

CR Report: Group Effects and Economic Outcomes

Fall 2010

Peers and social groups have been implicated in individuals' decisions to drop out of school, quit work, go on welfare, commit crime, have children out of marriage, use controlled substances, and default on mortgages. Indeed, groups are often seen as central to these behaviors. Motivated by the belief that groups have both positive and negative effects on behaviors and outcomes, policymakers have long sought to manipulate the groups to which people are exposed through policies such as schools integration and the shift from high-rise public housing to scattered-site public housing. This report discusses the state of research on the effects of groups with an eye to drawing out policy implications.

How Groups Work

Groups are believed to affect behaviors or outcomes in two broad ways: through information sharing and through exposure to attitudes and preferences. To illustrate some of the ways by which groups can affect behaviors, consider the decision to work.

1. **Information sharing.** Many people find jobs through their friends or associates. An individual in a network with others who are mainly employed will have an advantage over someone in a network with people who primarily are not employed. Additionally, employed friends are a source of information about how to behave in a professional situation. Someone whose associates are weakly attached to the labor market will not have access to this type of information.
2. **Attitudes and preferences formation.** Attitudes and preferences can also affect an individual's decision to work. Someone living in an area or who is part of a network in which working is expected is likely to feel pressure to work, whereas someone whose associates are weakly attached to the labor market is less likely to feel pressure to work, and may even feel pressure *not* to work. Thus, in addition to the information that one's network provides, the actions (or backgrounds) of one's associates may also affect an individual's attitudes.

These mechanisms apply far more generally than to employment alone, although employment is a canonical example that illustrates them well.

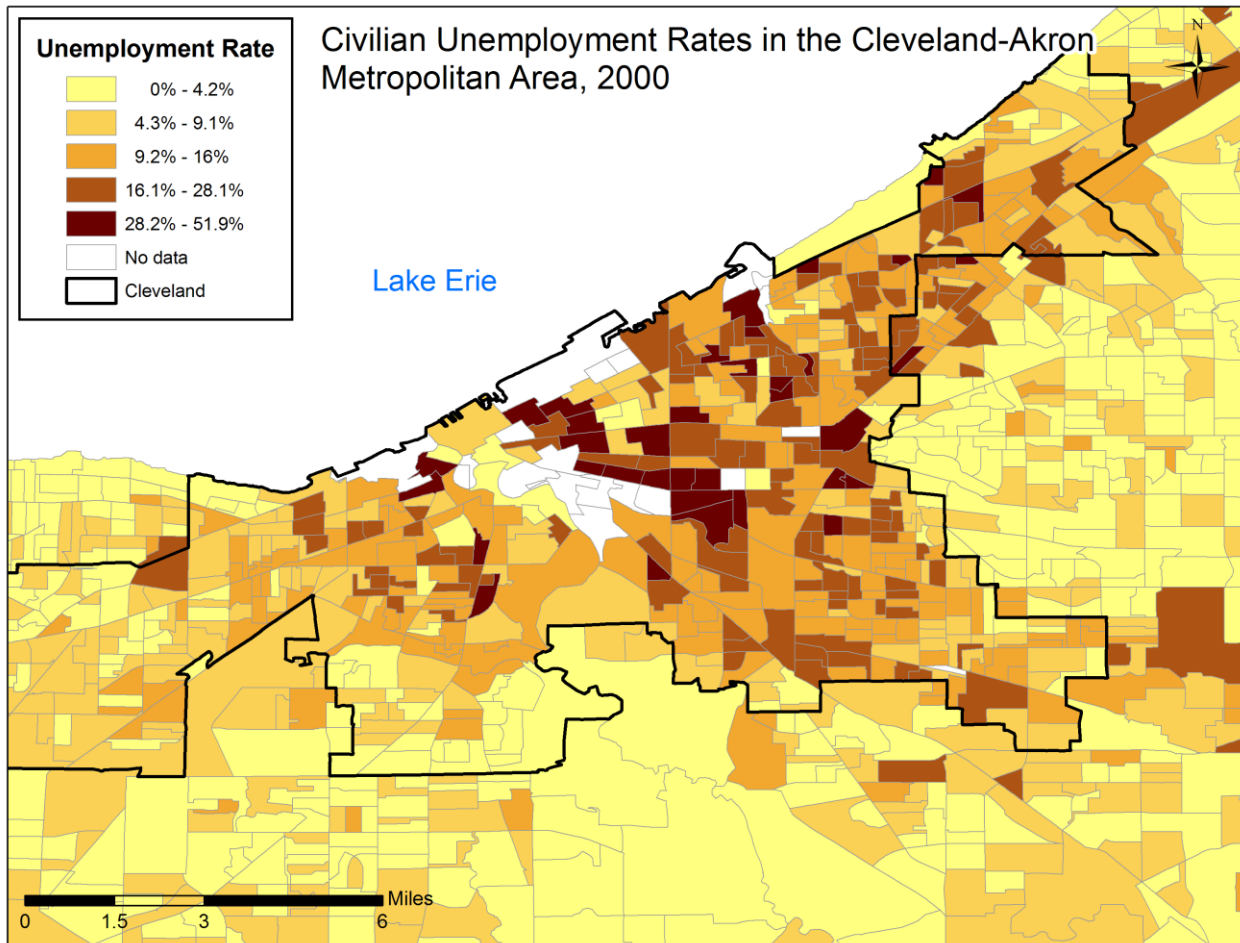
Estimating Group Effects

While the importance of groups often appears obvious, rigorous evidence for group or peer effects is surprisingly elusive. The challenges to estimating the effects of groups are illustrated by Figure 1, which plots the civilian unemployment rate in the Cleveland–Akron CMSA (Consolidated Metropolitan Statistical Agglomeration) from the 2000 Census. The shaded regions represent individual Census block groups, each comprising anywhere from 600 to 3,000 people. While the unemployment rate in 2000 in the Cleveland–Akron CMSA was 5.2 percent overall, in some areas the rate exceeded 50 percent. In 57 block groups with some 22,000 adult residents, more than 1 adult for every 4 was unemployed, a rate that is close to 5 times the average in the CMSA. By contrast, unemployment rates were well below the average for the metropolitan area in many other block groups. In fact, the unemployment rate was below the area average in more than half of the CMSA's 2,417 block groups, and less than half the CMSA average unemployment rate in 700 of the area's block groups.

CR Report: Group Effects and Economic Outcomes

Fall 2010

Figure 1. Civilian Unemployment Rates in the Cleveland–Akron Metropolitan Area, 2000



SOURCE: U.S. Census Bureau, 2000 data

In a well-known 1987 study, William Julius Wilson analyzed unemployment rates across Census block groups in Chicago.¹ He attributed the large differences in rates across block groups to a variety of factors, with peer and social influences among the most prominent. The tremendous disparities made it natural to consider the possibility that unemployment was high in many neighborhoods because of a self-reinforcing chain: High unemployment makes unemployment acceptable, which makes it harder for people to get the information necessary to locate, obtain, and retain jobs, which in turn increases unemployment in a vicious cycle. This argument suggests a *causal* effect of neighborhoods.

But while this logic is compelling, it is hardly unassailable. A visitor to Cleveland (or any other major American city) could hardly avoid noticing the tremendous disparities in neighborhoods, some with abandoned buildings and others with expensive homes. Not surprisingly, the residents of these different neighborhoods differ in terms of education, family structure, race, ethnicity, and earnings. While the

CR Report: Group Effects and Economic Outcomes

Fall 2010

typical resident of a low-income neighborhood might well have better outcomes and behaviors if he were surrounded—and therefore influenced—by people exhibiting behaviors and outcomes typical of those in the most prosperous neighborhoods, it seems doubtful that that exposure alone would bring him to the level of the residents in one of these neighborhoods. Part of the difference in outcomes and behaviors is almost surely due to *selection into neighborhoods*, with individuals experiencing poor outcomes either choosing or being forced into low-income neighborhoods, and those with the best outcomes choosing the most prosperous neighborhoods.

Are differences in outcomes, then, due to the causal effects of neighborhoods or to individuals' (sometimes-limited) choices? The answer to this question is critical for policymakers. If selection is responsible for differences in behaviors and outcomes across groups, with neighborhoods or other groups having little or no causal effects, the benefits from improving the groups to which people are exposed are reduced. By contrast, if groups have significant causal effects, there is a strong motivation to leverage groups in order to affect behaviors and outcomes.

Do relocation programs improve outcomes?

Much of the research on social effects by economists has focused on disentangling the causal effects of neighborhoods from the effects of selection into neighborhoods. One of the most common strategies seeks to mimic the thought experiment posed above – what would happen if a low-income person from a low-income group were relocated to a “better” neighborhood? Researchers have explored a range of approaches, from focusing on public housing residents who have limited ability to affect where they live to randomly assigning people into formal treatment and control groups, similar to clinical medical trials. In the latter case, the treatment group moves to “better” neighborhoods, while the control group remains where they live. While such analyses may not capture pure neighborhood effects – the act of moving *per se* may affect outcomes and behaviors – they do shed some light on the effects of neighborhoods.

Estimates from such studies find surprisingly small causal effects of groups and neighborhoods, suggesting that most or all of the large variations in behaviors and outcomes are due to selection into groups and neighborhoods, not to a causal effect of groups. In practice, many of these studies involved moving low-income individuals away from groups where most residents are low-income and into groups of individuals with a mix of income levels. That this approach to reallocation—moving low-income people into mixed groups—is common is not surprising, given that groups that are highly successful are unlikely to mix with low-income people. Indeed, finding even mixed-income groups that will accept low-income people has proven difficult.² Thus, there is a certain inevitability to such approaches.

Challenges facing relocation programs

While some policies aimed at affecting groups have taken the approach of relocating people across groups, there are other ways to manage or leverage group effects. As discussed below, a second broad approach is to *change behaviors within groups*. The vast array of policies that provide incentives or

disincentives for a multitude of behaviors, however, typically focus on improving the outcomes of the

CR Report: Group Effects and Economic Outcomes

Fall 2010

participants involved, versus addressing behaviors and outcomes through group dynamics. Thus, programs to change behaviors within groups are understudied, which is unfortunate given that there are a number of disadvantages to relocation programs.

One disadvantage of relocation programs is the “zero-sum” aspect to them. That is, in order to help some people, other people are in some way disadvantaged. For instance, one might move a low-achieving student from a class of low achievers into a class of high achievers, but doing so would reduce the average achievement level in his or her new class (because most or all of the students in the low-achieving class will have lower achievement than the high-achieving class). Similarly, moving high achievers into a class of lesser-achieving students can improve the peers in that class, but may worsen the class from which they were taken and exposes them to a lower-achieving group. Although the zero-sum aspect of relocation programs can be overstated, it remains an inherent challenge to any policy that emphasizes relocation.³

Moving people between groups also poses challenges to the individuals who move. Groups are complex and integrating oneself into a group with people who are different can be difficult. An individual moved into a new group may simply disassociate from the new group and retain connections with his or her original group. When an individual does integrate into a new group, there is no guarantee that he or she will associate with group members who are different from him or herself. Recall that relocation programs typically involve moving low-income people from groups where most people are low-income into groups with a mix of people who are low- and middle-income. Forming connections is a social process; a low-income person new to a mixed group is likely to feel most comfortable—and most likely to be accepted by—other people most similar to him or herself. Research into this relocation approach to affecting individuals’ behavior and outcomes shows that while relocating individuals may have a large effect on the composition of the group to which the relocated persons are exposed, it may have little effect on the people to whom the relocated individuals are exposed.

Integration, groups, and schools

The discussion thus far has focused on integrating people whose behaviors and outcomes are more preferred compared to those who are less desired, but groups can also be valuable as a way of promoting diversity and as a way of reducing prejudice. Diverse groups may reduce prejudice and may also be more creative.⁴

Focusing only on the diversity benefits of integration, the ways that segregation and integration work in groups can be seen exceptionally clearly by thinking about improving racial integration in schools. Schools are a valuable laboratory for this sort of analysis for two reasons. One, they are a formative environment in which integration may have a longer-lasting impact on attitudes toward other groups. Two, schools are manageable from a research perspective: students in schools are relatively easy to survey, and the vast majority of their associates are within their schools, meaning that researchers can obtain information on people and their associates alike.

Figure 2 shows the degree to which black and non-black students segregate or integrate within high schools, and how integration varies with the racial composition of a student’s grade. The data are from

Written by Bruce Weinberg, Visiting Scholar, Federal Reserve Bank of Cleveland
Produced by the Community Development Department of the Federal Reserve Bank of Cleveland
For additional research, go to www.clevelandfed.org/CommunityDevelopment

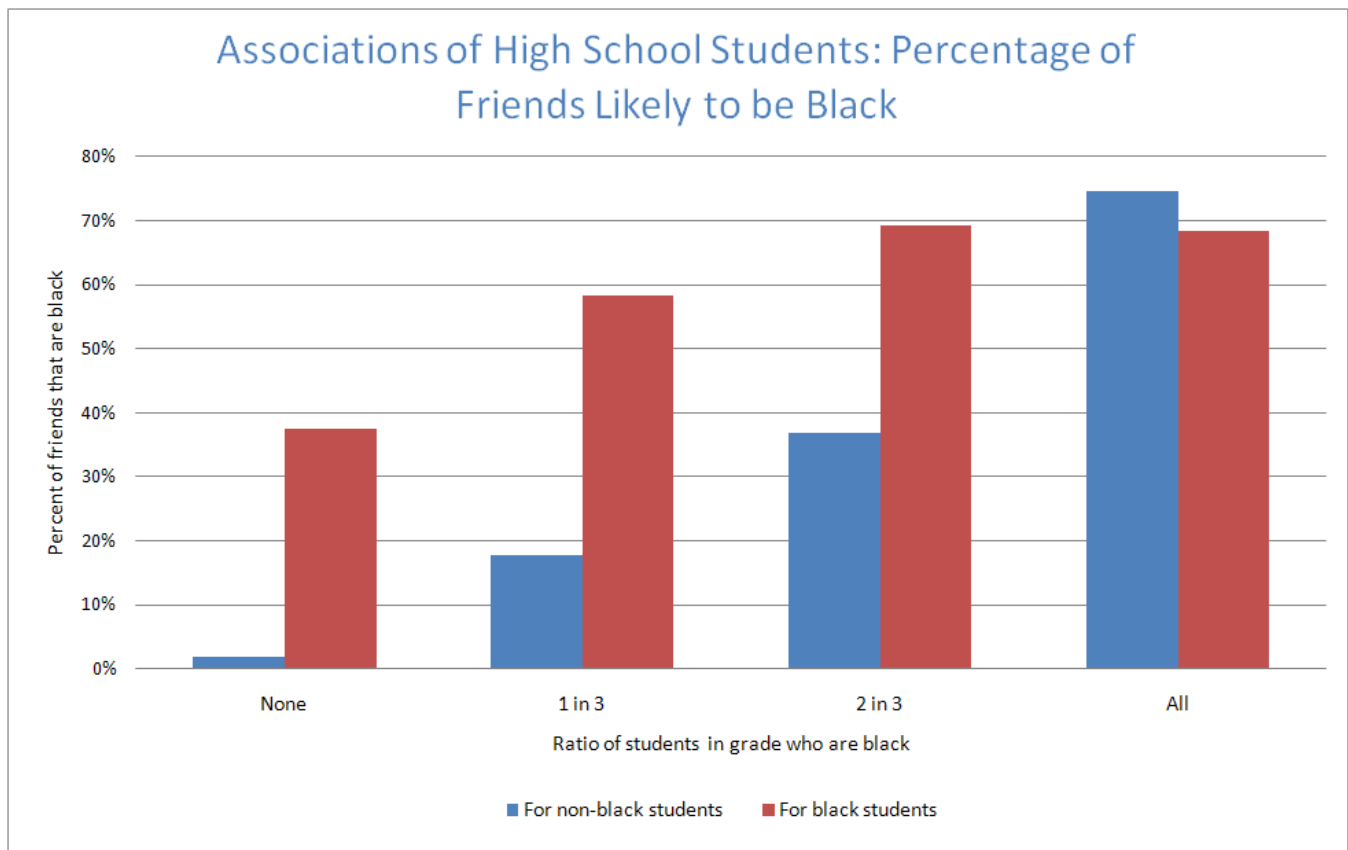
CR Report: Group Effects and Economic Outcomes

Fall 2010

the National Longitudinal Study of Adolescent Health (known as “Add Health”), a nationally representative survey of 90,000 students in grades 7 through 12 from 145 schools completed during the 1994-95 academic year. These data are ideally suited to studying associations because entire schools were surveyed and each student was asked to identify his or her 5 closest male and female friends. The bars on the far left show the percentage of a person’s friends who are black in a grade that has very few black students. If placed in such a grade, almost 40 percent of a black student’s friends would be black (e.g. people from other grades and/or other schools). By contrast, less than 2 percent of the friends of non-black students in an essentially all-white grade tend to be black. When the composition of the grade

changes to include more black students, the share of black students’ friends who are black rises—in a class where one-third of the students are black, nearly 60 percent of a black student’s friends will be black. The share of non-black students’ friends who are black increases as well, but remains under 20 percent. Doubling the ratio of black students to 2 in 3 raises the share of black students’ friends who are black to roughly 70 percent; yet, even in a class that is two-thirds black, barely 1 in 3 friends of non-black students are black. Only in a school grade where essentially all students are black are a majority of non-black students’ friends black. This finding suggests that relocation programs may not achieve a high degree of integration for, even in purposefully designed diverse environments, people may regroup with others they perceive and categorize as similar to them.

Figure 2. Associations of High School Students: Percentage of Friends Likely to be Black



CR Report: Group Effects and Economic Outcomes

Fall 2010

SOURCE: Author estimates generated from the National Longitudinal Study of Adolescent Health, 1994-1995 school year

Going back to the effects of groups on behaviors and outcomes, then, this tendency to associate with others most similar to oneself—known as “homophily” in the field of sociology—likely limits the effectiveness of relocation programs intended to improve outcomes. The school study results show that this tendency can be overcome by placing people into groups that are made up almost entirely of people who are different from themselves. Unfortunately, little is known about the effects of putting people in groups where they will stand out, making such programs risky. Interestingly, some of the author’s research shows that it is easier to integrate people in small groups than in large groups; one explanation is that it is harder to separate out from a group when there are few alternatives⁵. This suggests that efforts to relocate individuals into “better” groups to help improve their outcomes should focus on moving them into relatively small groups.

Policy Making and Group Dynamics

As indicated, programs that change behaviors within groups provide another way to leverage the benefits of groups (or avoid their disadvantages). Policies like the Earned Income Tax Credit generate

individual incentives for people to work. By shifting what is viewed as acceptable behavior in groups, they can also generate spillover benefits to other people within the individuals’ groups, multiplying the policy’s positive effects. Put differently, these programs can help break the vicious cycle of, for instance, high neighborhood unemployment, by changing norms, so that residents expect to obtain and hold jobs, thus increasing employment through group dynamics.

Among the array of policies that provide incentives or disincentives for a multitude of behaviors, few are aimed specifically at addressing an individual’s behavior through social groups. The potential for policies to affect outcomes through within-group interactions means that the benefits of interventions to improve one person’s behaviors or outcomes are larger, possibly considerably larger, than would be apparent.

Within-group programs have a number of important benefits. First, they leave group structure largely intact. At the same time, if there are social effects, then efforts to assist one person can spill over and benefit others, amplifying the program’s benefits. Second, unlike relocation programs, within-group programs do not have a zero-sum aspect to them. It is possible to invest in one person without reducing investments in others. In fact, investments in one person in a group actually benefit the other members of the group.

What programs are desirable once group dynamics are taken into account? First, fostering integration between the different types of people within a group has potential benefits, not only as an end in itself, but also to leverage group effects. To some extent, gains may be achieved simply through efforts to actively integrate groups, such as expanding perceptions of similarity. In one 2003 study, researchers found that children responded to what they call “deategorization” interventions, leading them to perceive similarities rather than ethnic-based differences among their peers.⁶

CR Report: Group Effects and Economic Outcomes

Fall 2010

Policies also use group dynamics to varying degrees of advantage. Consider school reforms. School-choice programs are often touted as a promising way of harnessing market forces to improve schools. Many economists also view some form of performance-based pay as a valuable way of providing strong incentives to teachers. Without taking a stand on the overall merits of these programs, the group dynamics we have identified suggest that insofar as school choice would lead to more changes in group composition, it may be less effective in improving outcomes for the lowest-performing students than policies focused on performance pay, which would leave existing groups largely intact. Indeed, some research shows that voucher programs can lead middle-class students to leave public schools.⁷ Thus careful thinking about group dynamics is essential both for policies intended to address group dynamics and even for evaluating policies that are not intended to address group dynamics.

CR Report: Group Effects and Economic Outcomes

Fall 2010

- ¹ Wilson, William Julius. *The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy*. Chicago: University of Chicago Press, 1987.
- ² Finkel, Meryl and Larry Buron. 2001. "Study on Section 8 Voucher Success Rates. *Volume I: Quantitative Study of Success Rates in Metropolitan Areas*. Cambridge, Massachusetts: Abt Associates Inc.
- ³ One way in which the zero-sum aspect of reallocations can be broken is if, for instance, low-achieving students benefit more than high-achieving students from being with high achieving students (Graham, Imbens, and Ridder [2009] explore such complementarities).
- ⁴ Page, Scott. 2008. *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*. Princeton, NJ: Princeton University Press.
- ⁵ Weinberg, Bruce A. 2010. "Social Interactions with Endogenous Associations." Working paper.
- ⁶ Jones, Lauriann M. and Linda A. Foley. 2003. "Educating Children to Decategorize Racial Groups." *Journal of Applied Social Psychology* 33 (No. 3): 554-64.
- ⁷ Hsieh, Chang-Tai and Miguel Urquiola. 2006. "The Effects of Generalized School Choice on Achievement and Stratification: Evidence from Chile's Voucher Program." *Journal of Public Economics* 90 (Issues 8-9, September): 1477-1503.