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The Socioecological Model of Procommunity Action: The Benefits of Residential Stability

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The authors conducted 3 studies to test a socioecological model of procommunity action. Study 1 showed that residents of stable communities purchased a "critical habitat" license plate to support preservation of the environment in their home state more often than did residents of mobile communities. Study 2 demonstrated that home game baseball attendance was less dependent on the team's record in stable cities than in mobile cities. Study 3, an experiment, showed that residential stability had a causal impact on procommunity behavior. Moreover, the effect of stability was partially mediated by identification with the "community." Together, these studies indicate that residential stability can lead to stronger identification with one's community, which, in turn, leads to more procommunity behaviors.

Keywords: residential mobility, well-being, community

Life, liberty, and the pursuit of happiness are considered inherent and inalienable rights in the United States and in many economically developed societies. One form of liberty is the freedom to live where one wants to live. Residential mobility affords individuals the ability to seek out opportunities for better education, better jobs, and better quality of life. However, residential mobility might have societal costs. Starting with the emergence of the "social disorganization" school of sociology (e.g., Shaw & McKay, 1942; Thomas & Znaniecki, 1920), social scientists from a range of disciplinary perspectives have examined the link between residential mobility and important social issues. Criminologists have examined its impact on crime rates (e.g., Sampson, Raudenbush, & Earls, 1997), political scientists have studied its effect on voting behavior (e.g., Highton, 2000; Squire, Wolfinger, & Glass, 1987), communication scholars have pursued its effect on civic engagement and media use (e.g., Kang & Kwak, 2003), and social psychologists have examined its impact on violence (e.g., Cohen, 1998).

Building on and extending these lines of research, we investigated the consequences of residential stability for the well-being of the community at large, as reflected in rates of involvement in activities undertaken for the benefit of the community and community residents. The primary aims of this work were (a) to determine whether residential stability is associated with higher levels of procommunity action and (b) to identify psychological processes that link the distal, macro factor of residential stability with the micro-level behaviors of individuals. To attain these goals, we used a fundamentally social psychological approach—using both a field, correlational method and an experimental, laboratory method—that stands in contrast to the reliance on survey methodology that has characterized most prior research in this area (e.g., Kang & Kwak, 2003; Kasarda & Janowitz, 1974; Sampson, 1988, 1991; Sampson & Byron, 1989). Furthermore, we sought to specify the psychological processes that underlie the causal link between stability and procommunity behavior and tested this causal chain in an experimental setting (see Study 3). Taken together, our approach should help elucidate not only how social structural factors (e.g., residential stability) affect an individual's identity (e.g., an identity as a community resident) but also how identity, in turn, affects an individual's behavior toward society (e.g., procommunity behavior).

The present research is the first attempt to examine the impact of residential stability on procommunity behavior. Complementing Penner, Dovidio, Piliavin, and Schroeder's (2005) definition of pro"social" behavior as a broad category of acts that are beneficial to other people, we defined *pro"community" behavior* as a broad category of acts that are beneficial to the community at large as well as to other community residents. Across three studies, we

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investigated the effect of residential stability on a diverse set of procommunity behaviors. Specifically, we examined the rate of support for preservation of natural habitats in a home state (see Study 1), support for the community baseball team (see Study 2), and helping of other "community" residents (see Study 3). This divergent set of behaviors have common underlying dynamics in that they reflect one's relation and attachment to the community at large as opposed to one's relation to and affection for a particular individual.

The Socioecological Model of Procommunity Action

The central tenets of our socioecological model of procommunity action are that (a) socioecological factors, such as residential stability, have an impact on the degree to which residents take actions for the sake of their community and that (b) psychological processes are involved in this linkage. We built our model on the general perspective first advocated by the "social disorganization" school of sociologists. Shaw and McKay (1942), for instance, predicted that sociostructural factors, such as residential mobility and racial/ethnic heterogeneity, would undermine how communities function, which, in turn, would result in higher crime rates. Sampson et al. (1997) found empirical support for the hypothesized association between residential mobility and crime rates. Similarly, in line with Milgram's (1970) characterization of urban dwellers as unresponsive and unhelpful, a meta-analysis revealed that 46 out of 65 studies found greater helping behavior in smaller communities than in larger communities (Steblay, 1987). Finally, R. V. Levine, Martinez, Brase, and Sorenson (1994) found that residents in less densely populated cities were more likely to help than were those living in more densely populated cities (see also Brickman, 1973, for a similar finding in college dormitories). In short, these studies have demonstrated that socioecological factors play an important role in predicting prosocial or antisocial behaviors.

As pointed out by Sampson (1991), however, the earlier social disorganization theorists did not specify exactly how residential mobility would lead to higher crime rates, except that high turnover might decrease institutional social control. Likewise, earlier studies on the size of communities and helping behaviors did not delineate the psychological mechanisms through which the size of community translates into helping behavior. To address this limitation, Sampson and colleagues (Sampson et al., 1997) have developed and found support for a systemic theory that postulates that residential mobility weakens collective efficacy (the ability to solve the community's problem collectively) by inhibiting social connection among residents, which, in turn, leads to higher crime rates. Building on the work of Sampson et al. (1997), we postulate that residential stability fosters in people an identity as a community resident (e.g., a sense of belonging to the community and positive affect associated with being a community resident) and that identity as a community resident leads to procommunity action. Identity as a community resident is similar to place identity in that it is identification with a particular place (see Feldman, 1990; Proshansky, Fabian, & Kaminoff, 1983). Identity as a community resident is likely to develop when residents have lived in the community for a long time, expect to live there for an extended period of time in the future, and take on some roles as a community resident. In a stable community, many residents have lived in the same community for a long time, and newcomers will likely expect to stay there for a long time, too. Thus, residents in a stable community are likely to develop a strong sense of identity as a community resident. In contrast, in a highly mobile community, many residents have lived in the community for only a short period of time, and few residents expect to stay there for a long time. As a result, individuals likely will not develop an important role identity as a neighbor or community member and, therefore, will not develop a sense of belonging to the community and psychological connection with neighbors as easily.

Consistent with this theorizing, Kasarda and Janowitz (1974) found that length of residence was positively associated with local friendships, psychological attachment to community, and participation in local affairs, controlling for socioeconomic status, age, size of the city/town, and other factors. Sampson (1988, 1991) extended these findings in large-scale survey studies (with samples $>$ 10,000) in England by showing that individuals' local friendship ties were predicted not only by individuals' length of residence but also by the community-level variable of average residential stability, again controlling for a host of other factors. Thus, residents in stable communities had more friends in the neighborhood than residents in mobile communities, even if they themselves had lived there for a short period of time. Replicating Sampson (1988, 1991), Kang and Kwak (2003) found in a survey study in Madison, Wisconsin that length of residence in the current community and residential stability of the community both predicted residents' self-reported civic participation (e.g., talking about the community's needs, working to bring about changes in the community).

In summary, residential stability is likely to nurture an identity as a community resident, including a sense of belonging to the community, which, in turn, should generate procommunity actions. This is because individuals with a strong sense of place identity should be invested in and concerned about the well-being of fellow residents and the community at large. Indeed, previous research on prosocial behavior has repeatedly found that psychological fusion with others, such as oneness (Cialdini, Brown, Lewis, Luce, & Neuberg, 1997) and "we-ness" (Flippen, Hornstein, Siegal, & Weitzman, 1996), is associated with greater helping behavior. In addition, when their group membership is made salient, people often show strong in-group favoritism and prosocial behavior toward other in-group members (e.g., M. Levine, Prosser, & Evans, 2005), even when the group was created on an arbitrary basis (see Tajfel & Turner, 1986, for a review). Moreover, when common group identity (e.g., common fate) is made salient, participants offer help even to out-group members (Dovidio, Gaertner, & Validzic, 1997; Gaertner, Dovidio, & Rust, 1999), suggesting the importance of identity in prosocial behavior. Thus, an identity as a community resident should give rise to a sense of belonging, oneness with other residents, and common group identity or "we-ness," which should translate into a greater degree of procommunity action.

The Present Studies

We conducted three studies to test our socioecological model of procommunity action. Because this is the first attempt to test this model empirically, the primary goal of the first two studies was to establish a direct link between residential stability and procommu-

nity behaviors. Toward this end, we examined objective indicators of procommunity behaviors such as the purchasing of a "critical habitat" license plate (see Study 1) and attendance at home baseball games (see Study 2). Previous research on socioecological factors (e.g., size of the city, rural vs. urban) and procommunity behaviors has often relied on nonexperimental methods (Kang & Kwak, 2003; Sampson, 1988, 1991; see also Amato, 1983; Steblay, 1987, for a review). Therefore, a causal relation between socioecological factors and procommunity behaviors has not been established. To address this issue, we created new "microcommunities" in a laboratory and experimentally manipulated the stability of these communities (see Study 3). In Study 3, we also tested whether the effect of stability on procommunity behavior is mediated by the degree of identification with the community. In summary, using diverse methods, we examined the direct link between residential stability and procommunity behaviors and the role of identity as a community resident as a mediator between residential stability and procommunity behavior.

Study 1: The Critical Habitat Study

In Minnesota, residents can purchase a "critical habitat" license plate by paying an additional fee of $30 per year. All of the funds raised through the purchase of this license plate go to the Minnesota Department of Natural Resources, which buys and manages natural habitats throughout the state. Thus, purchasing a critical habitat license plate benefits the community at large. In Study 1, we tested whether residents in a stable community were more likely than residents in a mobile community to have purchased a critical habitat license plate.

Method

In the fall of 2003, we contacted Minnesota's Driver and Vehicle Services (DVS), a subdivision of the Department of Public Safety, to inquire about whether we could obtain the addresses of individuals who purchased a critical habitat plate. The DVS agreed to give us access to the data from the Minneapolis and St. Paul metropolitan area (i.e., Hennepin, Dakota, Scott, Anoka, Ramsey, Carver, and Washington Counties) for research use. The data set included 55,635 addresses. Of these addresses, 396 (0.71%) were not included in the following analyses because (a) they were outside of Minnesota, (b) they contained inaccurate zip codes (due either to data entry error made by the DVS or to error in self-report on vehicle registration forms), or (c) they did not exist in the 2000 census (e.g., new suburban subdivisions that did not exist at the time of the 2000 census data collection but did exist at the time of "critical habitat" data collection in 2003).

We sorted the valid addresses by zip code and counted the number of the critical habitat plates purchased within each zip code area. There were 152 zip codes in the metropolitan area. Because the census also reported the number of vehicles in each zip code, we were able to compute the proportion of the total vehicles in each zip code area that had the critical habitat plate. We then obtained residential mobility data from the 2000 census, which reported the number of residents who lived in the same house in 1995. We computed mobility by taking the difference between the total population of a zip code area and the number of residents in the same house from 1995 to 2000 and dividing the difference by the total population for that zip code. Residential stability, therefore, was equal to 1-residential mobility (e.g., if mobility is .47, then stability is .53). Because the data available for residential stability were at the level of zip code, zip code served as the unit of analysis (i.e., $N = 152$).

Median income and political orientation might be confounded with residential stability and our main outcome measure. Thus, we obtained the median income of the 152 zip code areas from the 2000 census. In addition, we obtained, from the Federal Election Commission Web site (www.fec.gov), information regarding the number of residents in each zip code who donated more than $200 to the 2004 presidential campaign and computed the proportion of donors in each zip code who were Democrats.

We first examined the distribution of key variables. According to Curran, West, and Finch (1996), skewness greater than 2 and kurtosis greater than 7 should be considered outliers. None of the key variables departed markedly from the normal distribution (residential mobility: $M = 47.65\%$, $SD = 11.39\%$, skewness $= -.33$, kurtosis $= 2.58$; median income: $M = \$58{,}391$, $SD = \$16{,}280.05$, skewness $= .72$, kurtosis $= 2.49$; proportion of critical habitat license plates: $M = 4.00\%$, $SD = 1.42\%$, skewness $= .00$, kurtosis $= -.31$; proportion of pro-Democrat donors: $M = 47.53\%$, $SD = 25.87\%$, skewness $= .09$, kurtosis $= -.51$).

Results and Discussion

Our prediction was clearly supported, as the proportion of residents who engaged in the procommunity behavior was higher in stable communities than in mobile communities. Specifically, residential stability was positively correlated with the proportion of critical habitat license plates, $r(150) = .34$, $p < .01$.

The observed association between residential stability and procommunity behavior, however, could be due to third variables such as wealth and political orientation of the community. For instance, it is possible that stable communities are wealthier than mobile communities and that wealth is associated with the purchase of the critical habitat license plate. Indeed, the median income of the zip code was positively correlated with the proportion of critical habitat license plates, $r(150) = .57$, $p < .01$, and with residential stability, $r(150) = .38$, $p < .01$. It is also possible that communities with more Democrats are more proenvironmental than communities with more Republicans and that political orientation of the community is associated with the purchase of the critical habitat license plate. Surprisingly, the proportion of Democratic donors was *negatively* associated with the proportion of critical habitat license plates, $r(150) = -.17$, $p < .05$. That is, the zip code areas with more Republican donors had a greater proportion of critical habitat license plate owners. This might be because the zip code with more Republican donors had a higher median income, $r(150) = .36$, $p < .01$. The proportion of Democratic donors was not associated with residential stability, $r(150) = -.12$, *ns*.

Next, we tested whether the connection between residential stability and procommunity behavior would hold when controlling for the wealth and political orientation of the community. We conducted a regression analysis, predicting the proportion of critical habitat license plates from residential stability, median income, and the proportion of the Democrat donors. Median income and political orientation being equal, residential stability was still

positively associated with the proportion of critical habitat plates ($B = .018$, $SE = .009$, $\beta = .14$), $t(148) = 2.00$, $p < .05$. Thus, the association between residential stability and procommunity behavior observed earlier was not due merely to the confounding variables of the wealth and political orientation of the community.

In summary, Study 1 provided initial support for the socioecological model of procommunity behavior by showing the predicted positive association between residential stability and procommunity behavior (i.e., donation toward preservation of natural habitats in one's home state). This association remained significant even when statistically partialling out the influence of potential third variables such as median income and political orientation. A particular strength of Study 1 was that the procommunity behavior examined was an actual behavior that occurred in a natural context as opposed to self-reported procommunity actions measured in most previous research (e.g., Kang & Kwak, 2003; Sampson, 1988, 1991). However, paying an extra fee once a year does not necessarily indicate sustained effort to support the community. As articulated by Omoto and Snyder (1995, 2002), the motives behind, and the outcomes afforded by, sustained helping behavior (e.g., volunteerism) can be quite distinct from those associated with one-time helping behavior (e.g., bystander intervention). We conducted the next study to address this limitation.

Study 2: The Baseball Study

In Study 2, we sought to test the relation between residential stability and continuous community support. Toward this end, we chose to examine the home game attendance of major league baseball teams for an entire season. A professional sports team is often considered an asset to the community, and the continued existence of the team in the given community is determined in part by the degree of support provided by community residents (e.g., home game attendance). Because a professional sports team is intimately connected with the community, and because it takes money, time, and effort to attend a game, we considered attending a home game to be a procommunity behavior. Just as wearing home team apparel is a behavioral expression of group identity (Cialdini et al., 1976; Oishi, 2006), attending a home game can be an expression of one's identification with the home team and with one's community. Alternatively, sometimes attendance can be a reflection of the entertainment value of the game itself (Wann, Schrader, & Wilson, 1999). Which of these two motives predominates in a given city will be revealed by the pattern of home game attendance. If entertainment is the prevailing motive, then attendance will fluctuate with the entertainment value of the product, which the team's win–loss record presumably reflects. However, if identification with one's community is the prevailing motive, then attendance will not be contingent on the team's record because the ability of the experience to satisfy this motive does not depend necessarily on the team's success. We chose to focus on baseball for two reasons. First, there are 81 home games per season in major league baseball. Throughout the long baseball season, teams are likely to experience ups and downs, which are reflected in fluctuating records. This provides an ideal condition for testing the idea of sustained community support because sustained community support manifests itself most apparently when the team is not doing well. Second, baseball is a relatively affordable activity, which enables a wide range of community residents to attend home games.

A positive correlation between a team's record and its home game attendance over a season signifies that residents attend home games when the team is doing well, but they do not attend when the team is doing poorly. Thus, a positive association indicates that the entertainment value of the game, as indicated by the team's record, determines attendance and that community support is *conditional*. In contrast, a lack of association between a team's record and its home game attendance indicates that residents attend home games even when the entertainment value of the game is low, indicating sustained, *unconditional* community support. The socioecological model of procommunity behavior predicts that cities with low residential stability will show relatively low levels of sustained procommunity behavior (i.e., a positive correlation between the team's record and attendance), whereas cities with high residential stability will show relatively high levels of sustained procommunity behavior (i.e., a lack of or negative correlation between the team's record and attendance). In summary, Study 2 investigated our model using sustained procommunity behaviors as opposed to the one-time procommunity behavior examined in Study 1. We also conducted this test at a broader level of community than that which was used in Study 1 (i.e., metropolitan area rather than zip code area) to provide further support for the ecological validity of the findings from Study 1.

Method

We obtained the home game attendance data for 28 major league baseball teams for the 2003 season from www.espn.com (data from the Canadian teams—Toronto and Montreal—were excluded because residential mobility data were obtained from the 2000 U.S. census). We computed the winning percentage preceding each home game and used it as an index of team performance at the time home game attendance was measured. As in Study 1, we computed residential mobility for each city using the 2000 U.S. census data on the number of residents living in the same house in 1995. The metropolitan area for each U.S. baseball team was operationalized on the basis of the U.S. census definition of "metropolitan area." We also obtained information on median income and population size from the 2000 U.S. census data.

Because many of the winning percentages computed for the first 10 home games deviated sharply from the season average (SDs $>$ 2.00 because when there was only a small number of games played, winning percentage could be extreme such as 1.00 and 0.00), we decided to exclude the data from the first 10 home games from the main analyses. We included only the first game of a doubleheader (i.e., when two games were played on the same day). The skewness and kurtosis of all key variables were well within the range of the normal distribution, according to Curran et al.'s (1996) criteria: .08 and $-.25$ for residential mobility, .03 and $-.81$ for median income, $-.49$ and .53 for winning percentage, and .141 and $-.60$ for attendance.

Results and Discussion

Table 1 lists all 28 U.S. major league baseball teams in the order of residential mobility. It also shows population, median income, and the within-team correlation between team record and home

Table 1
Major League Baseball Teams: The Correlation Between Their Record and Their Home Game Attendance During the 2003 Season in Study 2

Metro area	Team	Pop (mil.)	Mobility (%)	Median income	Record–attendance correlation
Pittsburgh	Pirates	1.66	35.19	$38,142	−.155
NY	Yankees	16.6	38.58	$49,648	−.171
NY	Mets	16.6	38.58	$49,648	.077
Philadelphia	Phillies	4.82	38.65	$47,265	−.121
Cleveland	Indians	1.67	40.21	$41,920	.219
Detroit	Tigers	3.63	41.59	$48,541	.178
Boston	Red Sox	3.78	42.30	$53,908	−.236
Chicago	Cubs	7.69	43.46	$50,747	−.318**
Chicago	White Sox	7.69	43.46	$50,747	.150
St. Louis	Cardinals	1.94	44.15	$44,221	−.007
Baltimore	Orioles	1.94	44.30	$46,931	−.139
Milwaukee	Brewers	1.22	46.29	$43,727	.263*
San Francisco	Giants	2.82	46.70	$57,098	−.323**
Oakland	Athletics	2.82	46.70	$57,098	.198
Cincinnati	Reds	1.4	46.75	$44,485	.433**
Minneapolis	Twins	2.22	46.88	$53,242	.145
LA	Dodgers	10.89	48.65	$44,735	.242*
LA	Angels	10.89	48.65	$44,735	.059
Kansas City	Royals	1.26	49.24	$45,136	.088
Miami	Marlins	4.62	51.00	$40,214	.486**
Tampa Bay	Devil Rays	1.94	51.57	$37,864	−.173
Houston	Astros	3.51	51.81	$44,658	.396**
Seattle	Mariners	2.54	53.26	$50,866	−.031
San Diego	Padres	2.49	55.34	$46,610	.117
Denver	Rockies	1.84	55.49	$50,372	.293*
Dallas	Rangers	3.81	55.57	$46,993	−.114
Atlanta	Braves	3.24	56.76	$52,512	.374**
Phoenix	Diamondbacks	2.68	58.18	$44,623	.291*

Note. Population, mobility, and median income were based on the 2000 Census. The teams were ordered in terms of residential mobility.
* $p < .05$. ** $p < .01$.

game attendance during the 2003 season. Figure 1 shows this correlation for the Pittsburgh Pirates (the team in the most stable city) and the Arizona Diamondbacks (the team in the most mobile city). A positive correlation seen for Arizona indicates that Arizona residents attended home games more when the team was doing well than when it was doing poorly (i.e., conditional community support), $r(69) = .29$, $p < .05$. In contrast, the lack of a correlation for Pittsburgh indicates that Pittsburgh residents attended home games when the team was losing as much as when it was winning (i.e., unconditional community support), $r(66) = -.16$, *ns*. Most important, our main prediction was clearly supported, as the within-team correlation between team records and home attendance was higher in mobile cities such as Phoenix and Atlanta than in stable cities such as Pittsburgh and Philadelphia, $r(26) = .41$, $p < .05$ (see Figure 2).

We tested our hypothesis more formally using multilevel random coefficient models (MRCM). Although the above correlation provides valuable information, within-team correlations obtained at Level 1 (within-team level) are not equal in reliability. Some correlation coefficients are more reliable than others because of different standard errors across the 28 teams. MRCM explicitly takes into account differences in the reliability of Level 1 coefficients when testing whether variability in Level 1 coefficients is associated with Level 2 (between-team) variables such as residential mobility (see Kenny, Kashy, & Bolger, 1998, for the advantages of MRCM over traditional models). Toward this end, we used the hierarchical linear modeling (HLM 5.02) program (Raudenbush, Bryk, Cheong, & Congdon, 2001). The Level 1 (within-team) model was as follows:

$$yij = \beta_{0j} + \beta_{1j} \times (\text{team performance}) + r_{ij},$$

where Y_{ij} was the home game attendance (the number of people who attended a game) for team j on game i, β_{0j} was a random coefficient representing the intercept for team j (here average home game attendance because team performance was centered around each team's mean), β_{1j} was a random coefficient for team performance, and r_{ij} represents error. Because team performance (i.e., winning percentage) was centered around each team's mean over the season, coefficients for team performance described relations between team performance and home attendance.

The main hypothesis about the moderating role of residential mobility on attendance was tested at the Level 2 (between-team level) model, which was specified as follows:

$$\beta_{0j} = \gamma_{00} + \gamma_{01} \times (\text{median income}) + \gamma_{02} \times (\text{population}) + \gamma_{03} \times (\text{mobility}) + u_{0j}$$

$$\beta_{1j} = \gamma_{10} + \gamma_{11} \times (\text{median income}) + \gamma_{12} \times (\text{population}) + \gamma_{13} \times (\text{mobility}) + u_{1j},$$

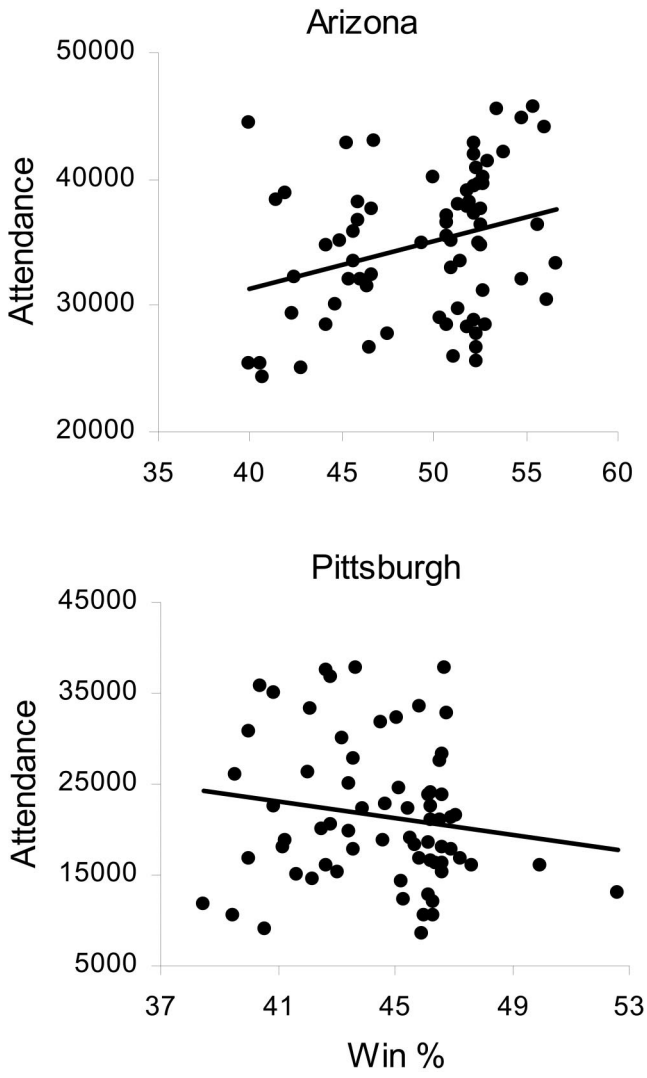

Figure 1. The association between team performance and attendance for the Pittsburgh Pirates and Arizona Diamondbacks.

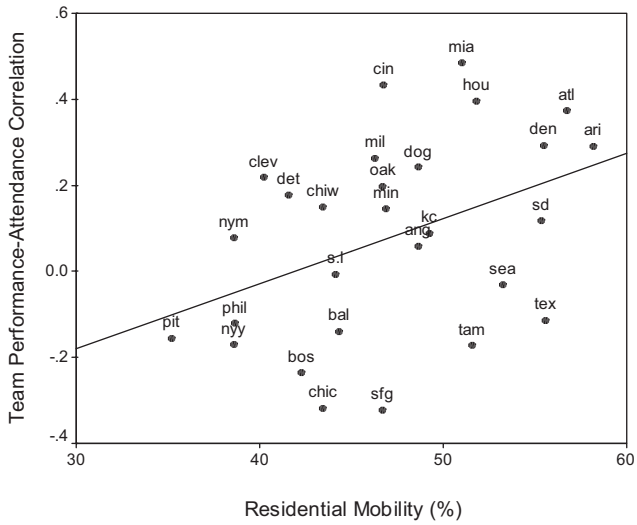

Figure 2. The association between the within-team correlation and residential mobility in Study 2.

where β_{0j} (the average home game attendance) and β_{1j} (or the within-team association between team performance and attendance) were predicted by residential mobility, median income, and population (in millions) of each city. All the variables were grand centered (i.e., centered around the grand mean).

Table 2 shows the results of the MRCM analysis. The average home game attendance for these 28 teams in the 2003 season was 29,086.47. Overall, the season average home attendance was larger in cities with higher median income than in cities with lower income ($\gamma_{01} = 0.65$, indicating that a $1,000 increase in the median income of the city was equivalent to 650 more attendees per game). It was also greater in larger cities than in smaller cities ($\gamma_{02} = 748.55$, indicating that a 1 million increase in city size was equivalent to 748.55 more attendees per game). Residential mobility was unrelated to the season average home attendance. On average, team performance was positively associated with home game attendance ($\gamma_{10} = 199.93$). On average, a 1% increase in team performance was associated with 199.93 more attendees. Most important, however, this within-team association between team performance and attendance was significantly higher among teams located in high-mobility cities than among teams located in stable cities ($\gamma_{12} = 31.41$, $t = 2.49$, $p < .05$). Specifically, in a city 10% higher in residential mobility than the average, a 1%increase in team performance was associated with 514.03 (= 199.93 + 10 × 31.41) more attendees. In a city 10% lower in residential mobility than the average, a 1% increase in team performance was associated with 114.17 (= 199.93 − 10 × 31.41) fewer attendees. In other words, home game attendance in stable cities tended to be greater when the home team was doing poorly than when it was doing well. Although median income and size of the city were both associated with higher overall home game attendance, they did not moderate the key relation between team performance and attendance.

In summary, consistent with the socioecological model of procommunity action, winning percentage was more positively associated with home game attendance in cities with higher rates of mobility. We found support for the socioecological model of procommunity action, again using an objective behavior in a naturalistic setting, while controlling for the median income and

Table 2
Hierarchical Linear Model Analysis of Unconditional Community Support in Study 2

Fixed effect	Coefficient (*SE*)	*t*	*p*
Intercept 1, β_{0j}			
Intercept 2, γ_{00}	29086.47 (1221.37)	23.82	.000
Median income, γ_{01}	0.65 (0.25)	2.59	.016
Population, γ_{02}	748.55 (362.40)	2.07	.050
Residential mobility, γ_{02}	168.90 (178.41)	0.95	.354
Team performance slope, β_{1j}			
Intercept, γ_{10}	199.93 (78.00)	2.56	.017
Median income, γ_{11}	−0.00 (0.02)	−0.00	.998
Population, γ_{12}	5.91 (18.75)	0.32	.755
Residential mobility, γ_{12}	31.41 (12.60)	2.49	.020

the size of the city. Residents of stable cities attend games regardless of how well the team is doing. This finding suggests that residents in stable communities have a stronger degree of identification with and loyalty to a local team and the community itself than do residents in mobile communities. This outcome further implies that when a social dilemma arises (e.g., an energy crisis; see Dawes & Messick, 2000, for a review), residents in stable communities may be more likely to behave in a prosocial fashion than those in mobile communities.

A key strength of Study 2 was that we used home game attendance throughout the baseball season, which lasted over 5 months (thereby providing a measure of sustained procommunity actions), as opposed to the one-time procommunity action measured in Study 1. A limitation of Study 2, however, was that we did not separate different neighborhoods within a metropolitan area that support different teams. For instance, residents in the north side of Chicago tend to support the Chicago Cubs, whereas residents in the south side of Chicago tend to support the Chicago White Sox. There are similar divisions within New York, Los Angeles, and the San Francisco Bay Area. We did not calculate residential mobility separately for such divisions within the same metropolitan area because there are many ambiguous neighborhoods (e.g., Manhattan) in terms of the dominant team. It is encouraging, then, that despite imperfections in our residential stability data, we were able to find the predicted link between residential stability and procommunity action.

The primary goal of the first two studies was to provide empirical evidence for the relation between residential stability and objective procommunity behaviors that people perform in their daily lives. These two studies were correlational, however, and therefore, a strong causal inference cannot be made readily. It is possible that a prevalence of procommunity actions leads to residential stability, as opposed to residential stability leading to greater procommunity action. In addition, in the first two studies, we did not examine any psychological mechanisms underlying the link between residential stability and procommunity action. We conducted Study 3 to address these issues.

Study 3: Creating "Micro-Communities" in the Laboratory

We conducted Study 3 with two goals in mind: (a) to test whether the stability of a community has a causal influence on procommunity behavior and (b) to test whether identity as a community resident mediates the link between residential stability and procommunity action. We manipulated the stability of a community and examined whether stability led people to feel a stronger degree of identification with the community, and whether this, in turn, led to more helping behavior toward other community members. Specifically, participants in this study were randomly assigned to either a stable or mobile community to perform four tasks in a group. Participants in the "stable community" condition worked on a series of tasks with the same people, whereas participants in the mobile condition worked on the tasks with a different group of people for each task. In each group, one of the community members was always a confederate. In the final task, a trivial pursuit game, the confederate pretended that she or he was clueless. We videotaped and later coded how often participants offered help to the confederate as well as to other fellow community members.

Because the number of interactions expected in the future is known to have an impact on cooperative behaviors among strangers (Axelrod & Hamilton, 1981), we first set the number of social interactions finite to control for expectations for the number of future interactions and for reciprocity norms associated with iterated interactions. We also assessed the critical dependent variable of helping behavior during the final task, before which participants were notified that there would be no future interactions with the other community members (i.e., expectation for future interactions was minimal and constant).

Because previous research has found that likability of a possible recipient is a predictor of helping behavior, at least in North America (e.g., Carnevale, Pruitt, & Carrington, 1982; Gross, Wallston, & Piliavin, 1975; Miller & Bersoff, 1998), we also manipulated the likability of the target person (a confederate) who pretended to be helpless in the final task. Because friendliness is associated with likability (e.g., Cash, Begley, & McCown, 1975), and friendliness is associated with helping behavior (e.g., Brickman, 1973), we predicted that likability of the possible recipient would determine participants' friendliness toward the recipient, which, in turn, would determine the level of helping offered to this person. We added this manipulation to examine (a) whether stability would have an effect on procommunity behavior above and beyond the likability effect and (b) whether the beneficial effect of residential stability would be limited to likable members. In fact, it is possible that residential stability would lead to less interest in helping a disliked group member, whereas it would lead to greater interest in helping a liked group member. If the latter were true, then this would provide an important boundary condition for the facilitating effect of residential stability on procommunity behavior.

In short, we tested (a) the direct effect of residential stability on procommunity behavior, using the experimental method, and (b) two mediational processes linking residential stability and likability of the possible recipient of help to the frequency of help offered to the confederate and other community members (i.e., residential stability → identity as community residents → procommunity behavior, and likability of the confederate → friendliness → procommunity behavior).

Method

Participants. Participants were 143 University of Minnesota students (35 men and 103 women; 5 did not provide this information). Of the 143 participants, 103 identified themselves as European Americans, 22 identified themselves as Asian Americans, 4 identified themselves as African Americans, 3 identified themselves as Hispanic Americans, and 6 chose the category "other." Individuals received either $10 or 1-hr research credit for their participation. In total, there were 51 groups run in this study. Data from five groups were unusable because the video camera malfunctioned, which prevented any assessment of the critical helping behavior.

Procedure. The participants were told that the experiment concerned group dynamics and task performance and that they would engage in four tasks. Experimental sessions involved three groups of 3–5 individuals in each session. Participants were ran-

domly assigned to each of the three groups. The manipulation of residential stability was introduced at the level of session. In the mobility sessions, the groups were dissolved after each task and new groups were formed, whereas in the stable sessions, groups were maintained throughout the four tasks. One of the group members was always a confederate who acted in either a likable or unlikable fashion.

Confederates were trained in advance for about 5 hr, during which time they were given a brief orientation to serving as a confederate in a social psychology experiment. They were then given a list of likable behaviors (e.g., moderate nodding, smiling) and unlikable behaviors (e.g., sighing, rolling eyes). Prior to the experiments, all of the confederates (three male and five female research assistants who were blind to our hypotheses) practiced, under supervision, playing a likable and an unlikable person in the same group situation as the real experiment until they were able to behave naturally. Of the 51 groups, 18 groups were run with a male confederate, and 33 were run with a female confederate throughout the four tasks.

The experiment was conducted in a classroom with a common room (about 30 feet $\times$ 15 feet) surrounded by six small compartments (about 8 feet $\times$ 10 feet). After completing, in the common room, a brief questionnaire about their personality and values, participants were randomly assigned to one of three groups and were seated in a compartment with the other group members. The assignment of participants to one of the three groups was made by the order in which participants arrived at the experimental room by providing an experiment-wide ID that combined group number (1–51) and member number (a, b, c, d, e). That is, the person who arrived first was assigned to Room 1 (e.g., 1a), the second person to Room 2 (e.g., 2a), the third person to Room 3 (e.g., 3a), the fourth person to Room 1 (e.g., 1b), and so forth. Three confederates were among participants in the common room, and the experimenter assigned them to different groups by providing IDs with different group numbers. The assignment of the three confederates was also determined by the order in which they arrived at the experimental room. Once participants completed the questionnaire, they were told to go to the room that matched their ID (e.g., Participants 3a, 3b, 3c, and 3d to Room 3). From this point on, all of the tasks were videotaped. For ease of identification, participants wore ID tags on their chests.

Among the four tasks, the first three tasks were filler tasks that were designed to make the cover story believable and to have participants spend meaningful time in the group. The first task was a budget allocation task in which each group was asked to determine how to allocate a $5 million budget cut among five categories (i.e., computing facility, library, athletic facility, resident halls, and student organizations) in the University of Minnesota budget. Each group was asked to reach a consensus on the allocation of the budget cut. The second task was a modified version of the common resource task used by Brewer and Kramer (1986). Each group was given 1,200 points. Each member was given 25 points at each round. They were asked to accumulate as many points as possible for themselves but also to remember that contributions to the common pool would grow with interest (rates ranging from 1% to 10%), benefiting everyone in the long run. They played four rounds of this task. The third task was a modified version of the forest resource task used by Sheldon and McGregor (2000). In this task, each member played as a representative of a timber company. Three to five timber companies (depending on the number of members in each group) were to cultivate 200 hectares of timbered land. Each company could harvest up to 10 hectares per year, and the forest regenerated at a rate of about 10% per year. They played this task for four rounds. The amount of points or hectares that participants kept for themselves in the second and third task, respectively, was not disclosed to other group members.

The final task was the critical one for this experiment. Here, we used a trivial pursuit task. In this task, although they were still in their small groups, all members were told that they would be playing against all other participants in the same session (i.e., against 8–14 others). They were told that the person who solved the most trivial pursuit questions in each session would win a $10 coupon to a store of their choice (Amazon, Papa Johns, or Blockbuster). During this 10-min task, the confederate always sighed, looked clueless, and wondered aloud about the questions. However, confederates were instructed not to directly seek help. Immediately before the beginning of the final task, the experimenter explicitly told participants that they could help each other, if they wanted. However, the experimenter also told them that helping others would decrease their own chance of winning the prize. The confederates were instructed to behave, depending on the likability condition, consistently in either a likable or unlikable way throughout the four tasks.

After finishing the four tasks, participants completed a final questionnaire about the task and provided demographic information. We assessed participants' degree of identification with the group with four statements: "I felt a strong sense of belonging to the last group (group during the trivial pursuit task) that I was assigned," "I regret that I belonged to the last group that I was assigned (reversed item)," "I was glad to be a member of the last group that I was assigned," and "I did not feel very sorry for other group members when they were having problems during the last task (reversed item)." These items were based on items previously used to measure group identity (e.g., Doosje, Ellemers, & Spears, 1995) and empathy (e.g., Davis, 1994). Participants indicated their agreement with these statements on a 7-point scale, ranging from 1 (*not at all*) to 7 (*very much*). We took the average of these four responses to create a group identity score ($\alpha = .61$). For a manipulation check of likability, participants then rated each of the other group members (in the last task) in terms of how much they liked them on a 7-point scale, ranging from 1 (*not at all*) to 7 (*very much*). As expected, the confederates who played a likable role were rated as more likable than those who played an unlikable role ($M = 5.79$, $SD = 1.10$ vs. $M = 5.01$, $SD = 1.61$), $t(123) = 3.15$, $p < .01$.

Two coders who were unaware of our hypotheses viewed the videotape segment of the final task and counted the number of times each participant helped the confederate and the other group members, separately. Overall, the two coders were in good agreement on the number of times the participant helped the confederate, $r(103) = .70$, $p < .001$. We identified three cases, however, in which the two coders differed by more than three (e.g., Coder A observed one helping behavior, whereas Coder B observed four helping behaviors). Shigehiro Oishi checked the videotapes for these three instances and resolved disagreement in coding. This resulted in a slightly higher interrater reliability, $r(100) = .76$, $p < .001$. The results reported below include these three cases, but the results were virtually identical with or without the three cases. The

two coders were also in good agreement on the number of times help was offered to other nonconfederate group members, $r(103) = .77$, $p < .001$. In addition, these two independent observers rated each participant's friendliness toward the confederate, $r(99) = .37$, $p < .001$, and other group members, $r(102) = .43$, $p < .001$, on a 7-point scale (1= *not at all friendly*, 7= *extremely friendly*). We took the average of the two ratings to compute helping and friendliness scores.

Because we were interested in between-community differences in residential stability, identity with the community, and helping toward other community members, the unit of analysis in Study 3 was at the level of community. We took the mean of individuals' responses for each group in the case of identity, friendliness, and helping behavior (e.g., the average of 4 group members' identity scores). According to Curran et al.'s (1996) criteria, the key variables again were approximately normally distributed (helping toward the confederate: skewness = 1.45, kurtosis = 2.38; helping toward other community members: skewness = 1.36, kurtosis = 1.11; identity as a community resident: skewness = .27, kurtosis = −.72; friendliness toward the confederate: skewness = .45, kurtosis = −.66; friendliness toward other community members: skewness = .20, kurtosis = −.51).

Results and Discussion

Table 3 presents the means and standard deviations of the frequency of helping behavior toward the confederate and other nonconfederate community members for each experimental condition. Because the gender of the confederate did not make a significant difference in the frequency of help offered to the confederate, $t(44) = 1.66$, $p > .10$, we did not include it in the following analyses. We also conducted a regression analysis to examine the interaction between the stability and likability manipulations. The interaction was nonsignificant for helping toward the confederate ($B = -.89$, $\beta = -.10$), $t(42) = -0.69$, *ns*, but it was significant for helping toward other nonconfederate community members ($B = -.58$, $\beta = -.33$), $t(42) = -2.34$, $p < .05$ (we discuss this interaction later). We used Amos 5 to test our theoretically derived predictions regarding helping toward the confederate and helping toward other nonconfederate community members, separately. Because the interaction was significant for the second dependent variable, we repeated the critical analyses for helping toward nonconfederate community members with the interaction term included.

Helping toward the confederate. First, we tested whether stability of the community and likability of the confederate predicted helping toward the confederate. Our prediction was supported, as participants in stable "communities" offered more help toward the struggling community member (i.e., the confederate) than did those in the unstable communities ($B = .62$, $SE = .25$, $\beta = .35$, critical ratio [*CR*] = 2.50, $p < .05$). Surprisingly, likability of the confederate was unrelated to helping toward the confederate ($B = .12$, $SE = .24$, $\beta = .07$, $CR = 0.50$, *ns*).

Next, we tested the mediational model outlined above and visually presented in Figure 3. In addition to the paths described in this figure, stability and likability of the confederate were allowed to covary, and identity as a community resident and friendliness toward the confederate were allowed to correlate with each other. However, none of these paths were significant, and therefore they are not described in Figure 3. This model fit the data very well, as all of the major fit indices showed excellent fit, $\chi^2(1, 46) = 0.01$, $p = .92$, goodness-of-fit index (GFI) = 1.00, comparative fit index (CFI) = 1.00, normed fit index (NFI) = 1.00, and root-mean-square error of approximation (RMSEA) = .00. Most central to our hypothesis, our mediational model was supported, as the direct effect of residential stability on helping behavior toward the confederate was partially mediated by the degree of identification with the community. As seen in Figure 3, residential stability had a strong positive effect on identity as a community resident ($B = .57$, $SE = .21$, $\beta = .36$, $CR = 2.78$, $p < .01$), which, in turn, significantly predicted helping behavior toward the confederate ($B = .25$, $SE = .12$, $\beta = .23$, $CR = 2.00$, $p < .05$ [Sobel = 1.70, $p < .10$]). However, the direct effect of residential stability on helping toward the confederate remained significant even after including identity as the community resident ($B = .47$, $SE = .19$, $\beta = .27$, $CR = 2.50$, $p < .05$). This suggests that there were other factors that explain the effect of residential stability on helping toward the struggling community member. In addition, as predicted, likability of the confederate had a positive effect on friendliness toward the confederate ($B = .35$, $SE = .18$, $\beta = .29$, $CR = 1.94$, $p = .05$), which, in turn, predicted helping toward the confederate ($B = .84$, $SE = .16$, $\beta = .58$, $CR = 5.32$, $p < .001$ [Sobel = 1.85, $p = .06$]).

Helping toward other community members. Next, we tested whether residential stability led participants to help other nonconfederate community members as well. Our hypothesis was again supported, as residential stability indeed led participants to help other community members ($B = 1.08$, $SE = .50$, $\beta = .31$, $CR = 2.16$, $p < .05$) (see Figure 4). It is interesting to note that participants in the groups in which the confederate was unlikable helped each other to a marginally greater degree than did those in the

Table 3
Means and Standard Deviations of Frequency of Helping the Confederate and Other "Community" Members by Condition in Study 3

	Helping confederate						Helping other members					
	Likable		Unlikable		Overall		Likable		Unlikable		Overall	
Stability condition	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Stable	1.14	1.19	1.23	1.10	1.17	1.13	1.44	1.31	3.64	2.82	2.25	2.21
Mobile	0.68	0.47	0.42	0.52	0.53	0.51	1.38	1.26	1.28	1.09	1.32	1.26
Overall *M* (*SD*)	0.91	(0.92)	0.69	(0.82)	0.80	(0.87)	1.41	(1.38)	2.03	(2.08)	1.71	(1.76)

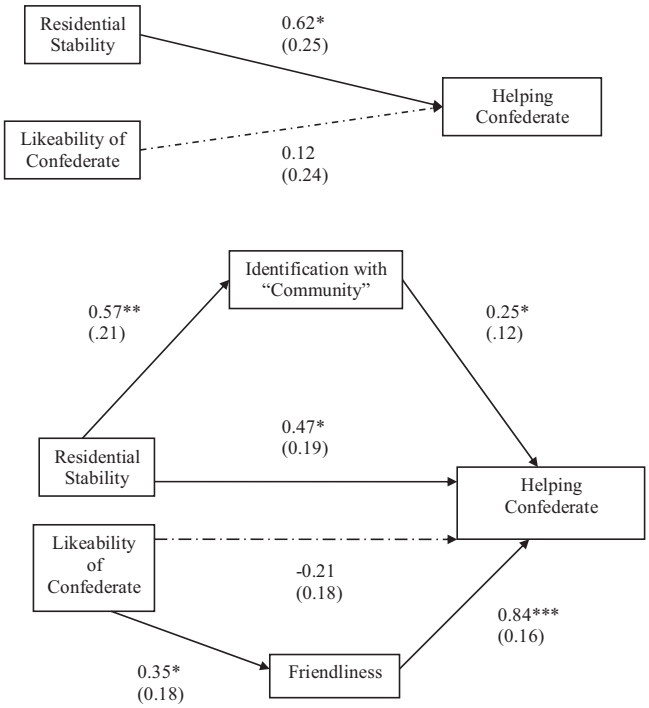

Figure 3. The mediational analysis of helping toward the confederate in Study 3. Unstandardized coefficients (*SE*) appear in parentheses. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

groups in which the confederate was likable ($B = -0.82$, $SE = .50$, $\beta = -.23$, $CR = -1.66$, $p < .10$).

We then tested our mediational model described in Figure 4, which was essentially the same as Figure 3 except that the dependent variable was helping toward other community members, and friendliness was toward other community members as well. This model fit the data very well, as all of the major fit indices showed excellent fit, $\chi^2(1, 46, N = 46) = 0.00$, $p = .99$, GFI = 1.00, CFI = 1.00, NFI = 1.00, and RMSEA = .00. Most central to our hypothesis, our mediational model was again supported, as the direct effect of residential stability on helping toward other community members was mediated by identity as a community resident (Sobel = 2.23, $p < .05$). There was a strong effect of residential stability on identity ($B = .59$, $SE = .19$, $\beta = .37$, $CR = 3.09$, $p < .01$), which, in turn, predicted the frequency of helping toward other community members ($B = .80$, $SE = .26$, $\beta = .36$, $CR = 3.05$, $p < .01$). Furthermore, once identity as the community resident was included in the model, the direct effect of residential stability was reduced to marginally significant ($B = .66$, $SE = .38$, $\beta = .19$, $CR = 1.82$, $p = .08$).

There was no indication that friendliness toward other community members mediated the direct effect of likability of the confederate on helping toward other community members, as likability was unrelated to friendliness toward other community members ($B = 0.18$, $SE = .17$, $\beta = .18$, $CR = 1.07$, *ns* [Sobel = 1.07, *ns*]). With friendliness included in the model, likability of the confederate negatively predicted the degree of help toward other community members ($B = -1.20$, $SE = .34$, $\beta = -.35$, $CR = -3.51$, $p < .01$). This suggests that the presence of an unlikable confederate had the unexpected effect of making other community members bond and help one another.

Because there was an interaction between stability and likability on helping toward other nonconfederate community members, we repeated the critical analyses reported above, this time with the interaction term included. The results remained essentially unchanged. As before, the direct effect of residential stability, controlling for the interaction effect, was again significant ($B = .61$, $SE = .25$, $\beta = .34$, $CR = 2.47$, $p < .05$). As before, the mediational analysis with the interaction term included again showed that residential stability had a positive causal effect on identity as a community resident ($B = .29$, $SE = .12$, $\beta = .36$, $CR = 2.49$, $p < .05$), which, in turn, predicted the frequency of helping toward other community members ($B = .88$, $SE = .28$, $\beta = .40$, $CR = 3.19$, $p < .01$ [Sobel test = 1.96, $p < .05$]). Once the mediator and the interaction term were included, the direct effect of residential stability on helping toward other community members became marginal ($B = .34$, $SE = .20$, $\beta = .19$, $CR = 1.72$, $p = .09$).

In summary, Study 3 provided the first support for the socioecological model of identity and procommunity action using an experimental method. Residential stability had a causal effect on helping behavior both toward the confederate and other community members. Furthermore, as predicted, the beneficial effect of stability on other community members was partially mediated by a greater degree of identification with the community. Study 3 also revealed a potential downside of residential stability. When the confederate was unlikable, residents in stable communities helped each other more frequently than did residents in mobile commu-

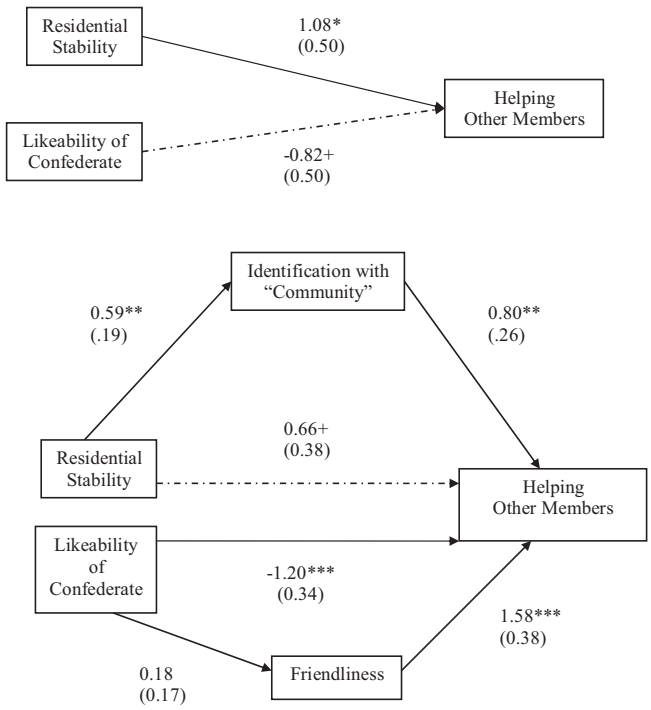

Figure 4. The mediational analysis of helping toward other "community" members in Study 3. Unstandardized coefficients (*SE*) appear in parentheses. $+ p < .10$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

nities, $t(20) = 2.88$, $p < .01$. As can be seen in Table 3, the patterns of helping (i.e., the significant interaction between stability and likability on the helping of nonconfederate community members) suggest that residents in the stable-unlikable condition found a "common enemy" in the unlikable confederate and offered help selectively to other nonconfederate members. In the mobile communities, there was no indication of the unlikable confederate becoming a common enemy. Although we have emphasized the benefits of residential stability, the dark sides of residential stability do exist. In the future, both the benefits and the drawbacks of residential stability should be investigated in search of an optimal level of residential stability for the well-being of the community.

General Discussion

We started our investigation with the goal of building on and extending previous social science research on residential mobility (e.g., Highton, 2000; Kang & Kwak, 2003; Sampson & Byron, 1989; Shaw & McKay, 1942) by explicating the psychological processes linking residential stability and procommunity action. Using three different objective measures of procommunity behaviors, we demonstrated the beneficial effects of residential stability on the well-being of community at three very different levels and conceptualizations of community (i.e., new "microcommunities" created in the laboratory, zip code areas, and entire metropolitan areas). In each case, we obtained strong support for the socioecological model of procommunity action. In Study 1, we found that residents in stable communities in the metropolitan Twin Cities area were more likely to purchase a critical habitat license plate than were those in mobile communities. In Study 2, we found that home game attendance at baseball games was less contingent on team performance in stable cities (unconditional community support) than it was in mobile cities (conditional community support). In Study 3, in which we manipulated the stability of an experimentally created community, we found that stability caused a greater degree of helping toward other community residents. Furthermore, the effect of stability on procommunity behavior was mediated, in part, by a stronger sense of community identity.

The present findings have several important implications for research and theorizing on procommunity action, identity, and the well-being of communities. First, although many existing theories of prosocial behaviors consider social structural and contextual factors to be important antecedents (e.g., Omoto & Snyder, 2002; Wilson & Musick, 1998), very few studies have examined the role of residential stability on procommunity behaviors. This is perhaps due to the fact that social psychologists tend to focus exclusively on individuals' internal states (e.g., mood), motives (e.g., altruism), and immediate external situations (e.g., an emergency helping situation) and pay little attention to distal macro factors (see Penner et al., 2005, for a review and recommendation of a multilevel approach). The advantage of a sociological approach is that it explicitly considers such distal macro factors. The present findings clearly indicate that community characteristics, such as residential stability, play an important role in shaping residents' identification with their community and in setting the probability of engaging in procommunity behaviors. Although the three procommunity behaviors that we examined in the present research are quite different from one another in their scope and quality, we believe that there is one commonality among them. Specifically, they all represent one's relationship with and attachment to a community at large rather than one's relationship with and affection for a particular individual. Thus, our studies illuminate one of the ways through which macro-level socioecological factors influence individuals' identity as a community member. Moreover, they demonstrate that one's relation to community is an important predictor of procommunity behavior. Our social psychological approach made it possible to elucidate not only how a macro-level factor affects individuals but also how individuals affect a macro-level state (e.g., the level of procommunity behavior). In short, our research demonstrates that the marriage of the sociological and social psychological approach helps to advance the understanding of identity and prosocial behaviors in general.

Second, reciprocal altruism (Trivers, 1971) is well recognized in the literature as an explanation for why people help unrelated individuals and why such helping is evolutionarily advantageous. As demonstrated by Axelrod and Hamilton (1981), strangers are more cooperative in the context of repeated interactions than in the context of a one-time interaction, presumably because individuals assume that their cooperative behavior will be rewarded in the future (Komorita & Parks, 1996). Our findings suggest a socioecological condition that moderates the prevalence of reciprocal altruism. Specifically, reciprocal altruism should be more prevalent in stable communities than in mobile communities because social interactions are more recurrent in stable than in mobile communities, which, in turn, should increase the likelihood that a favor is repaid (the key component of reciprocal altruism). With the increasing popularity of evolutionary explanations for prosocial behaviors, it is important to investigate how socioecological conditions might constrain the expression of evolutionary mechanisms underlying prosocial and procommunity behaviors.

Third, the symbolic interactionist perspective is at the heart of many theories of the self and identity (e.g., Baumeister, 1986; Higgins, 1987; Markus & Kitayama, 1991; Triandis, 1989). Although symbolic interactionist theorizing about self and identity has always emphasized that society shapes self, and self shapes social behavior (e.g., Mead, 1934), to our knowledge, very few studies have actually examined how neighborhood and community characteristics affect residents' identity. There is no question that "society shapes self." The question has been what aspects of society influence the self and "how." The present findings, combined with our earlier findings (e.g., Oishi, Lun, & Sherman, in press), help clarify this important process by specifying a socioecological factor that is associated with one's identity as a community member. These findings suggest that residential stability/mobility affects the salience of the collective self (conceptions of the self in relation to a particular group or community) relative to the individual self (conceptions of the self in terms of an individual's personality traits, skills, and abilities). One future challenge is to elucidate whether, and how, other socioecological factors (e.g., availability of public transportation, the building of new highways, population change, racial/ethnic homogeneity) affect specific aspects of one's identity and the self (e.g., interdependent self, public self).

Fourth, whereas the well-being of individuals has received extensive research attention during the last 20 years (see Diener, Oishi, & Lucas, 2003, for a review), the well-being of communities has received relatively little attention from psychologists. It is of interest that many social scientists outside of psychology have

been interested in the well-being of communities and society at large (e.g., Harrison & Huntington, 2000; Putnam, 2000). Researchers have proposed several factors critical for the development of well-functioning communities and nations, ranging from democracy (Inglehart, 2000) to a free market (Sachs, 2000) to cultural values (Lipset & Lenz, 2000) and trust (Fukuyama, 2000). The present research adds to this important research area by revealing that residential stability is another key antecedent of the development of social capital (Coleman, 1988) and of the involvement of individuals in actions that contribute to the well-being of their communities.

It is important to note, however, that there may be a "tipping point" at which residential stability begins to have a deleterious effect on community. For example, extreme residential stability might not be conducive to democracy in a community to the extent that it transforms into a closed social system, exemplified by communities in the feudal and colonial era. For a long time, residential and social class mobility were distinguishing features of American society (Hilton & van Minnen, 2002). Indeed, social and residential mobility were a manifestation of individuals' freedom and rights. Although upward social class mobility is not as common in the United States now as it was before (Scott & Leonhardt, 2005), many Americans still enjoy residential mobility uncommon in other societies (Schmitt, 2001). Unfortunately, however, the precedence of individual mobility over family obligation and organizational loyalty might be in part responsible for some of the challenges that many communities in the United States face such as higher crime rates (Sampson et al., 1997) and lower school achievement (Gonzalez et al., 2000). Although some psychologists have begun to examine the effect of residential mobility on children's adjustment (Adam, 2004), still too few psychologists are investigating the effects of community-level variables on psychological processes. As in Sampson et al.'s (1997) investigation, it is of great importance to identify, in future research, mediators such as collective efficacy and trust. Simultaneously, researchers need to examine how individual characteristics, such as personality traits and values, might influence the characteristics of communities. In a new suburban development, for instance, it might be possible to examine this process longitudinally.

Future Directions

Although the present studies provide converging support for the socioecological model of identity and procommunity behavior, several important questions remain. First, in all three studies, procommunity behavior was targeted toward a clearly defined community. There is the possibility that such behavior, taken to extremes, could turn into strong in-group favoritism and out-group discrimination. That is, in a stable community, there might be a great deal of procommunity behaviors; yet, at the same time, residents might show very selective benevolence, and might even be hostile to outsiders because of the clear and distinct boundary between "us" and "them." For example, as members of a highly stable community, Boston Red Sox fans might denigrate fans of other teams, whereas Arizona Diamondback fans, as members of a rather mobile community, might be more tolerant toward fans of other teams. It is possible that residents in a mobile community experience a sense of community at a more global level (e.g., Catholic, libertarian, Sierra Club) as opposed to having a strong sense of community at the physical, neighborhood level. A strong identification with a local community might even become a hindrance to a superordinate identity such as "member of the European Union" or "global citizen." Thus, from a public policy perspective, residential stability could be a double-edged sword: On one hand, it might encourage local community support, but on the other hand, it might encourage xenophobia and unfavorable intergroup relations.

Second, although we have discussed the effect of residential stability/mobility in a deterministic fashion, the effect of ecological factors on individuals may not be uniform (Oishi, 2004; Rozin, 2003). Individual-level factors, such as personality (e.g., antisocial personality), values (e.g., materialism), job status (e.g., part time), occupation (e.g., student), and income, may create within-community heterogeneity in residents' commitment to, and identification with, their community. As Stryker and Burke (2000) eloquently argued, social structures (e.g., residential mobility) act as boundaries affecting the probability that persons will enter social networks within the community and come to view themselves in terms of their role identity in that community. A future challenge is to identify individual-level factors that moderate the effect of ecological factors on individuals' identity and procommunity behavior.

Third, empirical evidence for the mediation effect of community identity was modest. This state of affairs suggests that there are processes linking stability to procommunity behavior other than the one mediated by identification. The remaining direct effect of residential stability on procommunity behavior might be explained by other potential mediators such as reciprocity norms and monitoring capability of the community. In addition, there is the possibility that procommunity behavior in Study 3 was driven by cognitive factors, such as a sense of duty and obligation, rather than by affective aspects of identity that we measured (e.g., "glad," "not sorry"). This needs to be further investigated.

Finally, the residential stability effect found in Study 3 could be explained by familiarity. Participants in the stable condition were more familiar with the confederate and other community members than those in the unstable condition. Although familiarity likely is a frequent consequence of residential stability, it is important to disentangle the effect of familiarity from the effect of residential stability. This could be achieved, for instance, by manipulating the reciprocity expectation (e.g., expect to interact once vs. many times), while minimizing prior familiarity with the confederate and other group members.

Conclusion

The present research demonstrates that residential stability is associated with procommunity behavior and that stability of a community has a causal effect on helping behavior toward other community members. Moreover, the effect of stability on helping behavior toward other community members was mediated, in part, by the degree of identification with one's community. Thus, residential stability is an important socioecological factor influencing the well-being of communities (see also Sampson, 1988, 1991). Future research should further clarify other mediating processes through which residential stability affects residents' identity and detect boundary conditions for procommunity behaviors. The socioecological model of identity and procommunity action outlined

here may help provide a constructive framework for such endeavors.

References

Adam, E. K. (2004). Beyond quality: Parental and residential stability and children's adjustment. *Current Directions in Psychological Sciences, 13,* 210–213.

Amato, P. R. (1983). Helping behavior in urban and rural environments: Field studies based on a taxonomic organization of helping episodes. *Journal of Personality and Social Psychology, 45,* 571–586.

Axelrod, R., & Hamilton, W. D. (1981, 27 March). The evolution of cooperation. *Science, 211,* 1390–1396.

Baumeister, R. F. (1986). *Identity: Cultural change and the struggle for self*. New York: Oxford University Press.

Brewer, M. B., & Kramer, R. M. (1986). Choice behavior in social dilemmas: Effects of social identity, group size, and decision framing. *Journal of Personality and Social Psychology, 50,* 543–549.

Brickman, L. (1973). Dormitory density and helping behavior. *Environment and Behavior, 5,* 465–490.

Carnevale, P. J., Pruitt, D. G., & Carrington, P. I. (1982). Effects of future dependence, liking, and repeated requests for help on helping behavior. *Social Psychology Quarterly, 45,* 9–14.

Cash, T. F., Begley, P. J., & McCown, D. A. (1975). When counselors are heard but not seen: Initial impact of physical attractiveness. *Journal of Counseling Psychology, 22,* 273–279.

Cialdini, R. B., Borden, R. J., Thorne, A., Walker, M. R., Freeman, S., & Slone, L. R. (1976). Basking in reflected glory: Three (football) field studies. *Journal of Personality and Social Psychology, 34,* 366–375.

Cialdini, R. B., Brown, S. L., Lewis, B. P., Luce, C., & Neuberg, S. L. (1997). Reinterpreting the empathy–altruism relationship: When one into one equals oneness. *Journal of Personality and Social Psychology, 72,* 481–494.

Cohen, D. (1998). Culture, social organization, and patterns of violence. *Journal of Personality and Social Psychology, 75,* 408–419.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94,* S95–S120.

Curran, P. J., West, S. G., & Finch, J. F. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods, 1,* 16–29.

Davis, M. H. (1994). *Empathy: A social psychological approach*. Madison, WI: Brown Benchmark.

Dawes, R. M., & Messick, D. M. (2000). Social dilemmas. *International Journal of Psychology, 35,* 111–116.

Diener, E., Oishi, S., & Lucas, R. E. (2003). Personality, culture, and subjective well-being. *Annual Review of Psychology, 54,* 403–425.

Doosje, B., Ellemers, N., & Spears, R. (1995). Perceived intragroup variability as a function of group status and identification. *Journal of Experimental Social Psychology, 31,* 410–436.

Dovidio, J. F., Gaertner, S. L., & Validzic, A. (1997). Extending the benefits of recategorization: Evaluations, self-disclosure, and helping. *Journal of Experimental Social Psychology, 33,* 401–420.

Feldman, R. M. (1990). Settlement-identity: Psychological bonds with home places in a mobile society. *Environment and Behavior, 22,* 183–229.

Flippen, A. R., Hornstein, H. A., Siegal, W. E., & Weitzman, E. A. (1996). A comparison of similarity and interdependence as triggers for ingroup formation. *Personality and Social Psychology Bulletin, 22,* 882–893.

Fukuyama, F. (2000). Social capital. In L. E. Harrison & S. P. Huntington (Eds.), *Culture matters: How values shape human progress* (pp. 98–111). New York: Basic Books.

Gaertner, S. L., Dovidio, J. F., & Rust, M. C. (1999). Reducing intergroup bias: Elements of intergroup cooperation. *Journal of Personality and Social Psychology, 76,* 388–402.

Gonzales, P., Calsyn, C., Jocelyn, L., Mak, K., Katsberg, D., Arafeh, S., et al. (2000). *Pursuing excellence: Comparisons of international eighth-grade mathematics and science achievement from a U.S. perspective, 1995 and 1999.* Washington, DC: National Center for Education Statistics, U.S. Department of Education, U.S. Government Printing Office.

Gross, A. E., Wallston, B. S., & Piliavin, I. M. (1975). Beneficiary attractiveness and cost as determinants of responses to routine requests for help. *Sociometry, 38,* 131–140.

Harrison, L. E., & Huntington, S. P. (2000). *Culture matters: How values shape human progress*. New York: Basic Books.

Higgins, E. T. (1987). Self-discrepancy: A theory relating self to affect. *Psychological Review, 94,* 319–340.

Highton, B. (2000). Residential mobility, community mobility, and electoral participation. *Political Behavior, 22,* 109–120.

Hilton, S. L., & van Minnen, C. A. (2002). The rocky road to greener grass: Mobility in U.S. history: An introduction. In C. A. van Minnen & S. L. Hilton (Eds.), *Nation on the move: Mobility in U.S. history* (pp. 1–15). Amsterdam: VU University Press.

Inglehart, R. (2000). Culture and democracy. In L. E. Harrison & S. P. Huntington (Eds.), *Culture matters: How values shape human progress* (pp. 80–97). New York: Basic Books.

Kang, N., & Kwak, N. (2003). A multilevel approach to civic participation: Individual length of residence, neighborhood residential stability, and their interactive effects with media use. *Communication Research, 30,* 80–106.

Kasarda, J., & Janowitz, M. (1974). Community attachment in mass society. *American Sociological Review, 39,* 328–339.

Kenny, D. A., Kashy, D. A., & Bolger, N. (1998). Data analysis in social psychology. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., Vol. 1, pp. 233–265). Boston, MA: McGraw-Hill.

Komorita, S. S., & Parks, C. D. (1996). *Social dilemmas.* Boulder, CO: Westview Press.

Levine, M., Prosser, A., & Evans, D. (2005). Identity and emergency intervention: How social group membership and inclusiveness of group boundaries shape helping behavior. *Personality and Social Psychology Bulletin, 31,* 443–453.

Levine, R. V., Martinez, T. S., Brase, G., & Sorenson, K. (1994). Helping in 36 U.S. cities. *Journal of Personality and Social Psychology, 67,* 69–82.

Lipset, S. M., & Lenz, G. S. (2000). Corruption, culture, and markets. In L. E. Harrison & S. P., Huntington (Eds.), *Culture matters: How values shape human progress* (pp. 112–124). New York: Basic Books.

Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98,* 224–253.

Mead, G. H. (1934). *Mind, self, and society*. Chicago: University of Chicago Press.

Milgram, S. (1970, 13 March). The experience of living in cities. *Science, 167,* 1461–1468.

Miller, J. G., & Bersoff, D. M. (1998). The role of liking in perceptions of the moral responsibility to help: A cultural perspective. *Journal of Experimental Social Psychology, 34,* 443–469.

Oishi, S. (2004). Personality in culture: A neo-Allportian view. *Journal of Research in Personality, 38,* 68–74.

Oishi, S. (2006). *Cultural and regional variations in the consistency of collective self.* Manuscript submitted for publication.

Oishi, S., Lun, J., & Sherman, G. D. (in press). Residential mobility, self-concept, and positive affect in social interactions. *Journal of Personality and Social Psychology.*

Omoto, A. M., & Snyder, M. (1995). Sustained helping without obligation: Motivation, longevity of service, and perceived attitude change among AIDS volunteers. *Journal of Personality and Social Psychology, 68,* 671–687.

Omoto, A. M., & Snyder, M. (2002). Considerations of community: The context and process of volunteerism. *American Behavioral Scientist, 45,* 846–867.

Penner, L. A., Dovidio, J. F., Piliavin, J. A., & Schroeder, D. A. (2005). Prosocial behavior: Multilevel perspectives. *Annual Review of Psychology, 56,* 365–392.

Proshansky, H. M., Fabian, A. K., & Kaminoff, R. (1983). Place identity: Physical world socialization of the self. *Journal of Environmental Psychology, 3,* 57–83.

Putnam, R. D. (2000). *Bowling alone*. New York: Simon & Schuster.

Raudenbush, S., Bryk, A., Cheong, Y. F., & Congdon, R. (2001). *HLM5: Hierarchical linear and nonlinear modeling*. Chicago: Scientific Software International.

Rozin, P. (2003). Five potential principles for understanding cultural differences in relation to individual differences. *Journal of Research in Personality, 37,* 273–283.

Sachs, J. (2000). Notes on a new sociology of economic development. In L. E. Harrison & S. P. Huntington (Eds.), *Culture matters: How values shape human progress* (pp. 29–43). New York: Basic Books.

Sampson, R. J. (1988). Local friendship ties and community attachment in mass society: A multilevel systemic model. *American Sociological Review, 53,* 766–779.

Sampson, R. J. (1991). Linking the micro- and macrolevel dimensions of community social organization. *Social Forces, 70,* 43–64.

Sampson, R. J., & Byron, G. W. (1989). Community structure and crime: Testing social-disorganization theory. *American Journal of Sociology, 94,* 774–802.

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997, August 15). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science, 277,* 918–927.

Schmitt, E. (2001, August 6). Census data show a sharp increase in living standard. *New York Times.* www.nytimes.com/2001/08/06/national/06CENS.html.

Scott, J., & Leonhardt, D. (2005, 15 May). *Class matters: Shadowy lines that still divide. New York Times.* www.nytimes.com/2005/05/15/national/class/OVERVIEW-FINAL.html

Shaw, C., & McKay, H. (1942). *Juvenile delinquency and urban areas.* Chicago: University of Chicago Press.

Sheldon, K. M., & McGregor, H. A. (2000). Extrinsic value orientation and "the tragedy of the commons." *Journal of Personality, 68,* 384–411.

Squire, P., Wolfinger, R. E., & Glass, D. P. (1987). Residential mobility and voter turnout. *American Political Science Review, 81,* 45–66.

Steblay, N. M. (1987). Helping behavior in rural and urban environments: A meta-analysis. *Psychological Bulletin, 102,* 346–356.

Stryker, S., & Burke, P. J. (2000). The past, present, and future of an identity theory. *Social Psychology Quarterly, 63,* 284–297.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Chicago: Nelson Hall.

Thomas, W. I., & Znaniecki, F. (1920). *The Polish peasant in Europe and America*. Boston: Gorham.

Triandis, H. C. (1989). The self and social behavior in differing cultural contexts. *Psychological Review, 96,* 506–520.

Trivers, R. (1971). The evolution of reciprocal altruism. *Quarterly Review of Biology, 46,* 35–57.

Wann, D. L., Schrader, M. P., & Wilson, A. M. (1999). Sport fan motivation: Questionnaire validation, comparisons by sport, and relationship to athletic motivation. *Journal of Sport Behavior, 22,* 114–139.

Wilson, J., & Musick, M. (1998). The contribution of social resources to volunteering. *Social Science Quarterly, 79,* 799–814.

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