SURVEILLANCE AND SYSTEM AVOIDANCE: CRIMINAL JUSTICE CONTACT AND INSTITUTIONAL ATTACHMENT

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ABSTRACT

There has been a dramatic increase in the degree and scope of criminal justice surveillance in the United States over the past four decades. Recent qualitative research suggests the rise in surveillance may be met with a concomitant increase in efforts to evade it. However, to date there has been no quantitative empirical test of this theory. In this paper, I introduce the concept of 'system avoidance,' whereby individuals who have had contact with the criminal justice system avoid 'surveilling institutions' that keep formal records. Using data from the *National Longitudinal Study of Adolescent Health (*n=15,170), I find individuals who have been stopped by police, arrested, convicted, or incarcerated are less likely to interact with surveilling institutions, such as hospitals, banks, formal employment, and schools than their counterparts that have not had criminal justice contact. Empirical and theoretical robustness checks suggest fear of surveillance and subsequent system avoidance, rather than socio-demographic characteristics, behavioral characteristics, or an aversion to institutions in general, shapes individuals' institutional attachment. As criminal justice contact is disproportionately distributed, system avoidance serves to exacerbate inequalities by severing an already marginalized subpopulation from institutions that are pivotal to desistence from crime and their own integration into broader society.

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INTRODUCTION

There has been a dramatic increase in the degree and scope of surveillance in the United States over the past four decades. The proliferation of surveillance—the "collection and analysis of information about populations in order to govern their activity" (Haggerty and Ericson 2006: 3)—has catalyzed significant theoretical reflection, with some scholars arguing that surveillance has become a salient characteristic of all modern societies (Giddens 1990; Foucault 1977; Garland 2001). Six million people are stopped and questioned by the police each year in the United States, and 47 million Americans—one quarter of the adult population—now have a record on file with criminal justice agencies (Bureau of Justice Statistics 2011; Travis 2002). Much scholarship exists on the precipitous rise in the population under criminal justice surveillance. Though most of the research is focused on imprisonment and criminal records, police contact and criminal justice sanctions short of incarceration have resulted in a growing swath of individuals—who previously would have not been involved in the criminal justice system for their minor offenses—to be under criminal justice supervision, a phenomenon termed "net widening" (Cohen 1985).

Beyond the broadening reach of the criminal justice system, there has been a 'creep' of surveillance more generally. Institutions not typically associated with a crime control function have adopted the language and logic of crime control and surveillance (Garland 2001; Innes 2001; Simon 2007) and formerly discrete institutions have become integrated in what has been termed "the surveillant assemblage"—a system aimed at performing surveillance and social control functions (Haggerty and Ericson 2000). Examples of this include recent regulations requiring American banks to link financial holdings of their clients to a roster of individuals who

owe child support (Haggerty and Ericson 2000), and fusion centers—surveillance centers that consolidate data from public and private agencies including criminal, hospital, bank, and state department of motor vehicles records, and make them available to law enforcement agencies.

The consequences of surveillance are important for scholars and policy makers interested in inequality, institutions and criminal justice policy. While most research on the topic focuses on the intended functions of surveillance, there is a burgeoning literature on the unanticipated consequences (Merton 1936). Theory and recent ethnographic work (e.g. Goffman 2009) suggests that the rise in surveillance—and, more importantly, individuals' *perception* of pervasive surveillance—may be met with a concomitant increase in individuals' efforts to evade it. However, to date, there has been no systematic test of whether criminal justice contact is associated with individuals avoiding certain institutions.

To begin to test for this relationship, I introduce the concept of 'system avoidance.' System avoidance denotes the practice of individuals avoiding institutions that keep formal records (i.e. put them 'in the system') and therefore heighten their risk of surveillance and apprehension by authorities. I argue system avoidance is an important concept that should be developed theoretically and operationalized in a way that can be empirically tested. Using data from the *National Longitudinal Study of Adolescent Health* (n=15,170), I test the hypothesis that involvement with the criminal justice system at all levels—from police contact to incarceration—affects the way people interact with institutions such as medical, financial, labor market, educational, civic and religious institutions. Specifically, I posit the potential of surveillance leads to lower levels of involvement in institutions that keep formal records such as hospitals, banks, schools, and employment and hypothesize that a key mechanism driving this relationship is system avoidance.

In an attempt to identify wariness of surveillance as the motivation behind system avoidance, I introduce the distinction between 'surveilling' and 'non-surveilling' institutions, arguing that an under-theorized characteristic of institutions is the degree to which they keep formal records of individuals' behaviors, transactions, and interactions as a matter of course. Surveilling institutions are those which keep detailed formal records; these records are critical to carrying out the functions of the institution and in most instances, are required to be kept by law. Examples of surveilling institutions include hospitals, banks, formal employment and schools. Non-surveilling institutions are characterized by a more casual relationship with individuals—whereas formal records may be kept, there is no legal imperative to do so. Examples of non-surveilling institutions include volunteer associations and religious groups.

To elucidate this distinction, consider how routine interactions with surveilling and non-surveilling institutions differ. One profound difference is in requirements for identification. Interactions with banks, hospitals and employers all require an individual to present state-issued papers to establish identity. For hospitals, establishing identity is essential for, among other things, insurance billing. For banks and employers, establishing identity is legally required in fulfillment with labor regulations and tax compliance. By contrast, religious and volunteer associations do not, as a rule, require an individual to present identification in order to participate. Whereas these institutions may keep legal records of donations and other activities for tax purposes, individuals can easily abstain from these more intrusive forms of record keeping without jeopardizing their ability to interact with the institution.

By focusing on institutional involvement, this paper extends existing research on the consequences of criminal justice contact by analyzing a heretofore unexamined outcome that literature suggests is consequential for social stratification and marginalization. Lack of

attachment to medical care, banks, schools, and employment is associated with poorer outcomes for health, financial security, upward mobility, and desistance from crime, respectively. Furthermore, while surveillance is growing in all parts of society, its penetration is differential (Fiske 1998). Those who have come into contact with the criminal justice system are under heavier surveillance than those who have not. Given that disadvantaged populations are more likely to be involved in the criminal justice system, any negative consequences of associated institutional avoidance will be similarly disproportionately distributed, thereby exacerbating preexisting inequalities. Therefore, this paper advances a mechanism by which the criminal justice system serves to stratify and marginalize already disadvantaged individuals and groups.

In the following sections, I outline existing literature on the expansion of the criminal justice system, highlighting that though there is considerable scholarship on the negative effects of a criminal conviction and incarceration, there is a dearth of research on the unanticipated consequences of lower levels of criminal justice contact and of surveillance more generally. Drawing on existing theoretical and ethnographic work on surveillance (Goffman 2009), I then introduce the concepts of system avoidance and surveilling institutions. After a description of the data and methods, I turn to the results. Regression analyses demonstrate a strong and robust negative association between criminal justice contact—i.e. being stopped and questioned by the police, arrested, convicted, or incarcerated—and involvement with surveilling institutions such as hospitals, banks, schools, and employment, net of a host of socio-demographic and behavioral controls. Propensity score matching and individual fixed effects analyses provide evidence for a direct, net effect of criminal justice contact. Moreover, consistent with the theoretical prediction, criminal justice contact appears to have no relationship to individuals' attachment to non-

surveilling institutions such as volunteer and religious associations. Finally, the results are related back to broader questions of surveillance, inequality, and criminal justice policy.

EXPANSION OF CRIMINAL JUSTICE SUPERVISION

The US criminal justice system has grown dramatically over the past four decades. Today, one in 31 Americans—approximately 10 million people—are under some form of correctional supervision and 2.3 million people are in prison or jail, making the United States a world leader in its use of imprisonment (Pew 2010). Including those under community supervision, more than 47 million Americans—one quarter of the adult population—have a criminal record on file with federal or state criminal justice agencies (Travis 2002).

Increases in criminal justice involvement extend beyond conviction and incarceration. Excluding traffic stops, the police in the U.S. stopped six million people in 2009, the majority of whom were released without charge (Bureau of Justice Statistics 2011). Stop-and-frisk practices are being implemented in cities from New York to Los Angeles.

Rates of criminal justice involvement—from street stops to incarceration—are highly stratified by class and race. Close police surveillance has become a part of everyday life for many residents of poor neighborhoods (Gelman, Fagan, and Kiss 2007; Beckett, Nyrop and Pfingst 2006; Goffman 2009). However, this was not always the case. Ethnographies from the 1970s and 1980s describe urban minority communities as largely devoid of police presence (e.g., Anderson 1978; Williams 1992). Goffman's (2009) more recent ethnographic work, by contrast, illustrates the magnitude of police surveillance today. Due, in part, to changes in crime control laws, such as the 1994 Violent Crime Control and Law Enforcement Act, police saturation and frequent interactions with authorities have become a reality in many low-income communities.

Research clearly demonstrates that racial minorities—namely black and Latino

residents—have higher rates of police contact. To be sure, areas with high crime rates often have high concentrations of minority citizens (Massey and Denton 1993). However, differences in stop rates between racial/ethnic groups cannot be explained by precinct or previous arrest rates alone (Gelman et al. 2007; Beckett et al. 2006). Similar patterns exist for more serious criminal justice involvement—whereas the risk of imprisonment for white men born since the late 1960s is less than one in 30, the risk for black men is one in five (Western and Wildeman 2009), with 60 percent of black male high school dropouts spending some time in prison (Pettit and Western 2004).

The sheer magnitude of the criminal justice system, coupled with the large race and class disparities in rates of involvement, raises a host of sociological questions about the consequences of such differential involvement for inequality.

CONSEQUENCES OF CRIMINAL JUSTICE CONTACT

What are the consequences of a growing swath of the population coming into contact with the criminal justice system? The rise in imprisonment has catalyzed research on the criminal justice system as a powerful mechanism of stratification. Existing literature demonstrates incarceration has negative consequences for employment (Pager 2007; Western 2002; Pettit and Western 2004), political participation (Manza and Uggen 2006), children and families (Wildeman 2009, 2010; Comfort 2007; Foster and Hagan 2007; Western and Mclanahan 2000), neighborhood stability (Clear 2007), and access to housing and public assistance (Travis 2002).

In addition to diminished opportunities, criminal justice contact may have unintended negative consequences for how individuals perceive the criminal justice system and the state more broadly. Research suggests that police-initiated interactions with civilians are commonly adversarial, infused with suspicion and involuntary (Skogan 2006). Stops that are viewed as

discriminatory may arouse antipathy from targeted populations and erode community-police relations. Fagan and Davies (2000) argue that when there is a perception among residents in minority neighborhoods that they are under "non-particularized suspicion and are targeted for aggressive stop and frisk policing" (457), it damages perceptions of police legitimacy and makes individuals feel vulnerable to the discretionary whims of authorities. Similarly, procedural justice literature (e.g., see Sunshine and Tyler 2003) suggests the quality of the interaction with authorities shapes public support of the police.

However, the consequences of criminal justice contact extend beyond altering perceptions of the police. Lipsky (1983) suggests that "street-level bureaucrats" shape individuals' perceptions of the state more broadly. In poor neighborhoods, residents' most frequent contact with the state is often through street-level bureaucrats such as the police and "liminal institutions" including courts, welfare offices and child protective services (Fernández-Kelly forthcoming). Such institutions, Fernández-Kelly argues, operate along assumptions deviating from those that guide their mainstream counterparts; clients are viewed as subjects worthy of suspicion and surveillance rather than consumers endowed with rights. This relationship of "distorted engagement" can erode individuals' capacity to interact effectively with institutions and informs how they view "the government" or "system" more broadly (Soss 1999).

Moreover, contact with the criminal justice system has real political consequences. Weaver and Lerman (2010) find it is associated with lower levels of trust in government and political participation. Specifically, the authors' suggest the more serious an individuals' level of involvement in the criminal justice system, the greater their distrust in government. In other

words, being incarcerated is associated with a greater decrease in trust than being arrested or convicted without being sentenced to incarceration (Weaver and Lerman 2010).

In addition to implications for perceptions of the police and the state, involvement with the criminal justice system can trigger labeling consequences (Becker 1963). Pager (2007) finds that the "mark" of a criminal record confers "negative credentials" on individuals attempting to enter the labor market. Likewise, Garland (2001) argues that the modern era is characterized by a penal strategy of "marked, monitored existence*"* for those in the criminal justice system. Being labeled a deviant not only confers a stigma that shapes how others relate to that person, but may also lead individuals to alter their behavior in ways unintended by agents of the state, a behavior termed "secondary deviance" (Matza 1969; Lemert 1967).

THE FEAR OF SURVEILLANCE AND CONSEQUENT SYSTEM AVOIDANCE

Rising incarceration rates, the growth of stop-and-frisk databases, and police saturation in low-income minority neighborhoods are fueling a heightened sense of surveillance. The growth of criminal justice surveillance is coupled with the expansion of surveillance in a wide variety of organizations (Garland 2001). Enabled by technological advancement, formerly discrete institutions have become integrated into what has been described as a "surveillant assemblage" (Haggerty and Ericson 2000).

A large body of literature has developed analyzing the increase in surveillance in both state and non-state institutions (e.g., Giddens 1990; Foucault 1977; Garland 2001; Haggerty and Ericson 2006). Foucault (1977) suggests that the modern era is a "society of surveillance" in which "permanent, exhaustive, omnipresent surveillance" is accumulated in formal "reports and registers…an immense police text" that creates a "permanent account of individuals' behavior" (Foucault 1977: 214). Such record keeping is not limited to criminal justice agencies—formal

records are part of a "textually mediated discourse" that is a fundamental component of many institutions such as mental hospitals, child and family services, welfare offices and the like (Smith 1990).

Garland (2001) similarly argues that U.S. society has become characterized by a "culture of control" in which surveillance has come to pervade institutions not typically associated with a crime control function. Crime control now entails both institutions formally mandated to reduce crime, such as the police and prisons, but also informal institutions of social control in broader society that are "embedded in the everyday activities and interactions of civil society" (Garland 2001). In other words, crime control includes not only the actions of criminal justice authorities, but also "private actors and agencies *as they go about their ordinary routines*" (Garland 2001, emphasis added). Individuals interact with institutions that keep records on a daily basis, contributing to a real awareness of the actual—or potential—prospect of being surveilled.

Yet, a social control or surveillance motive need not be inferred to all organizations that conduct record keeping and data sharing. Initially, records from different agencies were linked under a "welfarist ideology of service delivery" (Haggerty and Ericson 2000). However, institutions such as hospitals, schools, and banks have increasingly been "drawn into the harder edge of social control" (Haggerty and Ericson 2000). Record-keeping practices initially introduced with one intention are often expanded to address new problems and situations. Information accumulation and data migration are characterized by unintended expansion, whereby the simple everyday use of institutions leads to the amassing of more personal data (Innes 2001). In short, regardless of the reason they were kept in the first place, data and records are increasingly integrated and deployed by law enforcement agencies for social control, counter-terrorism, crime prevention and surveillance purposes.

A number of recent studies indicate that an unanticipated consequence of the spread of surveillance—and, more importantly, the *perception* of surveillance—in government programs is a concomitant increase in people's attempts to evade it. In other words, individuals avoid institutions that put them 'in the system,' because of the prospect that they will come under heightened surveillance, thus, increasing their risk of detection by authorities. For example, in 1992 the United States government passed the Child Support Recovery Act, enacted to increase child support compliance by administratively linking child support and public assistance records (Rich, Garfinkel, and Gao 2007; Wimberly 2000). Some research suggests the fear of detection and wage garnishment led men to withdraw from formal employment and increase underground work (Waller and Plotnick 2001; Holzer, Offner and Sorensen 2005).

A similar wariness of surveillance arises in a study of TANF recipients in which O'Brien (2008) finds individuals' concern that social service employees could monitor transactions with formal financial institutions and find some way to deem them ineligible for assistance, such as exceeding asset limits, led them to avoid banks. Notably, program participants feared such surveillance even in states that did not require formal records of recent bank transactions in order to qualify for assistance.[i] Likewise, in their recent study of legal financial obligations, Harris, Evans and Beckett (2010) demonstrate how nonpayment of monetary sanctions and legal debt leads individuals to avoid formal financial institutions as delinquencies with court fines and legal fees can lead to arrest or reincarceration. Evasion of financial institutions stems partially from the threat of garnishment, but also from concern that transactions with formal financial institutions might be surveilled and lead to apprehension by criminal justice authorities.

Recent ethnographic work suggests that wariness of surveillance and consequent avoidance of institutions is particularly prevalent among those involved in the criminal justice

system. In her study of the impact of criminal justice surveillance in an urban neighborhood, Goffman (2009) concludes that due to the prevailing "climate of fear and suspicion in poor communities," individuals wary of being reincarcerated for anything from technical parole violations to delinquencies with court fines and fees "avoid institutions, places, and relations on which they formerly relied." Institutions and activities that "others rely on to maintain a decent and respectable identity," Goffman (2009) argues, are "transformed into a system that the authorities make use of to arrest and confine them. The police and courts become dangerous to interact with, as does showing up to work or going to places like hospitals." Individuals avoid going to hospitals to obtain medical care or to attend the birth of their children for fear that they could be tracked and apprehended by authorities. Individuals' wariness of hospitals, it seems, is justified—in an interview with two police officers, Goffman (2009) found that in addition to surveilling Social Security, bank, and employment records, officers routinely run the names on hospital admission records when they bring someone in to the emergency room. Interestingly, even those with no pending legal action expressed concern that, if given the opportunity, the police would run their name through the system and "find some reason to hold them" or pressure them to inform on a friend or family member. These efforts to evade authorities ultimately undermine attachment to important institutions.

The above research suggests that individuals wary of surveillance may deliberately and systematically evade institutional contact. I label this behavioral response 'system avoidance'—the practice of individuals avoiding institutions that keep formal records and therefore heighten their risk of surveillance and apprehension by authorities. Preexisting literature on the fear of surveillance raises two questions about system avoidance. First, is there generalizable evidence to support the qualitative findings that individuals who have had criminal justice contact avoid

institutions that put them 'in the system?' Second, do individuals abstain from using institutions across the board, or are they selective in their institutional avoidance? To gain analytical leverage on these questions, I introduce the distinction between 'surveilling' and 'non-surveilling' institutions. As previously described, surveilling institutions are ones that are legally required to keep formal records. Surveilling institutions highlighted in existing literature include hospitals, banks, schools, and formal employment. By contrast, non-surveilling institutions are institutions that do not keep formal records of use. Examples of such institutions are volunteer and religious associations. By keeping records, an institution signals that one of its functions is surveillance, heightening the *perception* that the police, parole, or probation officers could access the data.

Appreciating system avoidance is critical to recognizing the full range of consequences of criminal justice contact, but also to understanding an unexplored pathway through which such contact may have real stratifying consequences for individuals. Attachment to surveilling institutions is consequential for life outcomes: obtaining medical care is important for health; banks are necessary for full financial participation in society, savings, credit, and upward mobility; life course literature suggests that attachment to school or employment is important in the transition into adult roles, such as labor force attachment and financial self-sufficiency. Moreover, in addition to the stratifying and marginalizing consequences of system avoidance, attempts at social control through surveillance may actually be fueling the very behaviors it is trying to suppress. When people go off the books, their attachment to institutions that are key to desistance from crime, such as formal employment, are undermined (Laub and Sampson 1993; Hirschi and Gottfredson 1993).

HYPOTHESES

The aim of this empirical investigation is to test for a relationship between criminal justice contact and institutional attachment. I test the following hypotheses, which are motivated by theories of social control and surveillance and existing qualitative literature (e.g., Goffman 2009): Net of a host of individual-level socio-demographic and behavioral characteristics that could be associated with both criminal justice contact and institutional avoidance, (1) Individuals who have had contact with the criminal justice system at all levels—i.e., have been stopped and questioned by the police, arrested, convicted, or incarcerated—will have higher odds of not participating in surveilling institutions that keep formal records, such as (1a) hospitals; (1b) banks; and (1c) school or work; (2) They will be no less likely to interact with non-surveilling institutions, such as (2a) volunteer and (2b) religious associations; (3) Due to the heightened severity of sanctions if apprehended and the varying impact different levels of punishment have on individuals' subjective experience (e.g., see Weaver and Lerman 2010), those with deeper levels of criminal justice involvement will have higher odds of not participating in surveilling institutions than those with lower levels of contact.[ii]

Testing for the association between criminal justice contact and non-surveilling institutions serves two functions. First, it tests an alternative empirical outcome—that involvement with the criminal justice system would depress all types of institutional involvement, as individuals abstain from participation as a result of associated feelings of disempowerment and distrust in institutions in general. Indeed, research suggests that individuals who have been involved in the criminal justice system develop a cognitive framework of distrust and cynicism of institutions. Second, it serves as a theoretical robustness check—if unobservable selection dynamics are driving both contact with the criminal justice system *and* institutional

avoidance, results should show that individuals with involvement in the criminal justice system participate less in all institutions, not merely those that keep formal records.

DATA AND ANALYTIC APPROACH

To test the above hypotheses, I utilize data from *the National Longitudinal Study of Adolescent Health (Add Health)*, a nationally representative panel survey of adolescents interviewed at four points in time. The sample of adolescents was selected in 1994-5 from 132 schools and the study includes both in-school and in-home surveys and interviews with the adolescents themselves, teachers, school administrators, parents, siblings, peers, and romantic partners. Data from Waves 3 and 4—when respondents are age 18-26 and 24-32—are employed in the current study.[iii] Wave 3 (n=15,170) includes a battery of questions on both criminal justice contact and institutional involvement, providing a unique opportunity to estimate the association between the two.[iv]

Respondents' contact with the criminal justice system is coded into 5 mutually exclusive categories: (1) No contact; (2) Stopped and questioned; (3) Arrested; (4) Convicted; (5) Incarcerated.[v] Individuals are categorized based on their most serious degree of criminal justice contact (i.e., if an individual has been both questioned by the police and arrested, they are classified as "arrested" only.) In a separate set of models, I use an overall measure of criminal justice contact that is a binary indicator for whether the respondent reported any criminal justice contact, regardless of level. The outcome of interest—institutional involvement—is divided into surveilling and non-surveilling institutions, the key distinction, as described earlier, being between those that keep formal records of use and those that do not. Surveilling institutions in this analysis are medical facilities (e.g., hospitals, doctors offices, clinics), formal financial institutions (e.g., banks), employment, and schools (e.g., high schools, colleges, universities).

Institutional involvement is coded using a series of binary measures, with lack of attachment coded as 1. Medical institutional involvement is coded based on whether respondents reported not obtaining medical care when they thought they needed it in the past 12 months (1=did not obtain necessary medical care, 0=did not report *not* obtaining necessary medical care); financial institutional attachment is coded based on whether respondents report having a checking account (1=no account, 0=account); employment and school enrollment is combined in one variable, as these two overlap as relevant age-graded institutions for adults in this age range. As an individual who is not working but is enrolled in school, or is not in school but is working, should not be considered unattached from institutions, this outcome is coded as a binary indicator for whether a respondent is "neither in school nor work" (1=no school/work, 0=school/work).[vi] In addition, as having a child under 12 years of age at home is the strongest predictor of being neither in school nor working for women (but is nonsignificant for men), women that fit this criterion are excluded from the neither in school nor working group.[vii]

Non-surveilling institutions in these analyses are volunteer associations and religious institutions. Involvement with volunteer associations is indicated using a binary measure for whether respondents performed unpaid volunteer or community service work in the past 12 months (1=no volunteer, 0=volunteer); participation in religious groups is indicated using a binary measure for whether respondents participated in special activities for young adults such as Bible classes, retreats, youth groups, or choir at churches, synagogues, or other places of worship in the past 12 months (1=no participation, 0=participation).

THREATS TO VALIDITY

A challenge in establishing causal inference in this analysis is that the factors that shape selection into criminal justice contact may also drive institutional attachment (or in this case,

avoidance). Literature suggests many of the characteristics that predict involvement in the criminal justice system—such as socioeconomic disadvantage or being a racial/ethnic minority—may also shape patterns of institutional attachment. Similarly, from a behavioral perspective, it is plausible that individuals who tend to be unpredictable and evasive may be both more likely to become involved in the criminal justice system and less likely to develop institutional ties. Therefore, I use a number of analytic strategies to isolate the direct relationship between criminal justice contact and institutional attachment.

The first strategy is to include an extensive battery of individual-level socio-demographic and behavioral controls preexisting literature suggests could be associated with both criminal justice contact and institutional avoidance—age, sex, education, parent education, employment status, school status, race, citizenship, military service, and household configuration (number in household and whether respondents live with parents). *Add Health* also has a uniquely rich set of behavioral measures, including: self-reported drug use (cocaine, methamphetamine), selling drugs, property crime (damaging property, theft under $50, theft over $50), violent behavior (fighting, stabbing someone), carrying a knife or gun to school or work, gang membership, and impulsivity (measured as individuals who self-report liking to "take risks," "lose control" of themselves[viii], or wish there were "no rules or restrictions"). Controlling for this range of behaviors that may be driving both outcomes assists in isolating the net effect of criminal justice contact.

Furthermore, given the nature of the investigation and potential selection in to refusing to answer questions about illegal behaviors, it could be problematic to handle missing data by employing listwise deletion and excluding all cases in which respondents refused to answer. Therefore, in this analysis, 'missings' on behavioral questions are included in models as binary

indicators, as respondents might refuse to answer these questions in a systematic way therefore potentially biasing any estimated association between criminal justice contact and institutional involvement.[ix]

Additionally, I employ three robustness checks, one theoretical and two empirical. As a theoretical robustness check, as previously noted, I test for the association between criminal justice contact and non-surveilling institutions. If unobservable measures of selection are driving both contact with the criminal justice system and institutional avoidance, results should demonstrate that individuals with involvement in the criminal justice system avoid all institutions, not merely those that keep formal records.

As a first empirical robustness check, I employ fixed effects analyses. For those outcomes measured at multiple waves, I estimate individual fixed effects regressions in order to net out time-invariant, individual-level unobservable characteristics that could potentially be associated with both criminal justice contact and institutional involvement. The estimation relies on cases where there is change in both the outcome and predictor variables, in other words, when individuals have no criminal contact in Wave 3, but have it in Wave 4, or if their levels of institutional involvement deepen across waves as does their institutional attachment. Whereas a benefit of fixed effects analysis is that it exploits longitudinal data, a limitation is that it can only estimate change in variables consistent across different waves of the survey. Therefore, fixed effects models can only be used to test for an association between *change* in criminal justice contact at the arrest, conviction, incarceration levels and *change* in attachment to medical, labor market/educational, volunteer and religious institutions because respondents are not asked in Wave 4 whether they have been stopped by the police or whether they have a bank account.

As a second empirical robustness check, I use propensity score matching—a nonparametric estimation method—and doubly robust estimation. As criminal justice contact is not randomly distributed, it is useful to model selection into the criminal justice system. Propensity score matching and the doubly robust estimation strategy are designed to gain analytical leverage by allowing for a better-specified treatment definition and establishing a direct test of the counterfactual model by making treatment and control groups more comparable. Propensity score matching offers a number of advantages over basic logistic regression models (Rosenbaum and Rubin 1983; Winship and Morgan 1999; Harding 2003). In this analysis, it makes it possible to control for characteristics and behaviors likely to predict criminal justice contact, maximize covariate balance between treatment and control groups and test the marginal effect of criminal justice contact on institutional attachment. Cases are matched based on their propensity to have contact with the criminal justice system; propensity scores are generated using a logistic regression including all socio-demographic and behavioral covariates used in the parametric models. This analysis uses nearest available pair matching with replacement. Comparing covariate means for each of the five matches demonstrates excellent balance was achieved.[x]

As a final test, I conduct a doubly robust estimation in which propensity scores serve as analytic weights in the logistic regression model. In line with existing research (e.g. Heckman, Ichimura and Todd 1997; Brand and Xie 2010), I restrict analyses to the region of common support, i.e., the region of propensity scores in which both treatment and control cases are observed. Including cases in which the propensity score of treatment observations is lower than the minimum or higher than the maximum propensity score of all control cases represents a violation of the common support condition (or "minima and maxima criterion") and could be a

source of evaluation bias. Very few cases needed to be dropped in order to meet this requirement—in total, 7 cases were excluded from the medical care PSM analysis, 3 from the bank account analysis, 5 from school/work, 3 from volunteer activities, and 4 from religious groups.

Combined, the cross-sectional, fixed effects and matching analyses provide considerable analytic leverage to estimate the relationship between criminal justice contact and institutional involvement.

RESULTS

CRIMINAL JUSTICE CONTACT

Before analyzing the relationship between criminal justice contact and institutional attachment, I begin with a brief description of who in these data report involvement with the criminal justice system. Of 15,170 individuals interviewed in Wave 3, 2,927 (19.48 percent) have had contact with the criminal justice system; 1,276 (8.49 percent) have been stopped and questioned by the police but never arrested, 761 (5.06 percent) have been arrested but never convicted, 706 (4.70 percent) have been convicted but never incarcerated, and 184 (1.22 percent) served time in prison or jail.

[INSERT FIGURE 1 HERE]

Table 1 presents the results of five discrete logistic regression models predicting criminal justice contact. The reference category in each model is people who have no criminal justice contact. The findings on socio-demographic characteristics largely comport with existing literature on the topic: net of other covariates, being male, US born, unemployed, or having lower levels of educational attainment is associated with higher odds of having been incarcerated. In terms of behaviors, having gang ties, being impulsive or reporting violent

behaviors is associated with higher odds of having been incarcerated, controlling for all other variables in the model. However, some violent behaviors (e.g. carrying a knife or gun to school or work, stabbing someone) fail to reach statistical significance due to the small numbers of people who actually report these behaviors. Being classified as impulsive is associated with higher odds of having been arrested, convicted or incarcerated, but not having been stopped by the police.

[INSERT TABLE 1 HERE]

Whereas the pseudo R-squared for the model predicting incarceration is 0.33, the pseudo R-squared for the model predicting being stopped or questioned by the police is only 0.08, suggesting that there is more randomness in who is stopped than who is incarcerated and that higher-order factors—such as neighborhood-level characteristics including crime rates and racial composition, and police organizational practices—contribute to stop patterns (Gelman et al. 2007; Beckett et al. 2006).

INSTITUTIONAL INVOLVEMENT

Descriptive statistics demonstrate approximately 23 percent of the respondents in these data report not obtaining medical care when they needed it, 28 percent do not have a bank account, 14 percent are neither in school nor working, 72 percent do not participate in volunteer activities, and 74 percent are not involved in religious organizations. Basic cross-tabulations suggest that criminal justice contact does appear to be associated with reduced attachment to surveilling institutions but not to non-surveilling institutions.

[INSERT FIGURE 2 HERE]

Figure 2 illustrates that, on average, those who have had contact with the criminal justice system are less likely to use surveilling institutions such as hospitals, but are no less likely to be

involved with non-surveilling institutions such as volunteer associations. However, these figures include no controls, and existing literature and the previous analyses suggest there are systematic differences between people who have been involved with the criminal justice system and those who have not.

Logistic Regression Models. Table 2 presents the results from logistic regression models predicting institutional involvement by criminal justice contact. Two discrete models are estimated for each of the five institutional outcomes—medical care, bank accounts, school/work, volunteer associations, and religious groups. In the first model for each outcome I use a single binary indicator for any criminal justice contact, and in the second, I disaggregate criminal justice contact into four mutually exclusive categories. All ten models include a battery of individual-level controls, including socio-demographic and behavioral characteristics.

[INSERT TABLE 2 HERE]

Model 6 and Model 7 present results of logistic regressions predicting the odds of individuals not obtaining medical care when they needed it. In addition to the host of socio-demographic and behavioral controls, these models also control for general health and possession of medical insurance. Individuals who have had contact with the criminal justice system have 31 percent higher odds of not obtaining medical care when they needed it, compared to those who have not had contact. Model 7 disaggregates criminal justice contact into four levels. Being stopped and questioned by the police, arrested, and convicted significantly predict not obtaining medical care; though the coefficient for being incarcerated is in the theoretically predicted positive direction, the result fails to achieve statistical significance at the $p<0.05$ level, likely due to the small number of respondents who have been incarcerated (n=184). This provides appreciable evidence in support of Hypothesis 1a—that contact with the criminal justice

system is associated with higher odds of not obtaining medical care when individuals thought they needed it. However, the magnitude of the coefficients on the disaggregated levels of criminal justice contact are similar, suggesting there is not evidence to support Hypothesis 3—the more serious the level of involvement in the criminal justice system, the higher the odds of not interacting with surveilling institutions. Therefore, lower levels of criminal justice involvement may be as consequential for institutional involvement as more serious contact.

To describe the relationship in terms of predicted probabilities, roughly 22 percent of those who have never had criminal justice contact did not obtain medical care when they needed it, compared to 30 percent of those who have had contact (holding all other variables in the model at their means). The confidence intervals for these predicted probabilities are non-overlapping, suggesting they are statistically different from one another.

Individuals' odds of not having a bank account are estimated in Model 8 and Model 9. Model 8 suggests that criminal justice contact is associated with 18 percent higher odds of *not* having a bank account. When levels of criminal justice contact are disaggregated in Model 9, being arrested, convicted, and incarcerated stand out as significant predictors—they increase an individual's odds of not having a bank account by 29, 53, and 51 percent, respectively, providing evidence in support of Hypothesis 1b. Being stopped and questioned by police does not appear to be related to individuals' account ownership, net of socio-demographic and behavioral controls. Among those with no criminal justice contact, the predicted probability of not having a bank account is 26 percent, whereas it is 34 percent for those who have had contact with the criminal justice system (holding all other variables in the model at their means). Again, the confidence intervals for these probabilities do not overlap.

Models 10 and 11 estimate the relationship between criminal justice contact and individuals being neither in school nor working. Those who have had any contact with the criminal justice system have 34 percent higher odds of being neither in work nor school than those who have not. This finding is statistically significant at the $p<0.001$ level. Similarly, individuals who have been arrested, convicted, or incarcerated have 31, 32, and 126 percent higher odds of being neither in school nor working than those who have not had contact with the criminal justice system. Though the coefficient for being stopped by the police is in the theoretically predicted direction, it fails to achieve statistical significance at the $p<0.05$ level. Holding the rest of the variables in the model at their means, among those who have had criminal justice contact, the predicted probability of being neither in school nor working is nine percent, whereas it is 14 percent among those who have been involved in the criminal justice system. The confidence intervals around the predicted probabilities do not overlap.

Models 6 through 11 provide compelling evidence in support of Hypotheses 1a, 1b, and 1c—contact with the criminal justice system, net of a host of socio-demographic and behavioral controls, is associated with lower levels of involvement with surveilling institutions—specifically, medical, financial, educational, and labor market institutions. Results yielded no evidence to support Hypotheses 3—the more serious the level of involvement in the criminal justice system, the higher the odds of not interacting with surveilling institutions.

Given that it is impossible to control for all potential predictors of criminal justice contact and system avoidance using cross-sectional data, lingering questions of selection remain. In the next set of analyses, Models 12 through 15 test for the association between criminal justice contact and individuals' attachment to non-surveilling institutions, including volunteer and religious groups. If selection into the criminal justice system also influences institutional

attachment, we would expect to find reduced attachment across the board. Yet, Models 12 through 15 suggest that criminal justice contact does not reduce the odds that individuals will interact with non-surveilling institutions. For example, in Model 12, the binary indicator for criminal justice contact is not a significant predictor of volunteerism; similarly, in the disaggregated model, neither being stopped, arrested, convicted nor incarcerated are significant predictors of participating in volunteer activities. Moreover, Models 14 and 15 illustrate that there is no statistically significant association between criminal justice contact at any level and individuals' odds of not participating in religious group activities, net of socio-demographic and behavioral controls, and model-specific controls for religiosity and church attendance. Models 12 through 15, therefore, comport with Hypotheses 2a and 2b—there is no evidence to suggest interacting with the criminal justice system reduces involvement with non-surveilling institutions.

Fixed Effects Regression Models. While the above cross-sectional logistic regression models control for a particularly rich number of observable measures of selection available in *Add Health* data, I employ individual level fixed effects regression as an additional strategy to address potential selection bias. Fixed effects make it possible to net out time-invariant individual-level characteristics that could be associated with both criminal justice contact and institutional avoidance. As Wave 4 does not ask individuals if they were stopped by the police, criminal justice contact is recoded to include only arrest, conviction and incarceration. Analyses are run on outcomes available in both waves—all but bank account ownership. Additionally, wave fixed effects are included in the models to net out the average difference between the two time periods.

[INSERT TABLE 3 HERE]

Table 3 presents the results from eight discrete individual-level fixed effects logistic regression models. Model 16 suggests individuals who transition from no contact to contact with the criminal justice system between Waves 3 and 4 demonstrate 50 percent higher odds of not obtaining medical care when needed. Similarly, when levels of criminal justice contact are disaggregated in Model 17, the statistically significant coefficients suggest that an increase in level of criminal justice contact between Waves 3 and 4 predicts higher odds of not obtaining medical care when needed in Wave 4. Models 18 and 19 present fixed effects estimates of the association between criminal justice contact and being neither in school nor working. Any contact, arrested and incarcerated coefficients appear in the theoretically predicted positive direction; however, they fail to achieve statistical significance at the $p<0.05$ level.

By contrast, none of the results from Models 20-23—models predicting change in involvement with non-surveilling institutions by change in criminal justice contact—are statistically significant, providing further support for the original hypotheses that criminal justice contact, net of individual-level characteristics, is only associated with avoidance of surveilling institutions.

Propensity Score Matching Models. Table 4 presents the results of the propensity score matching and doubly robust estimations. When a matched sample is employed to estimate the net effect of criminal justice contact on institutional involvement (i.e. the average treatment effect on the treated, or ATT), criminal justice contact appears to significantly reduce attachment to surveilling institutions, such as medical care, banks, and school/work, but not to non-surveilling institutions, such as volunteer associations and religious groups. Further, the results of the doubly robust estimations—in which propensity scores serve as analytic weights in the logistic regression models that include the full set of covariates—provide additional evidence that

criminal justice contact is associated with higher odds of not participating in surveilling institutions, but is a nonsignificant predictor of involvement in non-surveilling institutions.

[INSERT TABLE 4 HERE]

The results detailed above provide compelling empirical evidence for Hypotheses 1 and 2—that there is a strong, robust negative relationship between criminal justice contact and involvement with surveilling institutions, net of socio-demographic and behavioral characteristics. In Table 2, Models 6 through 11 demonstrate the strong negative association between contact with the criminal justice system and surveilling institutions such as hospitals, banks, formal employment, and school. Models 12 through 15 further suggest that it is indeed the surveilling nature of institutions that leads to lower levels of institutional involvement and that the relationship is not merely an artifact of selection. In contrast to the prediction based on existing literature[xi], the results yielded no evidence to support Hypothesis 3—that the more serious the level of criminal justice contact, the lower the rates of institutional involvement. This finding suggests the grade of contact may be less important than the contact itself. The fixed effects models, presented in Table 3, provide an additional test for selection bias and are consistent with the results of the cross sectional models. Finally, whereas fixed effect regressions make it possible to test how criminal justice contact changes an individual's attachment to institutions over time, the propensity score matching and doubly robust estimation results show that among matched pairs, receiving the "treatment" of criminal justice contact is associated with reduced involvement with surveilling institutions. In sum, the results from cross sectional and longitudinal models point to a negative relationship between criminal justice contact and attachment to surveilling institutions. Empirical and theoretical robustness checks suggest that fear of surveillance and subsequent system avoidance, rather than socio-demographic

characteristics, behavioral characteristics, or an aversion to institutions in general, shapes individuals' levels of institutional involvement.

DISCUSSION AND CONCLUSION

This investigation seeks to better elucidate the relationship between contact with the criminal justice system and institutional involvement. Motivated by recent ethnographic work detailing the way in which fear of surveillance leads to institutional evasion (Goffman 2009), I introduce the concept of system avoidance to capture individuals' deliberate evasion of surveilling institutions that keep formal records. The results of this analysis provide the first quantitative empirical evidence that those who have been stopped, arrested, convicted, or incarcerated are less likely to interact with institutions that keep formal records, such as hospitals, banks, formal employment, and schools than their counterparts without criminal justice contact. The results also suggest that institutional involvement is not uniformly impacted by involvement in the criminal justice system; the relationship does not hold for non-surveilling institutions, such as volunteer organizations and religious groups. In other words, individuals retract specifically from those aspects of institutionalized life that keep formal records and are more likely to increase their risk of re-exposure to the criminal justice system. The empirical and theoretical robustness checks suggest that fear of surveillance and subsequent system avoidance, rather than socio-demographic characteristics, behavioral characteristics, or an aversion to institutions in general, shapes individuals' behavior and involvement with institutions that are consequential for future outcomes.

Given the nature of observational data, it is important to consider other candidate explanations for the relationship between criminal justice contact and engagement with surveilling institutions. The first is selection—that pre-existing characteristics of individuals lead

them to select into both criminal justice contact and institutional avoidance. The fixed effects and propensity score models, alongside the battery of controls and theoretical robustness check of non-surveilling institutions, reduce the likelihood that this is the case. A second possibility is that institutions may systematically exclude individuals with criminal justice contact. Indeed, research suggests a criminal record is a significant barrier to getting a job (e.g., Pager 2007). In adjudicating between exclusion and avoidance mechanisms, labor market exclusion holds less explanatory power for lower levels of contact, such as arrests without convictions—without a criminal record, it is more difficult for a potential employer to know criminal justice contact occurred and make hiring decisions accordingly. Moreover, criminal justice contact does not directly impact an individual's ability to obtain medical care or have a checking account—physicians cannot deny care based on criminal justice involvement and the only criminal convictions that can preclude an individual from opening a checking account or other financial instrument are those related to fraud. Finally, existing theory and qualitative research (e.g., Goffman 2009; Harris et al., 2010) strongly suggest avoidance is at play. That said, the disconnection of a group of individuals from important institutions, whether the result of avoidance or exclusion, has similar implications for inequality.

By suggesting the concept of system avoidance may be an important dimension in future research, this paper contributes to the sociological literature on criminal justice, surveillance and stratification, and has implications for public policy. Understanding the consequences of surveillance is increasingly relevant for academics, policy architects, and practitioners alike, as technological advances in data integration, 'electronic trails,' and tracking systems continue, including the proliferation of fusion centers that consolidate data from public and private institutions and make it available to law enforcement agencies.

System avoidance and subsequent unequal institutional involvement may have real consequences for inequality. Given that involvement with the criminal justice system is highly stratified by race and class, the negative consequences of system avoidance for an expanding group of already disadvantaged individuals will be similarly disproportionately distributed, thus exacerbating preexisting inequalities. Furthermore, lack of attachment to important institutions such as hospitals, banks, schools and the labor market leads to marginalization and impedes opportunities for financial security and upward mobility among individuals. As Haggerty and Ericson (2000) suggest, "efforts to evade the gaze of different systems involves an attendant trade-off" (619). That trade-off is full participation in society.

The negative consequences of avoiding the specific institutions examined in this paper are myriad. Avoiding obtaining medical care can be detrimental to future health outcomes as regular medical care is associated with earlier detection of health conditions and lower rates of morbidity and mortality (Kaiser 2011; Weissman et al. 1991). Not having a bank account precludes individuals from building credit and securing financing for mobility-enhancing investments and can lead to increased reliance on alternative financial services such as predatory lenders (Blank and Barr 2009; FDIC Survey 2009). Furthermore, life course literature identifies attachment to educational and employment institutions as important in shaping outcomes during the transition to adulthood. "Temporally-embedded social engagement" (Wikström and Sampson 2006; Emirbayer and Mische 1998) is important at this critical juncture; lack of attachment to institutions such as schools and banks potentially leads to capital deficiencies (Caspi, Wright, Moffat and Silva 1998). Involvement with the criminal justice system in young adulthood, therefore, can have a powerful effect on life trajectories; this paternalistic contact with the state may lead people to avoid institutions that promote prosocial adult activity. Finally, there is yet

another unanticipated consequence (Merton 1936) of institutional avoidance—attempts at social control through surveillance may actually fuel the very behaviors it is trying to suppress. When people go 'off the books,' their attachment to institutions that are key to desistance from crime, such as formal employment, is undermined (Laub and Sampson 1993; Hirschi and Gottfredson 1993).

Though data integration provides many positive opportunities for service delivery, policymakers need to consider increasing the transparency of when and how personal data is shared across institutional settings, particularly with regard to criminal justice institutions having access to individuals' data in other institutional settings. Beyond transparency, policymakers should consider establishing 'safe harbors' in some circumstances, whereby an individual interacting with an institution does not put them in jeopardy of apprehension. For example, as a matter of policy, the Internal Revenue Service does not share data with Immigration and Customs Enforcement in an effort to not penalize positive civic behavior such as paying taxes (IRS 2012). Similarly, data sharing firewalls could ensure a parent taking their child to the hospital or enrolling in public medical assistance would not increase their risk of being apprehended. Regulatory efforts in Europe—specifically Germany and the United Kingdom—related to the accumulation and sharing of personal data may prove to be a useful guide for initiating similar policy conversations in North America.[xii]

Finally, this study suggests that lower levels of criminal justice involvement—such as police contact—have unintended stratifying consequences that have not received sufficient attention in the literature. There is a need for more research on the effects of police questioning on outcomes other than recidivism and aggregate crime rates. This paper provides empirical evidence that some of the penalties of involvement with the criminal justice system come into

effect with lower levels of contact. This finding has policy implications for debates over alternatives to incarceration, which may fail to appreciate the collateral consequences of lower levels of involvement in the criminal justice system such as police stops.

Future research investigating other institutions relevant to system avoidance, such as public assistance, may yield interesting results. By suggesting a potential pathway by which individuals involved in the criminal justice system become disadvantaged and marginalized—system avoidance—the findings of this study are relevant for other fields of inquiry, such as research on undocumented immigrants or other groups likely to be engaging in institutional evasion. Future research should explore whether system avoidance may lead individuals to rely more heavily on informal financial arrangements and social networks.

The increasing integration of institutional databases and monitoring practices is transforming the way individuals interact with institutions and has implications that researchers are only beginning to appreciate. As modern technology enables surveillance activities across institutions, scholars and policy makers need to think seriously about the unintended consequences. System avoidance may serve to sever an already marginalized subpopulation from the very institutions that are pivotal to their own integration into broader society, leaving a growing class of individuals further and further behind.

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TABLES

Table 1: Predicting Criminal Justice Contact

	Model 1: Any CJ Contact OR		Model 2: Stopped OR		Model 3: Arrested OR		Model 4: Convicted OR		Model 5: Incarcerated OR	
Socio-demographic										
Male	3.15***	(.16)	2.23***	(.15)	3.60***	(.33)	4.62***	(.47)	11.81***	(3.33)
Black	.92	(.06)	.82*	(.07)	1.24*	(.13)	.75*	(.09)	1.25	(2.78)
Hispanic	1.15*	(.08)	1.22*	(.12)	1.37**	(.17)	.81*	(.11)	1.51	(.37)
Other Race	.93	(.08)	.87	(.10)	.93	(.15)	.99	(.16)	1.19	(.40)
Age	1.02	(.30)	.46	(.18)	2.81	(1.50)	2.40	(1.36)	3.63	(3.81)
US Born	1.25*	(.12)	.94	(.12)	1.23	(.21)	2.12***	(.49)	6.38*	(.4.67)
Education	.93 ***	(.01)	1.04*	(.02)	.92*	(.042)	.82 ***	(.02)	.62***	(.04)
Parent College	1.24***	(.07)	1.27***	(.09)	1.23*	(.11)	1.29**	(.13)	.91	(.17)
Have Job	0.89*	(.05)	.97	(.07)	.78 **	(.07)	.89	(.09)	.53***	(.10)
In School	1.14*	(.06)	1.17*	(.08)	1.07	(.10)	1.15	(.12)	.78	(.19)
Behavioral										
Theft over $50	1.35*	(.16)	1.12	(.18)	1.46*	(.27)	1.24	(.25)	1.56	(.53)
Theft Under $50	1.68***	(.14)	1.79***	(.19)	1.60***	(.23)	1.71***	(.25)	1.27	(.39)
Damaged prop.	1.95***	(.14)	1.76***	(.17)	2.01***	(.24)	2.20***	(.28)	2.51***	(.60)
Carry gun/knife	.76	(.15)	.71	(.21)	.64	(.20)	.58	(.19)	1.57	(.60)
Pulled gun/knife	2.12***	(.40)	1.99**	(.53)	2.12**	(.61)	2.19**	(.66)	2.48*	(1.03)
Stabbed	1.21**	(.38)	.433	(.27)	1.59	(.70)	.74	(.39)	1.52	(.92)
Used meth	1.65***	(.16)	1.16	(.17)	1.54*	(.24)	2.23***	(.31)	1.82*	(.48)
Used cocaine	2.29***	(.17)	1.81***	(.20)	2.26***	(.29)	2.89***	(.36)	2.92***	(.68)
Sold drugs	2.09***	(.16)	1.70***	(.19)	1.99***	(.25)	2.31***	(.28)	2.44***	(.53)
Gang	1.33***	(.08)	1.13	(.10)	1.49***	(.15)	1.52***	(.17)	1.94***	(.37)
Impulsive	1.29***	(.07)	1.15	(.08)	1.45***	(.13)	1.32**	(.12)	1.60**	(.28)
N	14557		12917		12456		12410		11902	
Pseudo R-squared	.15		.08		.15		.22		.33	

Notes: Standard errors for odds ratios are in parentheses. ***p<0.01; **p<0.05; *p<0.10; two-tailed t-test
Includes controls for household size, live with parents, military, age squared, missing self-reported drug use and criminal behavior.
Reference category in all models is those with no criminal justice contact.

Table 2: Logistic Regression Predicting Institutional Avoidance

	Avoided Surveilling Institutions						Avoided Non-Surveilling Institutions			
	Medical Care		Bank Account		School/Work		Volunteer		Religious Group	
	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
	OR	OR	OR	OR	OR	OR	OR	OR	OR	OR
Any CJ Contact	1.31***	---	1.18**	---	1.34***	---	0.91	---	1.08	---
	(0.07)		(0.07)		(.10)		(0.05)		(0.07)	
Stopped	---	1.33***	---	0.94	---	1.23	---	0.91	---	0.99
		(0.10)		(0.08)		(.14)		(0.06)		(0.09)
Arrested	---	1.29**	---	1.29**	---	1.31*	---	0.93	---	1.14
		(0.12)		(0.12)		(.16)		(0.9)		(0.14)
Convicted	---	1.33**	---	1.53***	---	1.32*	---	0.87	---	1.24
		(0.13)		(0.15)		(.17)		(0.09)		(0.17)
Incarcerated	---	1.10	---	1.51*	---	2.26***	---	0.73	---	1.41
		(0.19)		(0.27)		(.44)		(0.15)		(0.37)
Socio-demographic controls	Yes†	Yes†	Yes	Yes	Yes	Yes	Yes	Yes	Yes‡	Yes‡
Behavioral controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	14458	14411	14515	14468	14147	14100	14510	14463	14354	14400
Pseudo R-squared	0.07	0.07	0.21	0.21	0.09	0.09	0.10	0.11	0.28	0.28

Notes: Standard errors for odds ratios are in parentheses. ***p<0.001; **p<0.01; *p<0.05; two-tailed t-test

†Includes control for general health and possession of medical insurance ‡Includes controls for religiosity and regular church attendance.

Socio-demographic controls include sex, race, age, education, parental education, marital status, nativity, household configuration (i.e. number in household and whether individuals live with parents), military service, and whether respondents are in school or have a job.

Behavioral controls include whether individuals self-report stealing over or under $50, damaging property, carrying a gun or knife to school or work, stabbing someone, using cocaine or methamphetamine, selling drugs, being in a gang, and whether respondents are classified as impulsive and/or candid.

□

Table 3: Individual-level Fixed Effects Logistic Regressions Predicting Institutional Avoidance

	Avoided Surveilling Institutions				Avoided Non-Surveilling Institutions			
	Medical Care†		School/Work		Volunteer		Religious Group‡	
	Model 16	Model 17	Model 18	Model 19	Model 20	Model 21	Model 22	Model 23
	OR	OR	OR	OR	OR	OR	OR	OR
Any CJ Contact	1.50***	---	1.05	---	0.90	---	1.04	---
	(0.08)		(0.11)		(0.19)		(0.09)	
Arrested	---	1.39***	---	1.02	---	0.81	---	1.03
		(0.14)		(0.15)		(0.22)		(0.12)
Convicted	---	1.39**	---	0.85	---	1.05	---	1.14
		(0.18)		(0.14)		(0.34)		(0.16)
Incarcerated	---	1.64***	---	1.21	---	0.89	---	1.23
		(0.16)		(0.16)		(0.23)		(0.16)
Wave fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	7674	7584	3076	3030	16576	16426	6938	6882
Pseudo R-squared	0.05	0.05	0.05	0.06	0.87	0.87	0.13	0.13

Notes: Standard errors for odds ratios are in parentheses. ***p<0.001; **p<0.01; *p<0.05; two-tailed t-test

†Models include control for possession of health insurance.

‡Models include controls for religiosity and church attendance.

Table 4: Effect of Criminal Justice Treatment on Matched Samples

	Propensity Score Matching						Doubly Robust Estimation			
Avoidance	Treated	Controls	Difference	SE	T-stat	Significance	OR	SE	N	Pseudo R2
Surveilling Institutions										
Medical Care	0.30	0.25	0.05	0.01	3.67	p<0.001	1.27***	0.08	5612	0.05
Bank Account	0.34	0.31	0.03	0.01	2.02	p<0.05	1.15*	0.08	5628	0.19
School/Work	0.13	0.10	0.03	0.01	2.89	p<0.001	1.40***	0.12	5504	0.10
Non-Surveilling Institutions										
Volunteer	0.72	0.73	-0.01	0.01	-0.74	n.s.	0.89	0.06	5634	0.10
Religious Groups	0.80	0.80	0.00	0.01	0.11	n.s.	1.05	0.08	5622	0.27

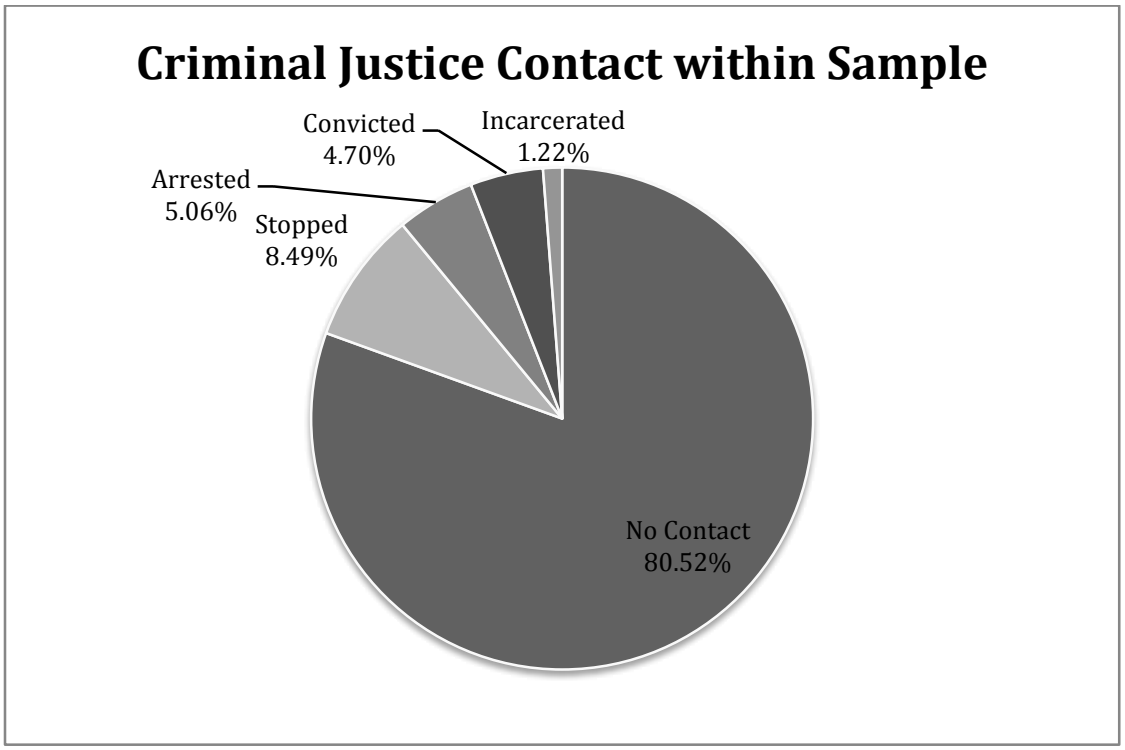
Notes: ***p<0.001; **p<0.01; *p<0.05; two-tailed t-test

Models includes same suite of sociodemographic and behavioral controls as in Models 6-15. Sociodemographic controls include sex, race, age, education, parental education, marital status, nativity, household configuration, military service, and whether respondents are in school and/or have a job. Behavioral controls include whether individuals self-report stealing over or under 50 dollars, damaging property, carrying a gun or knife to school or work, stabbing someone, using coke or meth, selling drugs, being in a gang, and whether respondents are classified as impulsive and/or candid.

?

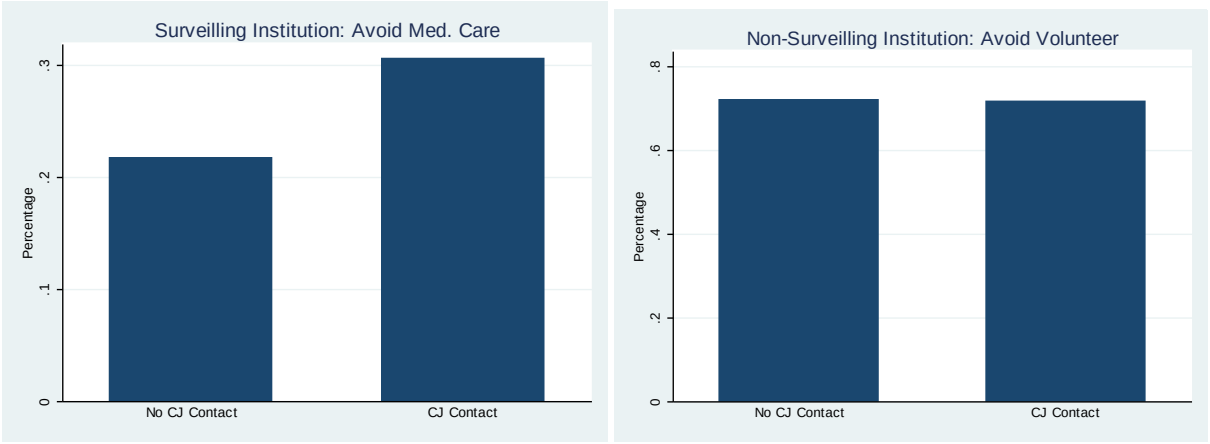
FIGURES

Figure 1



Source: National Longitudinal Study of Adolescent Health

Figure 2



Source: National Longitudinal Study of Adolescent Health
Notes: The bars represent the percentage of those individuals who responded affirmatively to the following questions: "Has there been any time in the past 12 months when you thought you should get medical care but you did not?" and "During the last 12 months, did you perform any unpaid volunteer or community service work?"

[i] Existing literature details various reasons why low-income and minority individuals avoid using mainstream financial institutions, one of which is fear of surveillance (Caskey 2005; Blank and Barr 2009).

[ii] For example, individuals who have been incarcerated will have higher odds of not obtaining medical care than individuals who have been convicted but never incarcerated, and so on.

[iii] Parental education data from Wave 1 are also included as controls.

[iv] Bias due to differential sample attrition is less than 1% (Chantala et al. n.d.). Moreover, as *Add Health* itself can be seen as a surveilling institution, selective attrition on these grounds would produce more conservative estimates and downwardly bias results because the study does not include those with the most extreme system avoidance.

[v] In their analysis of political participation, Weaver and Lerman (2010) use a similar operationalization of criminal justice contact.

[vi] The question used to measure employment is "Are you currently working more than 10 hours per week for pay." Analyses were also conducted using the question "Do you currently have a job," and a combination of the two and it did not significantly alter the results.

[vii] Regression results available upon request.

[viii] For a discussion on the role of self-control in predicting deviant/criminal behavior, see Gottfredson and Hirschi 1990, Laub and Sampson 1993, Pratt and Cullen 2000.

[ix] Each behavioral question is coded using two dummy variables. The first is a binary indicator coded 1 if the respondent answers "yes" and 0 for those who respond "no" or refuse to answer. A second binary indicator of "missingness" is included where 1 indicates the respondent refused to answer and 0 indicates the respondent provided an answer. Results were not substantively affected by including missing data in the model instead of employing listwise deletion.

[x] See tables in Appendix.

[xi] E.g., (e.g. Weaver and Lerman 2010)

[xii] For example, see German Constitutional Court's 1983 decision on "informational self determination."