest. Only in the case of the ERA, did they find changes in attitudes towards the Equal Rights Amendment Granger causing social movement events (Banaszak and Ondercin 2009). Following on this analysis, here we examine public opinion as a separate outcome of social protest in a multivariate model.

*Why consider public opinion a social movement outcome?* Given the large existing literature on social movement outcomes, arguing that we should look at public opinion as a social movement outcome may seem like a bait and switch technique. However, as numerous scholars have noted cultural change is an important part of what social movements seek (Meyer 2006; Rochon 1998; van Dyke et al. 2004). Indeed, because social movements seek social change, public policy is not always considered the proximate goal of the movement and many social
movements focus themselves on altering public opinion directly through high profile events or framing and rhetoric. In the case of the U.S. women’s movement for example, there are numerous examples of contentious events designed to alter cultural norms towards women (Faderman 1992: 249-252; Katzenstein 1999; Taylor 1996). For example, in the *New York Times*, one finds accounts of contentious events performed by feminists to alter cultural norms about youth and beauty in women (New York Times 1971; 1972). Women conducted guerrilla theater to question norms that older women were not beautiful or protested toy fairs to question the beauty norms perpetuated by female dolls. As van Dyke et al. (2004: 37) show the women’s movement, civil rights movement, and the gay and lesbian rights government targeted the state less than 50% of the time between 1968 and 1975.¹

Even when social movements have sought policy change, public opinion shift has often been an intended or unintended consequence. Some movements have intentionally tried to shape public opinion in order to affect policy change. For example, McAdam (1996) argues that part of the SCLC’s strategy was to stage compelling violent events in the media that would move public opinion thereby forcing the federal government to intervene more dramatically on behalf of civil rights. While in this case social movements were seeking state policy change through changes in public opinion, even when social movements do not achieve particular policies they often claim credit for shifts in public opinion (Meyer 2006). For example Mansbridge (1986: 188) in analyzing the failure of the Equal Rights Amendment noted that the campaign “forced Americans to keep thinking about these issues…The result was both creeping feminism and creeping antifeminism. But most of those who pondered these issues have moved in a feminist rather than an antifeminist direction.” Similarly, Meyer and Whittier (1994) argue that an important influence of the women’s movement has been their cultural influences on other social movements.

¹ Particularly for identity movements, we would expect the focus on the state to be less.
² In this paper we are focused on change in attitudes about a particular set of issues; however, social
Thus, public opinion deserves more attention as a social movement outcome variable. The public has been an important target of social movement activity, but even when it has not, much of the qualitative literature suggests that public opinion shifts have been an important result of movement activity. Particularly in the case of the U.S. women’s movement, we have shown that a) these cultural shifts were part of the movement’s own view of what they were trying to achieve and b) many observers of the movement argued that the movement had large effects on public opinion. If public opinion is a social movement outcome, we also need to theorize the mechanisms by which we expect social movement events to influence public opinion.

How might social movement collective action alter public opinion?

Given that change in the collective opinion of the United States regarding gender attitudes was a central goal of the women’s movement the causal mechanisms of how this change is supposed to occur has been largely undeveloped.² We contend that when the media reports on collective action events associated with a particular movement it sends a signal to the public and in turn the public systematically adjusts their attitudes resulting in macro-level changes in attitudes, in our case, towards gender role and expectations. We argue that collective action events will have both short-term influences on gender attitudes, causing an immediate but temporary shift in attitudes, and long-term shifts in attitudes that will persist and shape collective opinion for several years.

² In this paper we are focused on change in attitudes about a particular set of issues; however, social movements may also influence public opinion by increasing the salience of the issues. Because social movement issues are often not yet in the public consciousness, one way that social movement events may alter public opinion is by providing crucial information about problems that exist that might otherwise not be on the public agenda. In this case, we would not necessarily expect to see changes in public attitudes on the issue except for potentially movement from people having no opinion to having an opinion. Important in this case, is that the subject matter is not a known issue area and so we expect increases in salience to be accompanied by increases in opinion but not any particular opinion. This agenda setting influence on salience is an important one although not one we will examine in this paper.
Very few people actually participate or directly witness collective action events held by social movement; rather, they experience events through the media. One of the reasons social movement organizations engage in collective action events is to capture the media attention and influence a greater number of people. Thus these events are used to send messages or signals to the public as a whole. The signal sent to the public contains a variety of pieces of information that may shape attitudes. First, it increases awareness of the different grievances articulated by the social movement. For example, protests against the Equal Employment Opportunity Commission’s lack of enforcement of Title VII in the early 1960s helped to raise awareness of sex discrimination in the workplace, increasing the number of claims of sex discrimination. The reports in the media about collective action events also demonstrate that a critical number of individuals are interested and passionate about the particular issue. We expect that for a lot of individuals in the public the information they are exposed to by the media coverage of these events and issues will be new information. This consciousness raising could lead to individuals building connections between the message of the women’s movement and their personal experiences. We expect that exposure to information about the women’s movement will lead to individuals adopting attitudes more in-line with the goals of the women’s movement.

We expect to observe two different types of changes in attitudes that will be reflected in macro public opinion. First, for some individuals exposure to these collective action events will result in a life-long change in opinion. This group however will have a larger and more long-term influence on macro level opinion through the process of political socialization (Page and Shapiro 1992). As a result we expect to see macro level attitudes about gender to exhibit a long-memory, with persistent change in one direction. As we know a large portion of the population does not follow politics closely or care much about politics, yet still hold opinions about different issues. When exposed to the signal about the women’s movement we expect these individuals will shift their attitudes in towards the more progressive positions. When that signal is no longer present it is likely that the opinion shift will slowly fade away.
Up to this point we have not distinguished between different types of women’s movement events. We have just postulated that events will cause shifts in aggregate opinion about gender attitudes. However, not all events in a social movement are the same and thus we expect some events to have a larger impact on public opinion than other events. Two different ways that events varies that we feel will impact public opinion are large events and when violence is used at an event. Events that attract a large crowd convey a stronger signal meaning that it more strongly suggests that the issue is salient and important. Thus when that information is reported in the media we expect there to be larger than average changes in public opinion. Violent confrontation against demonstrators may create sympathy for the goals that those demonstrators sought. For example, studies of “cycles of protest” argue that public sympathy for movements is created by police violence or repression of protestors. Excessive repression particularly early on can bring public sympathy for social movements and outrage against the position of authorities (Koopmans 1993, 640). For example, McAdam (1996) argues that the drama of the civil rights protest particularly the violence of Southern police and bystanders increased the sense of urgency among the general public as well as among political elites.³

Alternative Explanations for Public Opinion Change.

While our major interest is the relationship of social movement activity to public opinion, numerous scholars of U.S. public opinion have also sought to explain why public opinion changes over time (Kellstedt 2003; Carmines and Stimson 1989; Erikson, MacKuen, and Stimson 2002; Stimson 1999; Page and Shapiro 1992, 1983). We need to consider three different possible influences on public opinion: opinion leaderships by political elites, people adjusting their

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³ Cycles of protest theories also posit the rise of increasingly radical or violent action forms at the end of cycles of protest, which may reduce public support for the movement (see for example Tarrow 1989: 8, 54). Thus, we would also expect the use of violence by social movement activists to reduce support for movement issues within the mass public.
attitudes to fit with existing public policy, and actual experiences that might influence gender attitudes.

Basic arguments about representation suggest that political elites should respond to public opinion as a function of their jobs as representatives. However, an increasing amount of literature questions this relationship (Manza and Cook 2002, Erikson, Mackuen and Stimson 2002, Shapiro and Jacobs 2002). Several scholars have argued that political elites exercise opinion leadership; where through a variety of activities they come out in the lead and shape attitudes on a particular issue (Shapiro and Jacobs 2002). For Carmines and Stimson (1989) the position of political elites have a greater influence on the mass public’s attitudes towards race than vice versa (see also Costain and Majstorovic 1994). Thus, one alternative to the idea that movement action influences opinion is that it is the messages sent from political elites that shape public opinion about gender attitudes.

Page and Shapiro (1983) raise the issue of whether the relationship between public opinion and policy is reversed from the normal causal ordering of public opinion affects policymakers. They look simply at whether policy is moving in the same direction as opinion and find that 1/3 of the policies don’t match public opinion shifts. They note that in a majority of the cases it cannot be ruled out that policy shifted before opinion. Indeed they say that “policy may affect opinion in close to half the cases of congruence between opinion and policy.” (p. 187).

Finally, changing experiences can also shape gender attitudes. For example over the past century women’s role in society has changed considerably. Women have entered the paid labor force, moved from working primarily within the home (both for pay and not for pay), obtained higher levels of education, and delay marriage and children until later in life. Many of these factors have been shown to influence individual level attitudes about women’s roles and opportunities and feminist policy goals (Welch and Studlar 1986, Schreiber 1978, Bolzendahl and Myers 2004, Banaszak and Plutzer 1993). In this paper we consider these alternative explanations as we explore the effect of social movement actions on public opinion.
Data

We draw our data from a variety of sources. In this section we describe our data starting with the dependent variable, moving then to the variables of primary interest and to the control variables.

*Measuring Aggregate Public Opinion.* Our dependent variable is a quarterly time series measure of attitudes about gender roles, norms, and policies. The incorporation of public opinion into studies of social movements and the rigorous testing of the relationship between public opinion and social movements has been hindered by the availability of public opinion data. Questions relating to social movements are not asked very often or on a consistent basis. Also, the timing of social movement events and the administration of relevant survey questions do not coincide in a convenient fashion\(^4\); making it difficult to assess any connection between movements and public opinion. As a result, social movement scholars often end up using a single question that captures only one aspect of the movements’ goals because it is asked in multiple years. However, this usually means scholars are then forced to interpolate between years (e.g. Soule and Olzak 2004; McAdam and Su 2002) or deal with a large number of missing cases (e.g. Guigni 2004, 2007).

To overcome these obstacles we employ a measure of gender attitudes developed by Heather Ondercin (2007). This measures uses 205 survey questions pertaining to roles and expectations of men and women and gender related public policies (collected from *iPoll* and the National Election Studies). The questions are combined into a single measure using the algorithm developed by James Stimson (see Stimson 1999 Chapter 3 and Appendix A; Stimson 2004).

\(^4\) Appropriate survey research questions are usually inspired by social movement mobilization.
This algorithm utilizes the logic of principle components factors analysis to combine multiple public opinion series together by extracting their shared variance. The dyadic ratio algorithm has a number of advantages in creating an index of public opinion. First, it creates a single continuous series out of the number of opinion questions, none of which are consistently asked over the entire period. Second, because it uses questions that are not asked in every time period a wider range of questions that reflect movement goals can be incorporated in our measure. The advantage is that this reduces the bias associated with any specific individual question.

This method assumes that the survey questions that ask about gender roles and expectations are tapping a latent trait about attitudes towards gender roles, gender norms and gender related policies. The algorithm uses the shared variance in survey questions to estimate a single time series of this latent measure. Two types of survey questions were included: a) those measuring attitudes towards women’s roles and status and b) those designed to capture attitudes towards policies supported by the women’s movement. Questions about the role of women and men in society spanned many different topic areas, such as the workplace, family, politics, and military. Policy questions are included when support for the policy indicates greater support of the changing roles and opportunities for women or men. These programs and policies included maternity and paternity leave, Title IX, the Equal Rights Amendment, abortion, and affirmative action. The combination of public opinion questions results in a single time series tapping the latent concept of progressiveness of gender attitudes.

Most important from our perspective, by gaining a longer time series of public opinion, we are then able to really explore the interaction between public opinion and
movement activity. The major disadvantage is that the metric of the Stimson algorithm is a product of how the series is calculated and does not have inherent meaning. For example a 60 does not mean that 60% of the population feels a certain way. However, the scale retains comparative meaning, we can talk about change, 60 is greater than 40.

Movement Activity. As our measure of events related to the U.S. women’s movement, we utilize data from the Dynamics of Collective Action data set, which collects all collective action events from 1960 to 1995 that were mentioned in the daily editions of the New York Times. The event data used here is the subset of events that made claims related to the women’s movements or abortion, which were then coded as either supporting or opposing feminist positions. We then aggregated the 1331 individual events by quarter to create a count of the number of women’s movement events by quarter.

We expect that different types of events may have a larger influence on public opinion, than the average event held by the social movement. Previous research (McAdam and Su 2002) has shown that both police violence and large events have been important influence on movement outcomes. As a result we include three different measures to capture this variation. First, we code the number of very large events in each quarter, defined as events having 10,000 participants or more. Second, we include

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6 Because valence coding can sometimes be misleading (Olzak 2010), the event data were coded by hand by the authors and a graduate assistant using the what, where, why, and how fields as well as the title of the article. Using, Cohen’s kappa statistic, which is generally considered a robust measure of intercoder reliability across multiple coders (Lombard et al. 2002; Landis and Koch 1977; Fleiss 1973) since it takes into account the probability that coders could attach similar values by chance, we found high levels of intercoder reliability for pro-feminist events (k=.81, p=.000).
indicators for two types of police action: the number of events where the police used physical tactics in that quarter and the number of events where the police used violence, attacking the protestors, in that quarter.

Because the measurement of movement events is much more developed within the social science literature, we will not dwell long on the issues underlying these data here. While we know that newspapers are a biased sample of all political events (see McCarthy et al. 1994, Oliver and Myers 1999; Oliver and Maney 2000) that is of little concern in this research because we are exploring the effect of movement activity on public opinion. In order for these events to influence the mass public, information about the movement activity must reach them. Since few are likely to be actual bystanders at demonstrations (and even such bystanders have only limited experiences), mass media is the means by which most of the public experience social movement activities.

Controls for alternative explanations. Several perspectives discussed above suggest that politicians and elected officials may lead the public to adopt more progressive opinions via opinion leadership. Members of Congress engage in a variety of behavior to publicly demonstrate their positions, thus this behavior could also send cues to the public about an issue, which might influence public opinion in ways similar to social movement events. We include a control for one of these cue providing behaviors by including a count of the net number of feminist bills introduced into Congress. Using

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7 The extensive literature on the bias of event data gathered from newspapers suggests that our list of events are likely to represent large, dramatic events involving physical violence, formal organizations or elites involved in policy making (McCarthy, McPhail, and Smith 1996; Oliver and Myers 1999; Oliver and Maney 2000; Ortiz et al. 2005, p. 399).
data from Christina Wolbrecht (2000) on the number of feminist and anti feminist bills introduced into each session of Congress, we simply subtracted the number of anti-feminist bills from the number of feminist bills to achieve our measure of net feminist bill introductions. Our second control for opinion leadership is a measure of the number of women elected to the U.S. Congress. Women serving in the U.S. Congress have typically been stronger supporters of feminist legislation, and have often highlighted issues of women’s equality as well (Swers and Larson 2005, Swers 2002, Dodson et al. 1995). As a result we expect women in Congress to be opinion leaders on the issue of women’s rights and we would expect that as their numbers increase that opinion leadership may become more pronounced.

We also include a measure to examine whether changes in opinions follow changes in policy. Our measure of policy changes is based on the passage of feminist legislation. To calculate this measure we started with Christina Wolbrecht's (Wolbrecht 2000) data on bill sponsorship and co-sponsorship of feminist legislation to create a list of feminist bills proposed in each session of Congress. We then researched the legislative history of each bill to determine which bills became law. The resulting series reflect the number of bills that passed both the House and Senate. Data is only available until 1992, so inclusion of this variable reduces the length of our time series.

We use the workforce participation rate of women 16 years or older to capture the massive demographic and lifestyle changes that have occurred over the last century.  

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8 Many scholars (Sorka and Wlezin 2009; Erikson, Mackuen, and Stimson 2002) argue that public opinion and policy change are endogenous. To test this possibility we conducted a series of Granger Causality tests and do not find evidence of the endogenous relationship.

These changes have created fundamentally different lived experiences, which may also influence public attitudes. While there are multiple indicators that could be used to tap these changes, women’s workforce participation has many advantages. It is available on a quarterly basis for the entire length of our study. Additionally, it is highly correlated with many of the other possible indicators such as the percent of single women and the percent of women with four-year college degrees. As a result we feel it is a good indicator of these larger changes.

Model

To test our expectations about the relationship between social movement events and public opinion we use an error correction model specification (ECM). The ECM is a general class of time series models that is valid for both stationary and non-stationary data (De Boef and Keele 2008). ECM models changes in the dependent variable as a function of a lag of the dependent variable, lagged exogenous variables and changes of exogenous variables. The lagged dependent variable represents the error correction rate, or the rate at which our dependent variable returns to equilibrium after changes in our independent variables. The lag of exogenous variables estimates the long-run effects, or the impact over time. Changes in the exogenous variables estimate the short-run or immediate impact. We include both long-run and short-run effects for our four key independent variables: women’s movement events, large demonstrations, physical tactics used by police and police violence. We only include long-run effects for our other control variables as a way to preserve model parsimony.¹⁰

¹⁰The results reported in the paper are robust even with the inclusion of both the short-run and long-run effects of the control variables. None of the short-run effects are statistical significant and they do not improve the fit of the model.
The flexibility of the ECM suits both our theoretical expectations and the properties of our data. We expect both long-run and short-run effects, which are directly estimated by the model. However, our dependent variable, gender attitudes, is integrated or non-stationary.\(^{11}\) Commonly when modeling non-stationary series we take the first difference of the series. Unfortunately, taking the first difference and modeling the series in a non-ECM framework purges the series of long-run dynamics making it impossible to estimate the long-run effects. The ECM allows us to estimate both long-run and short-run effects when, as is the case with these data, a series is non-stationary.

**Results**

Before we dive into the multivariate analysis, we first examine our gender attitudes series and a women’s movement event series, our dependent variable and key invariable, graphically. Figure 1 displays both of these series quarterly from 1960 to 1995. The solid line represents the gender attitudes series with the range on the left hand y-axis and the dashed line represents number of women’s movement events with the scale on the right hand y-axis. It is important to remember that the metric of the gender attitudes scale is artificial, meaning there is no substantive meaning behind the fact that in 1960 gender attitudes scale is 56 points; rather, we can say that public opinion in 1960 is slightly less feminist than in 1965 when it was 58 points. Nonetheless, we can talk about movement in the series over time and in the case of our gender attitudes scale, we can see that there has been steady growth in the feminist attitudes of the mass public. The low

\(^{11}\) The auto correlation function (ACF) for the gender attitudes series shows strong and persistent correlations suggesting the series is integrated. Both the Augmented Dickey Fuller test and the KPSS test indicate the series is non-stationary. The first difference of the series does not appear to be non-stationary based on these same tests. As a result, we conclude the series is a first order integrated series.
point in the series occurs in 1963, but then we see fairly substantial change over time as attitudes grow more progressive over the next several decades. Attitudes reach their most liberal position in 1991 at 68 points. The gender attitudes series demonstrates two distinct types of movement: a persistent movement over time towards attitudes supporting more gender equality and fluctuation around this general tendency as support for gender equality grows in one time period but then declines in another time period. Both of these types of movement fit with our theoretical expectations.

It is also worth taking a moment to look at the graph of feminist events over time, also reported in Figure 1. The dotted line in the graph indicates the number of events that

12 For more detailed and systematic analysis of the gender attitudes measure see Ondercin (2007). Generally speaking, our measure of gender attitudes moves in the same sort of trajectory as series of individual survey questions on gender roles (Bolzendahl 2004), on workforce participation (Mason 1976, Mason 1988, Simon 1989), on family responsibilities (Bolzendahl 2004, Mason 1976, Mason 1988, Simon 1989) and premarital sex (Bolzendahl 2004) and on the division of labor in marriage (Simon 1989).
occurred in each quarter. We observe only moderate feminist activity with only a few events occurring during the years between 1960 and 1965. The number of feminist events increases each year starting in 1966, with the rise increasing significantly in 1970 and the number of feminist peaking in the third quarter of 1977 with 17 feminist events. After 1980, the number of feminist events declines somewhat although there continues to be some periods of high activity in 1981-1982 and again in the early 1990s. If we compare the two series, moreover, there appears to be considerable shared movement between the gender attitudes measure and the number of women’s movement events in Figure 1. This provides some ocular support for our expectations that women’s movement events cause a shift in macro-level opinion about gender attitudes. To more systematically test this relationship and control for other possible explanations we now turn to a multivariate analysis.

Table 1 reports the results of the multivariate error correction model. We start by looking at the error correction rate, represented by the lag of the dependent variable (gender attitudes_{t-1}), because this tells the rate at which the public opinion measure will return to equilibrium, but is also tells us critical information needed to interpret the substantive effects. The error correction rate is both negative and significant, meaning that gender attitudes generally return back to an equilibrium at rate of 16% each quarter.

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13 Events which could not be given a clear date within a particular quarter were excluded from our analysis.
Table 1. Gender Attitudes Error Correction Model, Quarterly 1960-1992

<table>
<thead>
<tr>
<th>Model</th>
<th>Coefficients (S.E.)</th>
<th>Long-run Multiplier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Attitudes(_{t-1})</td>
<td>-0.16** (0.05)</td>
<td></td>
</tr>
<tr>
<td>Women's movement events(_{t-1})</td>
<td>0.06** (0.03)</td>
<td>0.375</td>
</tr>
<tr>
<td>Δ Women's movement events(_{t})</td>
<td>0.05*** (0.02)</td>
<td></td>
</tr>
<tr>
<td>Large women's movement events(_{t-1})</td>
<td>-0.29** (0.15)</td>
<td>-1.81</td>
</tr>
<tr>
<td>Δ Large women's movement events(_{t})</td>
<td>-0.25** (0.10)</td>
<td></td>
</tr>
<tr>
<td>Police physical tactics(_{t-1})</td>
<td>0.10 (0.16)</td>
<td>0.625</td>
</tr>
<tr>
<td>Δ Police physical tactics(_{t})</td>
<td>0.1 (0.14)</td>
<td></td>
</tr>
<tr>
<td>Police violence(_{t-1})</td>
<td>0.09 (0.56)</td>
<td>0.56</td>
</tr>
<tr>
<td>Δ Police violence(_{t})</td>
<td>-0.15 (0.38)</td>
<td></td>
</tr>
<tr>
<td>Net feminist bill introductions(_{t-1})</td>
<td>0.0003 (0.001)</td>
<td>0.002</td>
</tr>
<tr>
<td>Women in Congress(_{t-1})</td>
<td>-0.0005 (0.02)</td>
<td>-0.003</td>
</tr>
<tr>
<td>Feminist bill passage(_{t-1})</td>
<td>0.17* (0.9)</td>
<td>1.06</td>
</tr>
<tr>
<td>Women's workforce participation(_{t-1})</td>
<td>0.06** (0.03)</td>
<td>0.375</td>
</tr>
<tr>
<td>Constant</td>
<td>6.92*** (2.27)</td>
<td></td>
</tr>
</tbody>
</table>

N 132  
F( 13,  118) 1.84**  
Adjusted R\(^2\) 0.08  
Durbin's Alternative 0.004

Level of Significance * 0.10, **0.05, ***0.01

Our key independent variables are the short-run and long-run estimates for events in the women’s movement. We expect that events in the women’s movement will send a
signal, causing opinion to shift more progressive. The variable indicating change in women’s movement events represents the short-run or immediate effect and the lagged measure of women’s movement events represent the long-run effects. Both the short-run and long-run effects are positive and significant, indicating that collective action events held by the women’s movement result in gender attitudes growing closer to women’s movement positions over time. To better understand how the substantive effects play out over time, Figure 2 shows graphs of both the impulse response and the cumulative effect of a single women’s movement event. Panel A in Figure 2 depicts the impulse response function representing the effect on gender attitudes each quarter due to a single women’s movement event occurring in the first quarter. During the first quarter, we see the immediate, or short-run effect, with a women’s movement event to cause attitudes to shift .05 points more in line with the women’s movement position. We then see the biggest effect in the 2nd quarter after the shock due to the combined effect of both the long-run and short-run. Then the effect of an event grows smaller for each consecutive quarter as the series returns to equilibrium. As we can see it takes several years before the effect of just one women’s movement events reaches zero. Panel B of Figure 2 shows how the effect during each quarter cumulates over time. The cumulative effect illustrates how a single event can have considerable substantive impact as the effects add up over time. The long-run multiplier reported in the second column of Table 1 represents the total long-run effect; here we see that the total long-run effect of one social movement event on gender attitudes is 0.375 points. Specifically, this means that for every single women’s movement event, gender attitudes move over a third of a point. Substantively this is rather large when you consider the gender attitudes series only moved about 13
points more liberal over the entire time frame of the study and the average change in any
given quarter was 0.05 points.

Next we looked at how different types of events may have a different impact on
public opinion about gender attitudes. We expected that larger events and events with
police action may send a stronger signal thus resulting in larger changes. Both the short-
run and long-run effects of the larger events are negative and statistically significant.
This is the opposite direction as we had expected. We conjecture that large
demonstrations may represent too much for the general public to accept and people return
back to status quo gender attitudes. We note that there are considerably fewer larger
events, so despite the magnitude of the coefficients on the large demonstrations do not
erase the substantive effects of regular events. We also would be cautious about putting
too much emphasis on this finding. Large events and our women’s movement event
variable are moderately correlated at .47, which is strong enough to possibly cause issues
with estimation. Additionally, when we remove the women’s movement events from the model trying to isolate the effect of large events, the long-run relationship between gender attitudes and large demonstrations is no longer significant. Neither of our measure of police action and police violence reaches traditional levels of statistical significance.

We controlled for three possible alternative explanations for changes in gender attitudes: opinion leadership by political elites, adjustment of attitudes following the passage of policy, and new experiences. We find no evidence of opinion leadership. Both of our indicators, net introduction of feminist legislation and the number of women serving in Congress fail to reach traditional levels of statistical significance. There is evidence of policy change causing macro-level shifts in opinion, when feminist legislation passes both the House and the Senate gender attitudes move in the direction supported by the women’s movement. A single piece of feminist legislation causes gender attitudes to shift 1.03 points (long-run multiplier reported in column 2 of Table 1). We also find evidence that actual experiences represented by changing demographic trends also cause gender attitudes to grow more progressive. A one percentage point increase in the proportion of women in the paid labor force moves gender attitudes a total of 0.375 points more progressive.

**Conclusion**

This paper is an attempt to revisit our understanding of the role of public opinion in the case of the U.S. women’s movement. We start from the premise that public opinion is an important outcome of social movements. Although policy change has certainly been important for the U.S. women’s movement, feminists equally sought to
change social norms and beliefs about women’s roles. By taking the idea of social change seriously, two important conclusions result from our work.

First, in trying to explain the effect of social movements on public opinion we focus also on the mechanisms by which contentious action might influence opinion, and attempt to present initial tests of these mechanisms. In this paper, we use the dynamic nature of our time series data to explore influences beyond simply focusing on how one time period influences the next. We do find evidence that social movement events influenced gender attitudes, more so than the reigning alternative theory that citizens are following the lead of political elites. Moreover, these effects are not just short-term fluctuations, but rather the effects persist, cumulating over time. Even many years after the event occurred, there is a clear effect on the public’s gender attitudes.

Second, our analysis suggests that those who argue that Congress leads public opinion may need to incorporate social movements into their theoretical perspective more carefully. While many of these authors acknowledge the importance of social movements informally, the discussions of whether public opinion is led by policy or opinion leaders have not included social movements in the empirical models. The results here suggest that the politics of the streets play a large role in public opinion formation above and beyond the politics that occur in the halls of Washington DC. The results here speak to the importance of revisiting the question of how public opinion moves with more careful consideration of the role that social movements play.

Social movement scholars have largely been hampered in exploring the role of public opinion by the limited availability of consistent measures of public opinion over time. We utilize a method for combining individual survey questions into a single scale
that has less stringent requirements in terms of dealing with missing time periods, but produces a scale that is less easily interpreted in concrete terms.

**Bibliography**


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