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# Assessing Trends in Women's Violence via Data Triangulation: Arrests, Convictions, Incarcerations, & Victim Reports

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### **Abstract**

Constructionist theories suggest the national rise in female violence arrests may be policygenerated because arrest statistics are produced by violent behavior and changing official responses (e.g., net-widening enforcement policies). Normative theories attribute the rise to female behavior changes (e.g., in response to increased freedoms or hardships). We examine whether any narrowing of the arrest gender gap is borne out across offense types of varying measurement reliability, in victimization data, and across two post-arrest criminal justice stages. Advanced timeseries analyses over 1980–2003 support the constructionist position – first, all sources show little or no increase in women's rates for the more reliably measured offenses of homicide and robbery, and for rape; second, the assault gender gap narrows for arrests, but holds stable in victimization data; third, the assault gender gap narrows moderately for convictions, but is stable for imprisonment, indicating spill-over effects of more expansive arrest policies. Several factors have produced greater female representation in "criminal assault" arrests including (i) proactive policing targeting and formally responding to minor violence and in private contexts, (ii) interventionist developmental epistemologies that blur distinctions among violence types and circumstances, (iii) the rise of social movements recognizing "hidden" victims, (iv) law and order political messages stressing greater accountability, and (v) the somewhat greater decline in male compared to female violence in the late 1990s. The problem of women's violence is largely a social construction. Rather than women becoming more violent, changes in the management of violence increasingly mask differences in the violence levels of women and men.

#### **Keywords**

Crime rates; Methodology; Sex differences; Social change; Social control; Trends; Violence

Have women become more violent as recent arrest statistics suggest? Is the character or extent of female violence changing and the gender gap narrowing? Understanding trends in

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women's violence is central to mainstream sociological interests in the determinants and consequences of social and political change, particularly as regards the organization of gender. Explaining recent sizeable shifts in the gender composition of violent arrestees is central also to *constructionist* versus *normative* perspectives on the origins and development of social problems. Normative theories identify behavior change – suggesting that women's lives have changed in ways that increase their violence. In contrast, constructionists investigate shifting social control mechanisms – suggesting that changes in mobilization of law have prompted the rediscovery of violence that is more typical of women, and consequently, increased the application of social control to women. In addition to these substantive issues, identifying female violence trends has important policy implications because legislative and programmatic efforts to deal with an 'epidemic' of violence among women would differ from those predicated on an understanding of gendered effects of netwidening social control policies.

Identifying significant shifts in the traditional gender-crime relationship is complicated by the complex measurement issues surrounding gender gap estimates and the varying strengths and limitations of data that may be brought to bear on the issue. Sociologists and criminologists face a dilemma in interpreting dissonant findings on gender gap trends across two of the most widely used national sources on violence trends, arrests (UCR) and unofficial victim-reports (NCVS). National arrest statistics of the FBI's Uniform Crime Reports apparently show women making substantial gains on men in levels of violent crime. Comparing the 1980s to today, women's share of all arrests for aggravated assault increased from one-sixth of all arrests to more than one-fourth and from one-tenth to one-fifth for the Violent Crime Index (homicide, rape, robbery, aggravated assault) (FBI 1980, 2007). Media reports bolster the image of a "rising tide of violence among girls and women" and of their "moving into the world of violence that once belonged to males" (Ford 1998:13; see Goodman 2004). Legal experts are quoted identifying an "emerging group of homicidal women... it's a whole new phenomenon" (quoted in Gurr 2001) and sources in the Bureau of Justice Statistics have explained women's rising imprisonment rates as due to their increased violence (Carroll 2005).

Studies by Steffensmeier et al. (2005) and Chesney-Lind (2002) confirm increases in *girls'* arrests for assault, but show no corresponding increase in girls' assaultive violence according to nationally representative survey data from victim- and self-reports on offending. Arrest counts (and other criminal justice system data) are a product not only of women's violent behavior but also of official responses to it. That women's arrest gains are policy- rather than offender-generated is plausible both because women have always been more violent than their weak and passive stereotypes would suggest (Chesney-Lind 2002) and because official sanctioning may vary over time and across population sub-groups, particularly for less serious, more variably defined offenses. Such changes can elevate the visibility and vulnerability to arrest of women's violence. Steffensmeier et al. argue that policy developments emphasizing proactive intervention and preventive punishment may have gendered effects that escalate the *visibility* or arrest proneness of females for "violent" offending relative to females in the past and relative to males by encouraging more formal treatment of the minor sorts of violence that women have always been about as likely as

men to commit and by targeting violence in private (family, acquaintance) as compared to public (street, stranger) contexts.

The current work has three primary aims: 1) delineating the extent of change in female violence by extending our focus to *adults* and to *serious*, *predatory* violence; 2) testing constructionist suppositions laid out by Steffensmeier et al. (2005), namely that gendered netwidening effects are concentrated at earlier stages of the criminal justice system and on more minor offenses; and 3) making sense of dissonant findings in official and unofficial data, mainly for assault, by triangulating evidence and evaluating the strengths of various data for estimating gender gap trends, including: arrests, victim reports, convictions, and imprisonment. We address these concerns regarding whether women's criminal violence is rising and its gender gap closing in the context of two competing hypotheses, normative versus constructionist, using diverse data sources that span the criminal justice system as well as data independent of it and by employing advanced time-series methods.

To assert there has been a substantial change in the extent or character of violence for one sex but not the other requires a high burden of evidence. Our strategy of triangulating evidence on gender gap trends across diverse comparisons – across arrest, victim reports, and later stages in the criminal justice system (conviction, incarceration) and across offenses - counterbalances deficiencies in any one source and enhances confidence in the conclusions drawn. Equally important, we test some of the constructionist suppositions described by Steffensmeier and colleagues (2005) by leveraging advantages of each data source as alternative windows for identifying violence trends, examining the spectrum of violence from homicide to assault, and by focusing on adults,. To complement our earlier focus on minor offending by adolescents, we examine whether there have been real changes in the historically identified relationship between gender and crime: To what extent has the adult gender gap in serious, predatory violence narrowed? With the post-arrest data, we explore the hypothesis that changes in the mobilization of law toward more encompassing working definitions of violence will manifest in gender-disproportionate effects at earlier stages in the application of formal social control and only for minor offenses. The post-arrest data afford the opportunity to assess the extent to which there are downstream or spill-over effects of women's increased representation in assault arrest statistics versus the extent to which women's violence has worsened.

Whereas Steffensmeier et al. (2005) focused on delineating a theoretical perspective to understand variations in social control and gender gap trends, the present study is as much concerned with methodological issues raised in this debate – namely the meaning of various data sources vis a vis trends in the violence gender gap. We examine each of four national longitudinal sources on adult violence trends and include all available serious violence measures within each source. We lay out a continuum of reliability that provides a framework to evaluate competing empirical evidence on female-to-male violence trends across and within the four major longitudinal data sources on violence trends. This framework, based on consistency versus flexibility of violence definitions over time and across sources, is especially germane in times of rapid social change and when national data sources show divergent trends across subgroups. We first dissect *UCR* arrest trends into violent crime categories that represent varying levels of reporting reliability, and then we

examine alternative sources of longitudinal data on women's and men's violence including *non-official* trend data from victim-reports in the *National Crime Victimization Survey* (NCVS) and *post-arrest official* trend data across stages in the criminal justice system – conviction and imprisonment (also capital punishment).

# **Normative versus Constructionist Perspectives**

Offender- versus policy-generated explanations for escalating assault arrest trends are grounded, respectively, in normative and constructionist perspectives about the relationship between demographic characteristics, like gender or race, and official measures of deviance (see review in D'Alessio and Stolzenberg 2003). *Normative* theories tend to view criminal law as enforced largely in reaction to criminal acts so growth in arrest statistics mainly reflects changes in offender behavior. As reviewed below, speculations abound about the possible connection between women's violent arrest trends and recent gender role changes. The general contours of these normative arguments are congruent with traditional sociological crime theories such as differential association/social learning, anomie/strain, and social control/social disorganization, which emphasize the nexus between social factors and crime to account for changing crime patterns between the sexes in arrest statistics.

In contrast, *constructionist* approaches focus on shifts in law enforcement practices or other mechanisms of crime control to explain changes in arrest patterns. Particularly when arrest rates move abruptly upward or downward constructionists are prone to attribute shifts to extralegal factors and probe for policy changes that create crime "waves" or social problems "epidemics" involving influential stakeholders. <sup>1</sup> We elaborate on Steffensmeier and colleagues' emergent perspective on gender-specific impacts of the changing culture of crime control, particularly as it pertains to adult offending issues, like domestic violence and female-on-female violence across contexts.

#### Normative Perspective: Changes in Offender Behavior

There is no shortage of intuitively appealing speculations about the apparent rise in women's violence as reflected in arrest data, an underlying theme being that women's lives have undergone major changes that contribute to their greater involvement in violence. Social changes most noted include the popular view that recent shifts in the organization of gender and underlying gender-role expectations toward greater female freedom and assertiveness have tended to "masculinize" female behavior and produced a greater penchant for physical aggression or attack (Fox and Levin 2000). Variants include the possible effects of increased exposure and mimicking of media messages of women as violent (e.g., video games with violent female action heroes such as "Tomb Raider").

<sup>&</sup>lt;sup>1</sup>It is important to point out that many criminologists today only loosely align normative and/or constructionist approaches to the study of crime, including their stance toward types of crime data. Many normative theorists, for example, are highly skeptical of official data on crime and particularly so when it comes to assessing crime trends. Nonetheless, for purposes of making points introduced in this article, a correspondence is assumed in one's stance toward the meaning of official statistics depending on whether one is more aligned with "normative" or "constructionist" ideas.

<sup>2</sup>In the 1970s, Adler and Simon advanced a similar perspective. In its most basic form, the emancipation hypothesis was that women's

<sup>&</sup>lt;sup>2</sup>In the 1970s, Adler and Simon advanced a similar perspective. In its most basic form, the emancipation hypothesis was that women's liberation leads to their greater criminality. Though challenged by many scholars (e.g., Chesney-Lind 1997, 2004; Daly 1994; Richie 1996) who demonstrated that women in the criminal justice system are more often women living on the margins of society than liberated feminists, this is an oft recurring theme in explorations of female crime.

Other commentators propose that the same breakdowns in family, church, and community organization that have long been held responsible for violence among men are finally catching up to women (Anderson 1999; Baskin and Sommers 1998). Trends toward higher divorce rates and shifts in community social organization toward female-headed families can be seen as affecting female violence as much or more than male violence since women's psychic and economic well-being is more dependent on domestic arrangements (Popenoe 1996) and because kin networks act as buffers against victimization and economic hardship that may lead to involvement in violence (Brown and Gilligan 1992; Schwartz 2006). Therefore, women increasingly may resort to physical attack or threat as coping strategies for dealing with disadvantaged surroundings or for confronting conflicts with partners, children, extended family, neighbors, females, or authority figures (Anderson 1999).

A third overlapping social change, women are experiencing far greater stress and role strain than women two decades ago (Dubeck and Dunn 2002). Women today confront more complex, multi-dimensional, often contradictory behavioral scripts that specify what is appropriate, acceptable, or possible for women to do (Bianchi 1995). At the macro-level, economic adversity or poor marriage pools as part of the feminization of poverty alongside other women's upward economic and occupational mobility may intensify some women's sense of deprivation. This combination of old and new stresses may have increased women's propensities and opportunities for violence.

# Constructionist Perspective: Greater Visibility of Women's Violence via Net-widening Policy Changes

An alternative explanation is that women's arrest trends are by-products of policy and enforcement changes that have enhanced visibility and reporting of women's violence relative to women in the past and to men. This possibility rests on the interplay of three exigencies that surround the measurement of violence and its distribution by gender. These are: (a) elasticity of violence definitions, (b) broadness of UCR violence categories like aggravated or simple assault, and (c) variability in the gender/violence relationship depending on how violence is defined. These exigencies intermesh with recent policy shifts in ways that contribute to women being *more vulnerable to arrest* for "violent" behaviors that in the past would have been ignored, handled informally, or resulted in milder charges (e.g., disorderly conduct, harassment).

By the elasticity of violence definitions, we mean that citizens, police, and other officials have considerable discretion in defining violence. Victims and those responsible for addressing victimization must decide upon the lens they will use to determine when a particular behavior is considered *violent* and the threshold between minor and serious violence. A rough scale of least to most serious violence includes: threats of physical assault, attempted assault, throwing items, pushing, grabbing, shoving, slapping, kicking, biting, hitting with a fist, hitting with an object, choking, threatening with a weapon, and using a weapon. While some may include all behaviors on this list as *violence*, including *threats*, others may include only those on the scale's latter part.

Elasticity in defining violence is mirrored in the *broadness of UCR offense categories* like aggravated and simple assault that produces a heterogeneous mix of behaviors and

culpability levels. Distinguishing between assault categories and from less serious offenses like harassment and disorderly conduct requires police officials to subjectively infer whether the offender intended to commit harm, the degree of injury the offender wished to inflict, and the severity of the harm.

Consider the following scenarios of a female violent incident that leads to the male "victim" calling the police.<sup>3</sup> What begins as a verbal argument between partners becomes physical -(1) as she screams "I could just kill you" and throws a table centerpiece that strikes his left shoulder. [He calls the police.] (2) He responds quickly to throw her onto the couch and chokes her. The red marks on her neck will bruise, but not for a few hours. [He calls the police.] (3) Struggling, she grabs a kitchen knife off the nearby coffee table and cuts him across his back. She gets away and locks herself in the bedroom. [He calls the police.] The arriving officer is faced with a dilemma. In any or all of these three scenarios, the officer – depending on how s/he "sees" the event – has a number of options, including: (a) warn, file no charges, make no arrest; (b) charge the woman with disorderly conduct, harassment, or terroristic threat (sees no "assault and battery"); (c) charge her with simple assault (no serious injury or intent to seriously injure); (d) charge her with aggravated assault if the officer believes she intended to severely harm her partner with a deadly weapon (e.g., threatening to kill him; the centerpiece; kitchen knife). Or, the man might be charged with any or all of the above charges if he is viewed as the primary aggressor because he inflicted more severe injuries (e.g., choking; bruises) when he initiated physical contact and because her actions might be seen as "self-defensive." Or, the officer might arrest both the man and woman and charge them with any of the above-mentioned offenses. In each of these scenarios, the physical harm is identical and in many instances intent cannot be precisely determined. If elastic definitions of what constitutes "violence" or "assault" have expanded to become more inclusive, as several scholars suggest (Blumstein and Wallman 2000; Steffensmeier 1993; Zimring 1998), assault arrests might increase without a change in offender behavior because the gender gap is narrower at the milder end of the violence spectrum.

By *variability in the gender/violence relationship* we mean that the female share is greater for violence involving: (1) less seriousness, (2) less offender culpability, and (3) behaviors in private settings and against intimates. Therefore, the more elastic or encompassing the definition of violence, the smaller the gender gap. Serious, injury-producing violence is largely perpetrated by men, whereas women commit minor acts of violence nearly as often as men (Archer 2000; Straus and Gelles 1990). Women's violence more typically takes place within or near the home and against family members or others close to the offender; by comparison, men's violence occurs more frequently in public settings against friends or strangers (Kruttschnitt et al. 2002; Steffensmeier and Allan 1996). Men's violence is also far more likely than women's violence to produce serious injury (Campbell 1993) and much female violence is self-defensive (Miller 1986; Miller 2001). Abundant research suggests

<sup>&</sup>lt;sup>3</sup>These scenarios are based on actual cases shared with authors by police officials.

<sup>&</sup>lt;sup>4</sup>It is worth noting that the national surveys by Straus and colleagues that are cited for finding women almost as violent as men *also find* that women are six times more likely than men to end up injured, that the violent acts done by men cause more injury than if the same acts were done by women, and that men are likely to commit the most serious and injurious abuse (Straus 1993; see summary of Straus in Miller 2001: 1371).

that women typically assume less culpable roles when engaged in physical aggression among mixed-sex peer groups, such as accomplice or by-stander. Thus, to the extent that measures of violence and criminal justice practices target physical aggression within private settings and against intimates, women's violence will seem more frequent and the gender gap will appear to be narrower.

Gendered Effects of Recent Shifts in Philosophy of Violence Control—In light of the exigencies above, we describe three sets of net-widening changes in criminal justice policy and prevailing punishment philosophies surrounding "violence" control practices whose collateral consequences have apparently escalated the arrest-vulnerability of women today.

The first development is the trend toward more proactive enforcement and criminalization of minor forms of violence. Crime trend analysts point out that this net-widening has been particularly robust in broad offense categories like simple or aggravated assault (Steffensmeier and Harer 1999; Zimring 1998). Criminalization includes but goes beyond "zero tolerance" policies to encompass quite broadly: (a) targeting minor forms of interpersonal aggression and (b) "charging up" physical attacks or threats of marginal seriousness into offense classifications representing greater seriousness and harsher statutory penalties (e.g., relabeling harassment, resisting arrest, disorderly conduct as simple assault; simple assault as felony assault; purse snatching as robbery).

While criminalizing minor forms of threat or physical attack will increase the arrest risk for both sexes, expanded definitions of criminal violence would enhance sanctioning of women in particular because women tend to commit the milder, less serious forms of physical violence (Miller 2001; Steffensmeier and Schwartz 2004). Regardless of whether these netwidening effects resulted from an overt bias toward women, or from the unintended consequences of a more general trend toward zero-tolerance by criminal justice officials, the effects are the same – a narrowing of the officially-recorded violence gender gap without any necessary changes in underlying behavior.<sup>5</sup>

The second set of developments involves legal changes criminalizing violence between intimates and in private settings, where female violence levels more closely approximate male levels. After years of neglect and questionable use of police discretion in domestic and partner violence cases, state legislators implemented civil-legal protection and pro- or mandatory-arrest policies as the appropriate response to "immediately defuse the…situation and serve as a specific-deterrent by reducing the individual's subsequent abusive behavior" (Mosher et al. 2002: 177). Changes in law, policing, and support for battered women have altered the response to relational violence from a private family matter to a public criminal one. The extent of pro-arrest policies varies considerably by location, but police no longer are discouraged from making arrests in domestic disputes.

<sup>&</sup>lt;sup>5</sup>As we discuss in detail later, the gender-specific effects of net-widening enforcement practices are expected to be limited mainly to arrest and for less serious kinds of "violence." As punishable forms of criminal violence are better identified at later case processing stages, many of the less serious events committed by women are filtered out so that the gender gap in incarceration should narrow to a much lesser extent.

Though established mainly to protect women against abusive partners, the reality of proarrest policies always has been more complicated. Ironically, accumulating evidence shows pro-arrest policies disproportionately affect female violence arrests. Drawing mainly from Miller's (2001; 2005) in-depth case study of Delaware's experience with domestic violence enforcement, several key reasons for this greater impact on female arrests are worth noting. First, many police departments have adopted dual-arrest strategies (e.g., the man and the woman, the parent and the child) when the "primary" aggressor in a family or partner incident is unclear (see also Chesney-Lind 2002). This practice partly reflects fear of liability if no arrest is made and a major incident subsequently occurs, as well as more altruistic motives of officers to protect both parties or to prod the victim to seek help. Second, arrest increases have resulted in men becoming familiar with the criminal justice system and better at manipulating it to their advantage. New tactics used by men include: calling 911 first to proactively define the situation, self-inflicting wounds so the woman is viewed as dangerous, and capitalizing on their outward calm once police arrive. Last, Miller reports some police believe in strictly following the law such that when a woman allegedly commits a (violent) crime, she should be held accountable and arrested just as a man would be; this attitude persists despite the frequent scenario in which the woman is fighting back and caused little harm.

The third set of developments includes more punitive attitudes toward women, the more gender-neutral nature of law enforcement, and greater litigation concerns facing police and other public officials. An increased emphasis on the legal equality of the sexes, the changing role of women in society, and the perception that they are becoming more violent may increase: (a) the willingness of citizens – including victims or witnesses – to report women suspects to the police; and (b) the formality with which female suspects are processed due to police viewing them as having greater legal culpability. The increasingly "legalistic style" of policing too has encouraged formal treatment of events previously handled informally, which will impact more on female arrest probabilities (O'Brien 2003; Skogan 1990; Steffensmeier and Schwartz 2004). In sum, *shifts in penal philosophy* toward targeting more minor offenses and those taking place in private/domestic settings will increase disproportionately the detection and formal treatment of female "violent" offenders.

### **Previous Research**

Since the inception of sociological criminology, there have been rich debates about the veracity of official gender gap estimates vis a vis normative versus constructionist explanations of change in female violence: "Every investigation of the female crime rate is, first of all, faced with the question whether criminal statistics are adequate tools for gauging changes which the real criminality of women may undergo with the years" (Pollak 1950: 58). A key concern in this ongoing debate in not so much whether official data accurately

<sup>&</sup>lt;sup>6</sup>Some evidence of citizens' greater willingness to call the police and the police's greater willingness to take formal action in cases involving female offenders comes from the National Crime Victimization Survey (NCVS), which added questions in the early 1990s asking the victim whether s/he reported a violent incident to the police and whether the police made an arrest. Results confirm an increased tendency of victims to report female, but not male, assailants and for the police to make an arrest. Though limited, these data suggest that, along with changes in policing, changes in citizen attitudes toward female assailants have elevated the visibility and arrest-proneness of female "violent" offenders.

represent the "true" gender gap in offending, but the extent to which gender bias in arrest data has *systematically changed* over time. If, for whatever reason(s), the enumeration of female offenders (compared to males) has become more accurate over time, the *reliability* of time series arrest data for estimating gender gap *trends* is dubious. We review important work assessing agreement among independent gender gap measures of violence trends. In contrast to historical patterns, over the past 20 years major data sources disagree over the direction of gender gap trends in violence.

Among the first to address heightened concern of the 1970s over female crime with newly developed data programs, Hindelang's (1979) pivotal study compared gender distributions in arrest data to NCS victim reports on offender sex and considered uniformity in gender gap trends across the two data programs for 1972 to 1976. Based on high correspondence between the sources, Hindelang concluded that official and non-official sources yielded similar proportions of female involvement, calling into question the working assumption of female under-representation in official data. Both sources showed women's involvement to be lesser in more serious violence (rape, robbery) and greater in less serious violence (assault) (Steffensmeier et al. 2005). Over five years of available victim data, the gender gap for all violent offenses remained stable, a trend similar to official data (Simon 1975). However, Hindelang notes: "There seems to be general agreement among those studying female crime that...[gender] biases [in arrest data] may shift over time" (pg 144).

Steffensmeier (1980) and colleagues (Steffensmeier and Steffensmeier 1979) probed arrest data further, using external referents to identify female increases in offending over the 1960s–1970s. Steffensmeier and Cobb (1981) find notable female arrest increases for minor property crime, but little change for most forms of violence. The female share increased a bit for robbery, but decreased for aggravated assault and remained about the same for homicide and simple assault. Qualitative and national survey research, however, showed essentially no change over the 1960s in self reported offending by adolescents (Canter 1980; Elliot and Ageton 1978) and no change in victim reports on violent offenders of all ages over the mid-1970s (Hindelang 1979), including for robbery.

O'Brien (1999) re-examined gender gap arrest trends (1960–1995) utilizing advanced time series techniques to address the longstanding and fundamental problem in the debate over the meaning of arrest data of arbitrarily identifying "significant" change. Time-series methods that yield information on significance and magnitude of change provide a way to establish meaningful change in the gender gap, a critical step antecedent to evaluating whether changes in arrest trends result from shifts in women's behavior or social control. With respect to violence, O'Brien's findings for this longer time period are similar to those of Steffensmeier and Cobb (1981). For 1960 to 1995, the homicide gender gap significantly widens and the aggravated assault gender gap does not change appreciably over time. As also reported by Steffensmeier, the robbery gender gap significantly converges, albeit at a low rate of change. The larceny gender gap converges for 1960–1975, with no significant change thereafter. Thus, for the 1960s, 1970s, and 1980s, arrest data provide little evidence of appreciable change in the violence gender gap and there is little basis for questioning a normative interpretation of arrest gender-gap trends. This clearly is not the case in more recent years.

Steffensmeier et al.'s recent work (2005; 2006) compares gender gap trends in arrest with data independent of the criminal justice system, providing a stringent test of offender- versus policy-generated accounts of arrest trend changes since the 1980s. Employing time series methods advised by O'Brien (1999), Steffensmeier et al. (2005) find that the gender gap in adolescent assault *arrests* narrowed significantly, but girls' share of self-reported or victim-reported assault did not change much. Steffensmeier et al (2006) confirm the same pattern for offenders of all ages. In contrast to earlier periods, the nation's major sources of crime trend information disagree about whether the violence gender gap violence has narrowed over the past twenty years (see also Chesney-Lind 2002).

To further develop Steffensmeier and colleagues' position that more punitive targeting of less serious offenders has increased disproportionately female offenders' visibility to law enforcement, more inclusive tests should broaden the focus to more serious forms of violence and go beyond adolescents whose self-reports and victim-reports may be heavily weighted by less serious offending patterns, where female involvement always has been greater. Moreover, recent social control policies, such as those targeting partner violence, are likely to have stronger effects on adult women's arrest patterns. In the present analysis, we extend a portion of our earlier analyses comparing victim-based and official arrest reports to adults and examine a broad range of violent offenses to assess if the character of adult female violence is changing or whether the gender gap in predatory and serious violence remains as substantial as it has been traditionally.

To assess gender gap changes, the present study also applies data triangulation strategies to increase the ability to interpret dissonant findings, enhance confidence in conclusions about female violence trends, and explore additional hypotheses suggested by the theoretical perspectives. We widen the array of evidence by using post-arrest data sources and the spectrum of violence indicators in official and unofficial data to assess the convergent validity of multiple measures of gender gap trends in violence. This advance is theoretical as well as methodological.

Steffensmeier et al. (2005) locate shifts in girls' relative assault arrests as originating from policing practices that target minor forms of offending and enhance the visibility of girls' delinquencies. Thus, the gender gap may narrow in arrest data, the first and most encompassing stage of the criminal justice system, but if the nature or extent of girls' violence has not really changed, later stages in the administration of justice will filter out many of the girls who are pulled into the system. We expand upon this argument shortly. In a rare, in-depth study of police files, Chesney-Lind and Paramore (2001) provide insight into such a dynamic. Over the 1990s, the female share of robbery arrests tripled in Honolulu, but there was a downward shift in the value of items taken and age of offenders, suggesting netwidening police practices. We leverage national post-arrest conviction and imprisonment trend estimates against unofficial and arrest data for a range of violent offenses to assess whether women's violence has worsened versus the constructionist hypothesis that more encompassing violence definitions will manifest in gender-disproportionate effects at earlier criminal justice stages and only for more minor offenses.

# **Data and Hypotheses**

In light of competing theoretical positions and methodological exigencies surrounding the *meaning* of official crime statistics, we provide a *triangulated* assessment of female violence trends and the gender gap as documented across *diverse sources of data* and *different types of violent crime*. The unofficial source is *National Crime Victimization Survey* victim reports. Official sources represent successive stages of criminal justice processing: arrest, conviction, and imprisonment. Violent crimes are homicide, robbery, rape, and aggravated assault. Data triangulation involves combining data sources and methodologies to strengthen internal and external validity and reliability and increase confidence in conclusions by lessening the influence of biases in any one source or violence measure. These alternative measures across data sources and offense types reflect varying levels of reliability relative to women's and men's violence trends that can be used to generate hypotheses to evaluate offender- and policy-generated perspectives on changes in female violence.

#### Data

For technical details on deriving comparable violence estimates across sources see Appendix A.

**Arrest statistics**—The FBI publishes annually the *Uniform Crime Reports* (UCR). Each UCR includes aggregated *arrest counts* based on a compilation of thousands of local police precinct reports broken out by crime type and by demographic characteristics of the offender (e.g., age, sex).

**Conviction counts**—The *National Judicial Reporting Program* (NJRP) is a survey of State court records on convicted felons. Initiated fully in 1988 and conducted biennially through 2002, the survey is based on a nationally representative sample of counties and covers all court cases processed in that county for a given year (e.g., 1988 cases are coded in late 1989). Individual-level information on felons includes conviction offense and a variety of defendant characteristics including gender. Sampling weights are included to allow researchers to generate nationally representative estimates.

**Prison admission counts**—The *National Corrections Reporting Program* (NCRP), an annual national census of state and federal prison admissions and releases, has collected data continuously since 1986. The information gathered from prisoner records of those entering or leaving the correctional system includes conviction offense, sentence length, and defendant characteristics like age and gender. Admissions include court commitments, parole revocations, and transfers. We use new *court commitments* to derive female and male imprisonment rates for violent offending.

**Victim-based reports**—The *National Crime Victimization Survey* (NCVS), conducted annually by the Census Bureau since 1973, gathers information from a national sample of approximately 50,000 household respondents age 12 or older about any violent crime they experienced, excepting homicide. The NCVS provides trend data on violent crimes that did not necessarily come to the attention of the police or result in a recorded arrest. For personal crimes, the survey asks about the perpetrator(s), including age and gender. We generate

offending estimates based on victim identification of perpetrator sex and age (i.e, adult) (for details, see Schwartz et al., 2009).

Reliability Issues in Measuring Violence over Time—To evaluate the body of evidence on violence trends from these diverse data sources, it is critical to consider the reliability of measures over time. We lay out continuums of reliability for different (a) types of violent offenses (homicide, robbery, aggravated assault) and (b) sources of data (victimization, arrest, post-arrest data). By continuum of reliability, we mean the extent to which a marker of violence consistently represents the same set of behaviors *across time*. To the extent that more reliable markers of violence demonstrate similar gender gap trends, convergent validity is greater and confidence is higher that identified gender gap trends are accurate.

First, criminologists widely agree that more serious offenses are generally measured more accurately and consistently over time. Thus, we too assume that homicide and then robbery are more reliably counted than other violent crimes like aggravated assault (Blumstein and Wallman 2000; O'Brien 2003). Though not without reporting discretion or classification error, homicide in recent history and across jurisdictions is defined as serious, its reporting is seldom lost in the shuffle of papers, and the operational definition of what constitutes a homicide for both citizens and law enforcement is fairly unambiguous and unchanged over time (see review in O'Brien 2003: 506). Similarly, robbery, though more subject to interpretation than homicide, is less ambiguously defined and more uniformly enforced than either rape or assault (see Blumstein et al. 1991; O'Brien 1985, 2003; Steffensmeier and Harer 1999). It follows that policy changes such as expanded definitions and less tolerance of "violence" should impact less on homicide and robbery rates and gender gaps.<sup>7</sup>

In contrast, assault offenses are the most ambiguously defined violent crimes and subject to greater variation over time in enforcement practices (Blumstein and Wallman 2000; Steffensmeier 1993; Zimring 1998). Aggravated assault typically involves actual or attempted "severe" bodily injury or the use of a weapon. Considerable subjectivity exists in determining injury severity, what objects are considered deadly weapons, and the intent of the offender. To the extent that "severe" injury is defined down to include less harmful forms (e.g., scratches), more expansive definitions of weapons are used (e.g., fingernail file, dishes), and verbal threats are interpreted in more instrumental or literal terms (e.g., "I could just kill you") – more elastic definitions of violence will portray women as more heavily involved in *arrest* statistics for assault without any corresponding changes in violent behavior. In sum, we argue that offense definitions of serious violence, such as homicide, have changed little over time and tend to represent a similar scope of behaviors, whereas the operating definitions of more ambiguously defined, less serious forms of violence like assault have considerable potential to change a great deal over time and affect portrayal of the gender gap.

<sup>&</sup>lt;sup>7</sup>Recent movements criminalizing addicted pregnant women whose infants die in or around childbirth, mothers or (female) caretakers whose children die due to extreme neglect, and women involved in the death of a fetus as a result of female-on-female assault, might disproportionately elevate female homicide rates if these trends continue. Also, stretched definitions of robbery – e.g., as the arrest charge when an apprehended shoplifter "fights to get away" – is a trend that would narrow the gender gap for robbery arrests, a point we return to later.

We also analyze rape trends because it is an important part of the landscape of criminal violence that overwhelmingly has involved male perpetrators. Though a very serious form of violence, establishing a reliable measure of sexual assault is hampered by unique contingencies surrounding its reporting and prosecution relative to homicide or robbery (e.g., reluctance to report, establishing intent). Because of cultural shifts allowing for more sexually aggressive acts by women, we might expect some increase in females charged with rape. Also, legal definitions expanded and enforcement broadened (e.g., to include female accomplices of male rapists).

Second, we also consider the over time reliability of violence measures across data sources. There are longstanding debates on the relative virtues of different types of crime data for measuring "offending" patterns. However, preferences for official versus victim reports or arrest versus conviction or imprisonment data are not necessarily at odds with one another. Each source has strengths and weaknesses as measures of change in violent offending and social control. Whereas victim reports reflect the most 'inclusive' offender counts because they are largely unfiltered, post-arrest data capture most consistently the more serious offenders adjudicated guilty by the courts. In the context of changing police practices, conviction and imprisonment data ought to mitigate net-widening arrest practices. As such, each provides an alternative window on changes in offending.

On the one hand, drawing from Sellin's famous dictum "the value of criminal statistics as a basis for measurement of criminality...decreases as the procedures take us farther away from the offense itself" (1951:490), like many criminologists we view the NCVS victim-based data as more reliable over time than arrest counts (O'Brien 2003) because victim reports are not as vulnerable to variation in police arrest practices over time. These data are contingent on victim definition of the violent event and interviewer probing, however, so some selection bias is more likely in recent years in light of changes in *citizen* perceptions and expectations about women's violence that might lead to higher reported levels of women's violence in survey responses (Schwartz et al. 2009). Additional growing concerns about NCVS continuity over the 1990s include sustained declines in sample size, response rates, and representativeness, particularly among high-risk males, which will tend to inflate female rates and contribute to year-to-year instability of violence estimates (Schwartz et al. 2009).

On the other hand, we also assume that violent offending statistics produced at *later* case processing stages are more *consistent* markers of *trends* in women's criminal violence and the gender gap than those produced at the entry stage, arrest. A funnel analogy describes how both the number of offenders and offenses decrease significantly as they are successively "screened out" from *arrests* to *convictions* to *prison admissions* (Mosher et al. 2002). As Rosett and Cressey observe in their classic *Doing Justice*, "Arrests...are grouped in broad categories and no allowance is made for the majority of cases in which it later is decided that no crime was committed or in which what originally was recorded as a burglary...or *assault* later was reduced to a much less serious descriptive category" (1976: 176, our emphasis). A large share of arrests are dropped or the charges reduced in case selection processes because of insufficient evidence or triviality of the offense (i.e., declined "in the interest of justice" by police, magistrate at preliminary hearing, prosecutor)

(Blumstein 1995; Daly 1994; Frost 1995; Kramer and Ulmer 2009). In contrast to police who often must act decisively and are required only to believe a crime was committed by the accused, legal officials at later stages require more exacting evidence. As well, courtroom workgroups are inclined in their decision-making toward *consistency* with prior practices. Across many cases, dismissing or reducing charges is said to be "doing justice" by better matching the actual offense with appropriate disposition of the case and with past practices (Rosett and Cressey 1976).

Because the criminal justice process is designed to more precisely define criminal conduct, some sociologists have advocated the use of end-stage official data to more consistently capture the universe of offenders. Joan and William McCord (1959: 18, our emphasis) conclude: "convictions offer the best opportunity for *unbiased* identification of criminals... Convictions are the result of the operation of the legal system in its most objective form" (for a similar argument, see Tappan 1947). Imprisonment data also are important because an inmate sample identifies the most serious violent offenders (Blumstein 1995; Junger-Tas and Marshall 1999) and judicial standards of an imprisonable offense are relatively unchanged over time. Imprisonment decisions about guilty offenders have been based primarily on offense seriousness and, second, criminal history. Regardless of prior record, incarceration is a near *certainty* for homicide or robbery unless one plays a very secondary role, and highly probable for rape and aggravated assault (Frost 1995; Kramer and Ulmer 2009; Steffensmeier 1988). Concerns about prior record and prison admission data are more warranted for less serious offenses (e.g., drugs, simple assault).

A key result of this filtering process is that offenders counted at later stages of case processing represent a more homogenous group of more serious offenders whereas earlier stages include less serious, overcharged, less culpable and perhaps innocent defendants. Advantages of samples of violent offenders further in the criminal justice process is the greater certainty that the offenders we are studying engaged in conduct that: (a) actually violated the law; (b) was a comparatively serious law violation; and (c) involved the use or threat of violence (e.g., as compared to disorderly conduct, harassment, terroristic threat, resisting arrest). Arrests will capture a larger fraction of offenses, but convictions and prison admissions include more serious and more precisely defined infractions, implying that trend analysis based on arrests may be inaccurate or even misleading (Farrington and Jollife 2003; Soothill et al. 2008). This is especially true when substantial change in social control practices are taking place, such as the major enforcement shifts related to violence that have occurred over the past decade.

We take the position, though not without caveats, that conviction and incarceration statistics are useful alternatives for analyzing basic gender gap trends in violence. Boundaries of violence definitions are more consistent over time at later stages of case processing whereas police reports are more subject to vicissitudes in defining violence. As Tappan (1947: 100; our emphases) describes: "law has defined with greater clarity and precision the conduct which is criminal...it has moreover promoted a *stability*, a security and dependability of justice through its exactness...and its *moderation* in inspecting proposals for change." Key to trend analysis, samples of convictees and prisoners include presumably the most serious culpable offenders. Although less representative of the general law-violating population than

arrests or self-reports, post-arrest data more accurately and consistently represent specific types of violent offending (e.g., murderer, robber, rapist, assaulter). As such, it is reasonable to assume that conviction and prison-admission statistics, as more consistent markers of criminal violence, will more accurately capture female-to-male violence *trends* than arrest data. This particularly will be the case for crimes like assault that involve considerable subjective judgment on the part of the police at arrest and that appear highly prone to reporting bias brought about by recent policy changes. A key empirical question then is whether women offenders today are represented more heavily at end stages of the criminal justice process.

The use of conviction and imprisonment data may meet skepticism based on the leniency sometimes afforded female offenders by agents of the criminal justice system. Scholars of crime and punishment generally agree that women's representation lessens across stages of the criminal justice system, but mainly because further stages represent a more serious class of offender where gender differences are legitimately larger (Daly 1994). Previous research concludes that there are *small* to moderate effects of sex on imprisonment, net case-relevant characteristics (Daly and Bordt 1995; Steffensmeier 1993; Koons-Witt 2002; Steffensmeier and Demuth 2006). Sex, and other defendant and community characteristics, affect case process decision making (Ulmer 1997), but screening out from arrest to imprisonment – including reducing or dropping charges – is done mainly based on evidence and legal culpability (e.g., criminal intent, harm) (Demuth 2004).

More key is whether sex effects in sentencing have *changed* over time. We could find no evidence that gender biases shifted appreciably. Recent studies that explored over time change in sex effects on sentencing showed *consistency* in sentencing practices (Daly and Bordt 1995; Griffin and Wooldredge 2006; Koons-Witt 2002; Steffensmeier and Demuth 2006).

However, criminal justice officials do not operate in a vacuum. Despite the lack of evidence, it is plausible that criminal justice agents have come to view women as more culpable or as potentially dangerous to their families or communities so sentencing practices have become harsher for women. If post-arrest criminal justice biases have shifted out of women's favor, our study might find greater gender convergence than warranted in conviction or imprisonment data.

### **Hypotheses**

The available array of measures and corresponding continuum of measurement reliability across types of data and violence measures yield a series of hypotheses about female-to-male trends in violence to evaluate *normative offender-generated* versus *the constructionist policy-generated* explanations for changes in women's violence arrest trends. Support for

<sup>&</sup>lt;sup>8</sup>Extending the partner violence example described earlier, the arresting officer had considerable discretion in defining violence (none, disorderly conduct, misdemeanor assault, felony assault) and in arresting the male or the female. The constructionist position suggests this case is more likely to lead to arrest now compared to the past. However, it is highly unlikely that this behavior would lead to imprisonment and given basic standards of evidence, it is unlikely the offender would be convicted of a felony offense. Additionally, as we describe in more detail later, recent research offers evidence for "corrective" judgments on the part of judicial officials (e.g., prosecutor, judge) in response to police overcharging in domestic violence cases – that is, by reducing or dropping felony assault charges (see, for example, S. Miller 2006).

offender-generated hypotheses that changes in women's violent arrests reflect real behavioral changes requires we find:

- H-1 Women's arrest gains on men for aggravated assault are matched by similar gains for robbery and homicide.
- H-2 Women's arrest gains on men for violent crime are matched by similar gains in victim reports.
- H-3 Women's gains on men in arrests for violent crime are matched by similar gains in convictions for violent crime and in imprisonment for violent crime.

Support for the *policy-generated* hypothesis that gender gap changes are due to netwidening enforcement practices that enhance the visibility of women's violence requires that we find:

- H-4 Women's arrest gains on men for aggravated assault are not matched for homicide and robbery.
- H-5 Women's arrest gains for violent crime are not matched by gains based on victim's reports.
- H-6 Women's arrest gains on men for violent crime diminish across criminal justice stages.

To clarify, we expect at least some narrowing of the gender gap at all stages of the criminal justice system and even in the NCVS data, especially for more flexibly defined violence, because of "spillover effects" related to net-widening enforcement practices. Notably, the social construction of violence and expanded mobilization of law directed at it can be expected to impact some on all data sources, even the NCVS (Schwartz et al., 2009). One by-product of changing expectations about women's aggression may be a greater propensity of assault victims to identify female perpetrators in surveys and to authorities, for police to make an arrest, and for officials to prosecute and, possibly, imprison female offenders. Gray areas of physically combative behavior that, in the past, would have been ignored or defined in milder terms may now be labeled as assault by citizens, police, and/or other criminal justice officials. Though to a lesser extent than at arrest, later stages also will be affected by more punitive policies and overcharging practices, if for no other reason than some slippage or error in screening that is inevitable when higher numbers of women enter into the system. Female arrest increases ensure at least some increase in female proportions at later stages.

We expect police data to show the greatest increases in female violence, with *smaller increases* for more serious violence and at more advanced stages in the criminal justice system, and then the victim-based source, if the constructionist policy-change hypothesis is supported. If, on the other hand, the normative position is correct that women's behavior involves more criminal violence, the gender gap would narrow more evenly across all data sources and offenses.

# **Analytic Procedures**

To assess trends in women's violence and avoid the convention of arbitrarily selecting two or a few time points for analysis, which can lead to misleading conclusions, we employ Augmented Dickey-Fuller (ADF) tests to assess statistically whether the gender gap in arrest trends has been converging, diverging, or essentially unchanged (stable or trendless). Briefly, the ADF test is an econometric time-series method that is well-suited for establishing statistically reliable patterns in the violence gender gap over the 1980–2003 period, including: (i) whether there are systematic year-to-year changes in the share of female offending after taking into account random fluctuations in the data, isolated "shocks" that cause rates to fluctuate, and autocorrelated residuals and (ii) the direction of systematic trends in the gender gap. A symmetrical measure of the gender gap is defined as the natural log of the female rate minus the natural log of the male rate (see Table 1 for formula). A positive coefficient indicates gender gap convergence; a negative coefficient signifies gender gap divergence. A stable trend exists when female rates move in tandem with male rates (i.e., equilibrium). A trendless pattern exists when there are random fluctuations in the gender gap rather than any consistent upward or downward trend. The terms "stable" and "trendless" both indicate no systematic change in the gender gap. Statistically significant trends may not be substantively meaningful, so to better interpret meaningful trends we refer to figures displaying the female percentage. (For more on ADF methods, including application to crime trends, see Hamilton 1994; LaFree and Drass 2002; O'Brien 1999; Steffensmeier et al. 2005).

Second, to better contextualize changes in the violence gender gap, figures display female percentages. Sex-specific arrest rates are calculated for violent crime and to derive the female-to-male percentage of arrests. The formula for female (or male) arrest rates per 100,000 is:

 $\frac{(U.S.population/UCR covered\ population) \times \#of\ females\ arrested(ages18-64) \times 100,000}{\#of\ females\ in\ U.S.population(ages18-64)}$ 

Rates, adjusted for sex and age composition of the population, are calculated similarly across data sets. UCR rates include a correction to account for variable coverage over 1980–2003. The NCVS data are adjusted to account for survey redesign effects in 1992. NCVS and NJRP rate calculations employ survey weights so estimates are nationally representative of adults. See also Appendix A.

The *female percentage* of violent offending is used in figures to describe the gender gap. This measure, calculated as *female rate/(male rate + female rate)*  $\times$  100, indicates the female share of violence, adjusted for the sex composition of the target population (O'Brien 1999; Steffensmeier 1993). Examining the female percent, in tandem with rates yields evidence about (i) sex differences in violence in general and by type; and (ii) whether violence levels of females or males are rising, falling, or holding steady. The female share of violence may increase because male rates are declining at a faster pace than female rates or female rates might be steady despite male declines.

# **Findings**

We turn to our examination of female violence trends as reflected in *arrest* counts of the *Uniform Crime Reports* (UCR) versus *victim's reports* of the *National Crime Victimization Survey* (NCVS). We then assess trends in *conviction* counts of the *National Judicial Reporting Program* (NJRP) and *prison admission* counts of the *National Corrections Reporting Program* (NCRP).

# Uniform Crime Reports Arrest Statistics: Gender Gap Trends across Types of Violent Crime

To delineate the scope of change in the arrest gender gap and test competing hypotheses (*H1 vs. H4*) regarding whether the gap narrows for all violent offenses or only more flexibly defined offenses, Table 1 (Panel A) displays Augmented Dickey-Fuller (ADF) results for arrest data on homicide, rape, robbery, and aggravated assault. (ADF results for violence trends in the NCVS, NJRP, and NCRP data are also shown). For homicide and rape the gender gap in arrests is unchanged. Yearly movement in female-to-male homicide rates is unsystematic. Any changes in female and male rape rates are parallel (i.e., stable gender gap). For robbery, the gender gap has converged slightly, but the overall change is rather small, especially in comparison to the statistically significant convergence in female-to-male aggravated assault arrests (see Figure 1).<sup>9</sup>

That female-to-male trends are stable or converge only slightly for more reliable violence measures (homicide and robbery), but converge considerably for the more ambiguously defined offense of aggravated assault provides support for the view that police today tend to cast a wider net and overcharge suspects when making arrests for "violent" crimes.

### Gender Gap Trend Comparisons across UCR Arrests & NCVS Victim-based Estimates

A discerning test of competing hypotheses compares gender gap arrest trends for violence to National Crime Victimization Survey (NCVS) trends in victim reports of violence that do not necessarily result in police attention or arrest. The constructionist, policy-change position predicts disagreement across official and unofficial sources of data, particularly for assault. The normative, behavior-change position predicts female gains across both data sources, reflecting true changes in the aggressive tendencies of females. We extend Steffensmeier et al.'s (2005; 2006) previous NCVS-UCR assault comparisons for juveniles and all ages to adults and broaden our focus to compare across more serious forms of violence. ADF findings for female-to-male trends based on victim reports of offender sex are shown in Panel B of Table 1.

Most notably, the stable NCVS assault pattern is contrary to converging female-to-male rates depicted in UCR aggravated assault arrest trends. The female-to-male gap is unchanged for robbery, compared to slight convergence in arrest data. For rape, the gender gap is unchanged, a trend consistent with UCR arrests. Figure 1 plots changes in the female

 $<sup>^{9}</sup>$ ADF coefficients can be converted to yield average annual percent change:  $(10^{\text{CL}}-1) \times 100$ , although we rely primarily on figures to show over time change in the female percentage over time. Robbery and assault show similar rates of change, but the base rate is smaller for robbery and the cumulative change is not as great as for assault (see Figure 1).

percent (i.e., gender gap) for each violence indicator; panel A depicts arrest trends and panel B displays the NCVS results.

Consistent with the policy change hypothesis, the NCVS and UCR depict comparable female percentages in earlier years but diverge in more recent years, especially for assault. The NCVS female share of aggravated assault is 12 percent during the 1980s, 1990s, and 2000s. The UCR female share of aggravated assault arrests is also 12 percent in the 1980s, but slowly climbs to 20 percent over the 1990s and 2000s. Such female-to-male convergence does not occur in data independent of the criminal justice system. These findings for adults replicate the adolescent assault patterns identified by Steffensmeier et al. (2005) – growth in the female percent of adolescents arrested for assault with little or no corresponding increase in victim-reports.

We extend recent UCR-NCVS comparisons by also focusing on gender gap trends for serious violence. Robbery gender gap trends are discrepant across arrest and unofficial data, although change in the female share of robbery arrests is minimal so data source differences are less acute than for assault. The female share of robbery is 8 percent in both sources during the 1980s, but female representation in arrest statistics grows at a slow pace (9% in the 1990s and 10% in the 2000s) whereas female representations does not uniformly increase in the NCVS (8% in the 1980s, 6% in the 1990s and 7% in the 2000s). Rape trend comparisons show no change in either source since the 1980s – female participation remains low – about 1 percent according to the UCR, 2–3% according to the NCVS. These comparisons support the conclusion that, net changes over time in violent behavior, recent policy shifts targeting minor and private forms of assaultive violence have impacted the arrest vulnerability of women more than men.

Examining female and male rate trends across arrest and unofficial victim reports reveals two important findings about the mechanisms underlying change in the female share of arrests for assault and, to a lesser extent, robbery (figure 2). First, over the same timeframe that women's arrest rates for aggravated assault doubled, their rates declined by more than half between 1980 and 2003 according to NCVS victim-reports – a finding that casts strong doubt against behavior change as a viable explanation for long-term female arrest gains. Female (and male) declines would be even greater except for stretched definitions of assault affecting victim-respondents as well as officials. Second, since the female percentage started rising around 1990 (figure 1), the NCVS victim-reports show both female and male rates of assault and robbery dropping as compared to the UCR, where male arrest rates for assault and robbery sharply declined but female rates decreased less (figure 2). The relative female increase in assault (and robbery) is largely because downward movement in male violence rates outpaced female rate declines.

To sum, there is general agreement between the UCR and NCVS that the organization of gender, which shapes women's and men's offending patterns, has not changed all that much: Male violence rates continue to be much higher than female rates, particularly for the most serious crimes – homicide, robbery, and rape – where 90% or more of those arrested continue to be men. Neither source identifies substantial changes in women's serious violence, but the two sources differ sharply in their representation of gender gap trends in

assault. In contrast to UCR arrests, the NCVS reveals very little change in the assault gender gap over the past 1–2 decades. The sharp declines in female and male assault crimes since about the mid-1990s as indicated by the NCVS have been partly offset by the greater proneness of police to arrest and charge persons with assault, particularly women whose arrest trends have only barely leveled off despite sizeable declines in female perpetrated assaults according to victim's reports. The evidence provided by the NCVS is strongly supportive of the constructionist, policy-change position because of the greater reliability of NCVS estimates as judged by some criminologists.

# Conviction and Imprisonment Data: Official Data with Less Culpable Offenders Filtered Out

To evaluate hypotheses on whether female arrest gains persist or diminish across stages of case processing, we examine female-to-male trends in violent crime in post-arrest *conviction* and *imprisonment* data, respectively. Compared to more inclusive police data with more variable violence definitions, judicial and correctional statistics provide more reliable estimates of trends in criminal violence and the gender gap because they reflect a more homogenous set of violent incidents over time, namely those that involve greater offense seriousness and offender culpability. Incrementally smaller changes in violence and the gender gap in imprisonment compared to arrest data supports the constructionist based policy-change hypothesis whereas the normative-based behavior change hypothesis is supported if changes in arrest data are mimicked across the criminal justice system. This set of findings also offers a statistically rigorous portrait of women's changing involvement in the criminal justice system. Post-arrest data, available since 1988 for convictions and 1986 for imprisonment, cover the period just prior to when female assault arrests began to climb.

National Judicial Reporting Program Conviction Data—ADF findings for female-to-male trends in conviction rates are shown in Table 1, Panel C. The gender gap is unchanged for homicide and rape, patterns consistent with both UCR and NCVS trends. Female-to-male rate changes are trendless for robbery, as in the NCVS but in contrast to marginal convergence in female-to-male arrests. Figure 3, panel A shows the female percentage for homicide holds steady at about 10 percent, rape at 1 percent, and robbery at about 6 percent. For assault, the female-to-male gap in convictions has narrowed somewhat as indicated by a positive and statistically significant ADF trend coefficient. Because assault is more ambiguously defined than other violence types, it appears to be particularly susceptible to the gender-specific impact of more elastic violence definitions. Stretched definitions of criminal assault are indicated by the steady climb in conviction rates particularly among women, whose small base rates have tripled from 5 to 16 per 100,000 from 1986 to the present, but also among men, whose rates have almost doubled (48 to 91 per 100,000). This pattern contrasts with declining assault rates for both sexes in the NCVS.

The trend toward increased female representation in assault convictions is consistent with the direction of the UCR trend, but the change is smaller in conviction data than in UCR arrest data, (9 to 14 percent [5% change] versus 12 to 20 [8% change]). This pattern provides modest support for the constructionist contention that less serious or less culpable female offenders who inflict more minor injuries are dropped out at later criminal justice

stages, in part correcting for overcharging women offenders at the arrest stage. Yet, there seem to be *spillover effects* of heightened use of arrest for assault at the conviction stage as proportionally more women are prone to have a violent conviction record now than in the past. This interpretation is bolstered by NCVS data showing no change in the assault gender gap and decreases in women's involvement in aggravated assault.

National Corrections Reporting Program Imprisonment Data—The ADF findings for female-to-male trends in new prison admissions for violent offenses are shown in Panel D of Table 1. ADF results indicate trendless patterns in the gender gaps for homicide, rape, robbery, and assault. Figure 3, Panel B shows that the female percentage holds steady for homicide at about 8 percent, rape at 1 percent, robbery at about 5 percent, and assault at about 6 percent. The unchanged gender gap in imprisonment for assault contrasts with arrest data, where the gender gap converged considerably, and conviction data, where the gender gap moderately converged. The female percent of involvement in assault has risen only marginally from 6 to 7 percent according to imprisonment statistics, but somewhat more based on conviction data (9 to 14%), and markedly based on arrest data (12 to 20%) (see Figures 1 & 3). 10 Less serious, often female, cases are dropped or charges reduced as level of injury and culpability is taken into account. In recent years, the female share of arrests for assault was about three times the share for women newly admitted to prison. In comparison, over the mid-80s the female share of assault arrests was twice the female share of imprisonments. This means that today a greater proportion of female cases are pruned out over the course of the criminal justice process than in yesteryears, substantiating constructionist explanations highlighting the criminalization of (women's) minor forms of violence.

Two other databases provide additional evidence for the *corrective* effects of case processing on gender gap trends for violence. The first involves prison stock population trends where we find that between 1990 and 2005, women's representation was steady at 6% for homicide and 1% for sexual assault and rose minimally for robbery (from 3 to 4%) and assault (4 to 6%). The other involves statistics on the imposition of capital punishment for the most serious forms of homicide (e.g., killings perpetrated while committing a felony, that entail both malice aforethought and planning, or that are particularly heinous). Consistent with the above findings, the gender gap for offenders receiving a death sentence is both very large and essentially unchanged – females were less than 2 percent of those sentenced to die in the 1980s, 1990s, and 2000+ (Bureau Justice Statistics 2005).

Table 2 summarizes key findings relative to the competing hypotheses about women's violence trends and the gender gap. The findings are at odds with the offender-generated behavior change hypothesis and the normative perspective but supportive of the policy-change hypothesis and the constructionist perspective on the relationship between the status

<sup>&</sup>lt;sup>10</sup>The observation that the *overall* imprisonment rates for female offenders have been rising at almost twice the pace of male rates over the past 2–3 decades has frequently been used to buttress the claim that women are more violent today. The female-to-male percentage for imprisonment in state and federal penitentiaries at the start of the 21<sup>st</sup> century is about 6–7 percent. That percentage is higher than the 4–5 percent in the 1970s and 1980s and the 3–4 percent in the 1960s, but comparable to what it was in the 1920s when females also made up about 6 percent of the inmate population. What this comparison clouds, however, is (a) the low base rate of female relative to male imprisonment levels so that even incremental gains by women can appear large and (b) the *still* very small female-to-male proportion of those incarcerated.

characteristic of gender and official measures of criminality. First, the finding that female *arrest* gains are largely confined to assault provides fairly strong evidence for the view that police today tend to cast a wider net and overcharge suspects, particularly female suspects, when making arrests for "violent" crimes. This is because criminal assault is more ambiguously defined than homicide or robbery, and therefore more affected by elastic definitions of violence and changing enforcement practices. <sup>11</sup>

Second, NCVS victim reports show declining levels of female assault in recent years and a lack of convergence in the gender gap for assault and other violent crimes over the past 1–2 decades. That many criminologists view the NCVS, which collects data independently of criminal justice agents, as providing more reliable estimates than the UCR gives added credence to the view that women's violent crime has not been rising. In fact, it is somewhat remarkable that such a trivial increase in female-perpetrated assault was detected in the NCVS, considering – first, that changing expectations about women's violence might increase victims' willingness to report women offenders; and second, that recent NCVS trend data are prone to *underestimate male violence* due to increasingly undersized samples and growing non-response that is greatest among young minority males who exhibit the highest victimization and offending rates (for elaboration, see Schwartz et al. 2009). 12

Third, post-arrest data also support the policy-change position because the gender gap has been stable across conviction and imprisonment for all violence types. Assault convictions are a notable exception. Even so, the gender gap in assault narrows less in the conviction data compared to arrest data and essentially not at all in the imprisonment data. As in the arrest data, increases in the female share of convictions for assault may result, at least partly, from judges' applying broader standards of culpability, viewing minor harm more punitively, and assigning greater blame to women offenders. And, some narrowing of the gender gap is expected given that cycling more women through the criminal justice system via arrest might spillover to increase women's representation at later stages, if only because of the increased probability of slippage or error.

Last, we offer substantiating "eye-witness" evidence for the net-widening constructionist perspective from interviews we've conducted with criminal justice officials (e.g., police, lower-court magistrates) on women's violence trends. The overall sentiment of those we interviewed was decidedly doubtful of the portrait of the more violent female (though some agreed with it). Parenthetically, in Miller's (2001) study reviewed prior of the increase in women arrested for partner violence, she reports that none of the police or social service

 $<sup>^{11}</sup>$ We do not present simple assault trends because: our focus is on serious violence, the single assault category available in post-arrest data reflects mainly felony assaults, and simple assault trends track aggravated assault trends very closely within the arrest and victim-based data. Simple assaults do not involve a weapon or aggravated bodily injury. Results for adults show that the female percent of *arrests* averages 13 percent in the 1980s but grows to 22 percent over the 1990s and early 2000. The female percent in the NCVS, however, averages between 16 and 18 percent across decades. The simple assault ADF coefficient is trendless for NCVS data, but positive and significant for arrests, suggesting convergence ( $\alpha = 0.240$ : n < 0.11)

positive and significant for arrests, suggesting convergence ( $\alpha$  = .0240; p < .01). 12We detail in Schwartz et al. (2009) several emerging caveats relative to using the NCS/NCVS as a measure of crime trends generally and across subgroups like gender. Caveats include: declining sample size, response rate, and representativeness which deflate male rates and contribute to instability of low-n female estimates; and sex-specific effects of the massive 1992 questionnaire redesign which inflated recent (post-redesign) female rates. We also theorize how changes in societal definitions of "acceptable" forms of violence and "appropriate" responses to it might impact upon victim reporting of female (and male) violence and, consequently, the over time reliability of sex-specific trend estimates using victimization data. Last, we describe the rate estimation methods that most mitigate the methodological issues we outline. For detail, see: cooley.libarts.wsu.edu/schwartj/crim09.htm

providers she interviewed believed that more violence by women explained the increase in arrests or that the gender gap was converging.

The following representative comments attest - first, that stretched definitions of violence have impacted more on female than male arrests for assault; second, this impact goes beyond domestic situations to encompass female-on-female violence in varied contexts, involving a neighbor, store customer, or service provider, and the filing of assault charges for "resisting arrest;" and third, that other females, as much or more than males, are more often reporting and pressing for assault charges against another woman with whom she has a grievance. This response from a veteran probation officer, while thumbing through office files, helps to illustrate key enforcement trends:

Domestic cases are a big change as far as arresting women. But I could tick off cases covering other areas where, in the past, it's unlikely the police would get involved; even more so, where the citizen would bother to call the police – for one, because the police would ignore it or just talk to the people involved, not let it get to being a real police matter. Just going through my files as we're talking [for assault cases] ... woman is arrested for pulling her 12-year daughter's hair and cursing her; neighbor lady called the police. Here's a 22-year old college student who is charged with "resisting arrest" and "aggravated assault." Is so drunk the police take her to the emergency room but she is puking and kicking and biting. Bang, bang, charge her – not with simple assault – but with aggravated assault on account she drew a little blood when she bit the officer's hand. Local police chiefs are hard noses about this, no excuse for giving the police any grief. That, and the office women who keep the records in the police station are being trained by the FBI to count [for the UCR] any resistance as an assault. Is a former police chief who has criticized this practice [and] most of the police think it is silly, too, especially on account the DA and the county judges will usually knock down the assault charge to "resisting" or a "disorderly" [conduct]. Here's another good one – two college roommates [females] get into a squabble - end up with a couple of bruises and scratches, nothing major; the mother of one presses charges against her daughter's roommate saying she is the one that started the fight. Here's another we are seeing more of – two moms fighting 'cause their kids are fighting or one mom goes after somebody's kid cause this kid is doing things to her kid. I like this one – a woman takes a screw driver to her ex-boyfriend's new girlfriend's car [scratching it] and then threatens her with the screw driver. Here's one for two women getting into a fight at a bar. Bartender called the police. In my eye, there is a lot more of these kinds of goings on that are reported today. Keep in mind, now, if the police do make an arrest, doesn't mean it will stick - 'cause the DA or the judge will many times knock the changes down to a disorderly or harassment or even throw the case out. Is only common sense to do that.

A second response is from a former police officer who holds a masters degree in criminal justice and is now a lower-court magistrate, responsible for arraigning all arrests and presiding over preliminary hearings in the court's jurisdiction, which covers a number of police departments.

This whole "they are more violent" thing, I don't see it. Yes, they [females] are louder today, more foul-mouthed. Aren't potted plants, if they ever were. But lotta of their arrests is for little stuff the department in the past would have looked the other way or just charge a disorderly or harassment. One reason is - the pendulum in policing has swung toward cracking down on small stuff, especially if it is (air quotes) "violent." Go to a conference on policing, this is what the chiefs are hearing – you need to make this a police matter. Another reason is - the department is concerned about being criticized for not doing something; is sort of a liability issue but is more just wanting to avoid being hammered in the paper or by some group getting bent out of shape that the police aren't doing enough. Safest way for the chief and the cop on the street --is to make an arrest and charge it up. Let people like me, at the next stages, sort it out. In the cop's eye, what's the harm? Maybe keep someone from getting hurt or even save a life; maybe some good will come from putting a scare in the person, a little deterrence you know...A department goes through cycles and the one we're in now will soften I think. At least here locally this already is happening – yes, be hard on some things but for other things go back to the old school and don't overdo it. A lot depends on the chief – which way does he wanna go.

## **Understanding these Trends and their Implications**

Identifying only "law and order" politics and "get tough" crime control approaches as driving the punitiveness trend ignores the role of other interest groups that have fostered the profound shift in penal philosophy toward preventive punishment and risk management strategies that emphasize rapid intervention and a more encompassing role of formal social control, not only for violence but across a range of "deviant" behaviors (e.g., alcohol/drugs), even some which seem minor (see Schwartz and Rookey 2008; Zhong and Schwartz 2009).

First, activist groups like feminist and victim's rights movements (Young 2002) have (1) given voice to victims and encouraged societal intolerance of all forms of violence wherever it occurs, (2) encouraged citizens and the law to cross boundaries of private space (school, home) in search of offenders, (3) endorsed more bureaucratic formalized policing as recourse against ignored victims, which contributed to gender-neutral legal practices, and (4) given public exposure to women's crime, increasing its visibility and perceptions of increase. Father's Rights groups now are promoting attention to women's violence against battered men. Violence first may be redefined by activist groups and then translated into public policies and formal institutional practices (e.g., mandatory domestic violence arrests, zero tolerance school discipline, workplace violence policies) as institutionalized definitions are accepted by citizens and officials.

Second, adoption of the psychological developmental paradigm and growth in the prevention-security sector has encouraged early and proactive interventionist strategies (Muncie 2004; Steffensmeier et al. 2005). The strategy of attempting to control misbehavior before it escalates blurs the boundaries between crime and antisocial behavior, lumps together differing forms of physical aggression and verbal intimidation as interpersonal violence, and elevates violence, broadly defined, as a high-profile social problem. These

beliefs are now core elements of popular thinking (media, activist middle-class citizenry, community leaders, medical/helping professions) about violence.

Third, law enforcement increasingly has assumed that formally targeting minor offenses will lead to fewer serious offenses (Kelling & Coles 1996) and adopted proactive, situational crime prevention tactics, including for disorder, incivilities, and disputes (Garland 2001; Mastrofski et al. 2000; Reiss 1992). Surrounding heightened personal safety concerns, victims and witnesses are more inclined to report and press charges for minor physical attacks. The legal trend toward arrest and charging up low-level incivilities will render more visible physical aggression that typifies women's offending.

Last, coinciding trends include: (a) the expanding media role in shaping policymaker and public views of purported shifts in female violence (see reviews in Best 1999; Males 1996); (b) the rise in public and private agencies, industries, and advocacy groups to aid, repress, punish, monitor, rehabilitate, safeguard, or in other ways deal with both victims and offenders of violence; and (c) an increasingly litigious society in which authorities are inclined to resort to formal procedures to forestall legal reprisal or public criticism (Mastrofski et al. 2000; Muncie 2004; Sacco 2005). A socioeconomic symbiosis exists among enterprises that benefit directly or indirectly from concern about women's violence. Many have a professional or economic stake in interpreting year-to-year fluctuations in official data as evidence of the growing "social problem" of female violence.

These developments have left women particularly vulnerable to the effects of the social construction of violence and changing culture of crime control – even though the gendered nature of violent offending has not shifted much, if at all, over time. Should the penal philosophy of preventive punishment for marginally serious law violations continue to define social control practices, although it may have the desired effect of holding people more accountable, it also will result in arresting proportionately more females than would be expected based on the typical sex ratio in violence.

Our findings have several possible implications for criminal justice policy and women's future arrest trends. The first draws on our finding that men's violence declines are largely responsible for the narrowing gender gap for assault *arrests*, most notably since the mid-1990s. Although violence declines are multi-causal (Steffensmeier 1993), one factor may be civilizing effects of messages and policy response focused initially and primarily on the unacceptability of *men's violence against women* (Kruttschnitt et al. 2002; Rosenthal 2000). Broader messages intolerant of violence are now communicated by (white, middle-class) women as moral sentries and via their roles in feminized occupations such as school teachers, mental heath counselors and health care workers, and human resource workers who deal with personnel issues. Aging baby-boomers, an influential and sizeable subpopulation are espousing "kinder and gentler" middle-aged values that include greater willingness to intervene for the common good and lesser tolerance for displays or threats of violence (Steffensmeier and Harer 1999). The resultant shaming of would-be violent

<sup>&</sup>lt;sup>13</sup>We reiterate that the NCVS indicates fairly substantial declines in rates of *female* as well as male assault, suggesting that it is police behavior, not female behavior, that has sustained women's rising/higher levels of arrests for assault. Were it not for stretched definitions of violence, NCVS rates might have declined even more.

perpetrators (e.g., as "bullies," "wife beaters," and "pathetic") may serve as strong informal deterrents, especially when these coincide with increased formal legal deterrents. Changes in cultural perceptions and tolerance of violence may have complex effects – netwidening effects on police and citizens that increase *perceptions* and *reporting* of minor violence, but otherwise constructive social changes that *decrease the incidence* of serious violence.

Coinciding with cultural shifts toward less tolerance of violence, more punitive policies, such as deterrence based incapacitation and crime prevention aimed at high-risk chronic offenders, also might have reduced male violence rates (Greenberg 2006). This possibility is intriguing because it suggests, *with time*, tough enforcement policies may comparably reduce women's assaultive behavior. However, we are skeptical about the viability of such an approach to curbing women's arrests for assault. Evidence suggests incapacitation effects exert only small effects on male declines (Greenberg 2006). Effects on female rates would be even smaller because males are more often the "career offenders" (Steffensmeier and Allan 1996). Even if effective for men, whose violence is more instrumental, women, whose violence is more expressive, may respond less to changes in formal sanctions compared to informal sanctions by family and friends (Bottcher 1995; Daly 1994).

Another policy approach to women's future arrest trends is to modify current pro-arrest policies, particularly for partner violence, that some contend are misapplied and used unfairly against women (Feder and Henning 2005). This remedy calls for a more nuanced understanding of domestic violence and changes in police arrest practices to take into account contextual and qualitative differences in violence committed by women and men (Miller 2001): Women's relational violence tends to be defensive, less injurious, and less frequent than men's (Tjaden and Thoennes 2000).

Modifying pro-arrest practices to address gender differences in violence would have benefits, but may not markedly affect women's arrest trends. First, female arrest gains are due not only to partner assault but also for assaults on children, siblings, co-workers, neighbors, police, and other females (Steffensmeier and Schwartz 2004). To dampen women's future arrest rates, policies would have to be modified across other domains like schools, workplaces, neighborhoods, and nightspots. Second, modifying current enforcement practices responsible for women's arrest gains for violence may not be feasible without addressing broader social forces that *underlie* netwidening enforcement practices.

Net-widening effects on female arrest trends have far-reaching ramifications, even when charges are dropped. The criminal justice system bears significant costs not only by processing *more* female defendants, but also because female arrestees have unique health and child care needs. Individual suffer emotional and financial costs, such as substantial fees, lost wages or employment, and child custody issues (Dasgupta 2002). If pro-arrest practices continue, female victims may become more reticent to call the police for fear of arrest (Ferraro 2006; Miller 2001); absent legal protection, some women may resort to violence in response to victimization. Costs of criminalization may be unduly felt by minority and impoverished women (Coker 2004). Popular images of violent women are not race neutral and enforcement practices like zero tolerance might have more severe consequences for women living in poor, urban environments. Disproportionate incarceration

statistics also suggest intersectionalities among gender, race, and economic status and the need to explore whether net-widening and changing perceptions of women as violent have disparate consequences for women of color or in disadvantaged contexts (Coker 2004; Richie 2001). Cross-national studies also are warranted as netwidening practices and consequences are becoming apparent, at least in other western countries outside the US (Estrada 2001).

Also a concern, there are potential self-fulfilling consequences of societal beliefs that female violence is a growing social problem. Moreover, the alignment of these beliefs with women's liberation detracts from the reality that women caught in the system are often marginalized and victimized. As less stringent thresholds are used to diagnose violence as a problem and justify formal intervention, more women may define themselves as violent (Lemert 1951; Chiricos et al. 2007). Further, changing views of women and their violence might affect criminal justice officials' attributions of blameworthiness and culpability, leading to harsher treatment and greater downstream effects of the increased use of arrest. Our findings indicate that increases in female assault arrests already tend to spill over to the conviction stage. Presently, judges appear to filter out female cases prior to imprisonment. Whether this practice continues is a topic for future research.

An intriguing future research question concerns the impact of shifting definitions of violence and changing attitudes about women on the *measurement of violence*, not only in arrest or official data but also in surveys. Such changes have pervasive effects on citizen perceptions and actions, police-citizen interactions, and data collection efforts regarding violence. Changing attitudes and perceptions may sway some victims/citizens to more readily identify women as violent offenders and more women to self-report violent behavior - so that all measures are, to some extent, contaminated by perceptual changes and the social construction of violence (Schwartz et al., 2009). Archival assessments of official records, including reliable, consistently measured conviction data, can help address the impact of changing attitudes and self-fulfilling expectations on female offenders and data collection programs by tracking changes in the behaviors included in broad offense categories (e.g., simple vs. felony assault, theft vs. robbery). Some evidence suggests police more often arrest females for violent crimes when their actual behaviors are non-violent, such as: robbery charges instead of larceny-theft for purse-snatching or when "resisting" when caught shoplifting; in thefts from "johns" by prostitutes; and when suspected of being accomplices who identify good "marks" or supply other information to male robbers, act as a decoy or "bait" to set up a victim, or provide a safe haven for the robber or the stolen property (Chesney-Lind 2004; Miller 1998; Steffensmeier and Ulmer 2005).

### Conclusion

As for recent trends, key results from our analysis of the available longitudinal sources (victim reports, arrests, convictions, prison admissions) support the constructionist tenets of the policy change hypothesis that changing enforcement practices (e.g., in citizen reporting, policing) more so than changes in women's underlying behavior account better for recent arrest trends in women's violence. For the most serious kinds of violent crime including homicide, rape, and robbery, *all* data sources show *female rates have not been rising and* 

there has been very little, if any, change in the gender gap. Notably, for the most reliably reported offense, homicide, female rates are smaller today than two decades ago and the gender gap has actually widened a bit. Only trends in assault differ by type of data (official versus unofficial data) and across stages in the criminal justice system (arrest to conviction to imprisonment). Indeed, assault arrest trends are the driving force behind recent concerns about rising levels of female violence. UCR arrest statistics for assault show women's rates rising and the gender gap closing (especially since 1990) whereas victimization data show a flat trend in the gender gap and no increased involvement in assault – despite caveats about greater inclinations to report women for physical attack or threat in recent times as compared to yesteryear. In order, the narrowing gender gap for assaults is greater in the arrest than in the conviction or imprisonment data.

We conclude that 1) recent net-widening policy shifts and expanding social definitions of violence have led to greater proneness to arrest or sanction female offenders, particularly for criminal assault; 2) greater vulnerability of females to law mobilization at the arrest stage is partially removed as "real" cases are better sorted out relative to seriousness and culpability as they are processed at later stages, though there are arrest spill over effects that have increased women's representation at later stages; 3) future trends in women's arrests (and probably in convictions and imprisonment) for violence are likely to depend less on what women do than on whether the net-widening effects we identified as "causing" the rise in female arrests for violence continue to define public policies.

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# Appendix A

## **Longitudinal Data Sources on Male and Female Violence**

Four crime data sources provide counts of offenders who were either observed by victims, arrested, convicted, or incarcerated for violence. A key methodological concern in deriving estimates of women's and men's violence and the gender gap is comparability across data sets in defining violent offenders as well as comparability over time within each source. Deriving over time violence estimates is fairly straightforward for the official data sources, so we focus especially on complexities associated with the NCVS – including the coding of assault, handling mixed sex and age offender groups, treatment of missing data and series victimizations, and correcting for the survey redesign.

The UCR, NJRP, and NCRP each provide age-specific (offender) counts of males and females arrested, convicted, or imprisoned for offenses categorized as violent based on FBI definitions. There is more flexibility in the NCVS in categorizing types of violence. As in the UCR, attempts and threats of violence as well as completed incidents are counted in our NVCS measures of violence. We follow FBI guidelines in defining aggravated assault. Aggravated assault includes incidents where a gun or other weapon was used or if the victim reported an injury requiring hospitalization (e.g., broken bones, internal injury, etc.). Other physical attacks that did not involve theft/robbery or sexual attacks (i.e., rape) are simple assaults.

In light of the intricacies surrounding the NCVS/NCS surveys, we elaborate on the procedures used in our analyses to derive offender counts. We also offer additional details at: cooley.libarts,wsu.edu/schwartj/crim09.htm. From the NCVS, offender counts can be derived using victim-supplied information on offender demographics (i.e., age and gender) and number of offenders. A very small portion of victims could not identify the age or sex of the offenders; we did not include these offenders in our analysis. To remain consistent with FBI arrest tabulations, we build on procedures developed by NCVS analysts to aggregate counts of single offenders and groups of offenders, including mixed sex and mixed age groups (see Lynch 2002 for additional details). For victimizations involving multiple offenders of different sexes (as opposed to all male or all female groups), we coded all offenders to be a single sex if the victim could identify the sex of the group's majority. We deleted the record from our analysis if the victim could not report the majority sex in the group – approximately 5–8 percent of all violent incidents per year. When the victim reported multiple offenders of mixed age, we counted all offenders as adults rather than delete these groups from the analysis. In alternative analyses (not presented), substantive results did not differ regardless of whether we categorized mixed-age groups as all juveniles or adults. We produce offending rates from NCVS data by multiplying each reported victimization by the number of offenders who perpetrated the act (see Lynch 2002; Hindelang 1981). We limited the maximum number of offenders for each incident to ten

because rare incidents with more than ten offenders can disproportionately contribute to rate estimates and victims cannot accurately report characteristics of such large groups of offenders. Only one percent of victims report more than ten offenders, so the consequences of this approach are minimal. In addition, series incidents – six or more victimizations by the same offender (3 or more for pre-1992 data) – were counted once to be consistent with offender-based tabulations and because these incidents can disproportionately contribute to rate estimates.

The analysis of gender trends in adult violence was further complicated by the redesign of the NCVS implemented in 1992 to include a wider range of violent behaviors that the earlier NCS often failed to detect. (For a detailed description of survey changes, see Mosher et al. 2002). These survey changes, which tend to identify more offenses and relatively more female offenses, are particularly salient for offenses that fall on the low end of the seriousness continuum (e.g., assault) and those that involve relatives and acquaintances (Taylor and Rand 1995). Prior research suggests that analyses involving genderdisaggregated or offense-specific trends across the 1992 transition period need to be particularly aware of the effects of changes in instrumentation on violence estimates (e.g., Blumstein and Wallman 2000; Taylor and Rand 1995). Relying solely on 1992 data to calibrate estimates of offender counts in the older survey to be consistent with the newer survey may be problematic due to (1) considerable year-to-year random fluctuations in the data, (2) the smaller-than-typical sample size due to the split design during the 1992 implementation, and (3) methodological "noise" in survey administration that occurred during the transition year (Cantor and Lynch 2005; Liu and Messner 2001). Primarily, the split samples for the 1992 survey produce such low numbers of female violent offenders that estimates are unstable and do not provide a good benchmark to appraise gender-specific effects of the redesign. Thus, we adjust for the survey redesign using five years of data (i.e., the two years prior to 1992 for the NCS and the two years after 1992 for the NCVS along with the 1992 split-samples) to compute gender- and age-specific correction factors for each offense (for a similar approach, see Cantor and Lynch 2005):

Multiplier= $(\text{ncvs}_{92}+\text{ncvs}_{93}+\text{ncvs}_{94})/(\text{ncs}_{90}+\text{ncs}_{91}+\text{ncs}_{92})$ 

This approach addresses the problem of unstable estimates, but redesign effects may be over or under estimated if crime trends over 1990 to 1994 differ for women and men. We ran similar ADF analyses on trend estimates adjusted for the redesign using the 1992 overlap. The substantive results did not differ. The multiplicative correction factor adjusts upwards pre-redesign surveys for the expanded range of behaviors measured by the revised survey and produces more comparable and accurate offender estimates over time (see Table A). We use these offender estimates to compute rates, as described below.

The two post-arrest data programs provide straightforward estimates of conviction and imprisonment rates. The NJRP data provide counts of adult felony convictions in the U.S., disaggregated by gender and offense type, as estimated based on a nationally representative survey of counties. National felony convictions in state courts are estimated based on a two-stage stratified cluster sample of 300+ counties and a sample of convicted felons within

counties. Rates are calculated after applying "national weights" provided by the NJRP, which are is the product of first and second stage sampling weights (Bureau of Justice Statistics 2004). Because these estimates are provided biennially, we interpolated from the available data to estimate male and female convictions for years in which NJRP estimates are not available. Our incarceration data were drawn from NCRP data, which provide counts of new court commitments to prison for sentences of a year or more, disaggregated by gender and offense. Gender-specific counts of new court commitments were summed across participating states to obtain male and female incarceration figures. The NCRP provides near complete coverage for the U.S., with state participation in the NCRP ranging across years between 35 and 39 states in addition to Washington D.C. Note that substantive findings are similar in analyses based on a stable sub-sample of 31 states that submitted reports in all years since 1986. Although these figures underestimate national levels of incarceration, they are the best available source on national make and female imprisonment trends.

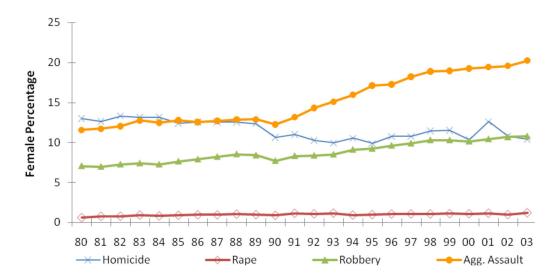
We adjust all data to take into account the sex- and age-composition of the population and other factors that might affect comparisons over time. For the UCR, NCVS, and NJRP, we calculate violence rates using US Census Bureau sex- and age-specific populations for the nation as a whole. We calculated NCRP incarceration rates for each year using gender- and age-specific state population estimates obtained from US Census data, which we summed for all states participating in the NCRP for a given year. To ensure consistency over time, the UCR rates are corrected for variable coverage over the 1980–2003 period (see O'Brien 1999; Steffensmeier and Harer 1999) and the raw data from the NCVS and NJRP are weighted using STATA to insure that year-to-year changes in the demographic make-up of survey respondents (and non-respondents) do not affect longitudinal comparisons. Weighting procedures for NCVS and NJRP data are detailed more fully in data documentation manuals (Bureau of Justice Statistics 2003, 2004).

### Appendix – Table A

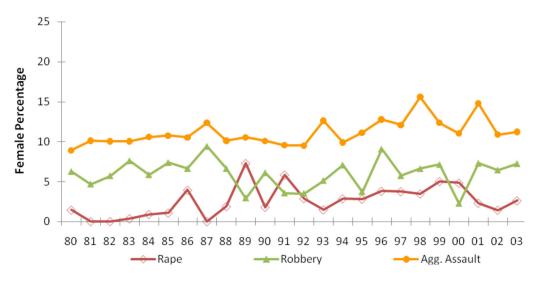
Weights Used to Adjust for the 1992 NCVS Redesign

	Male	Female
Aggravated Assault	1.28	1.60
Simple Assault	1.62	2.03
Rape	1.21	1.41
Robbery	0.92	1.22

## A. Arrests: Uniform Crime Reports



### B. Victim-Based Counts: National Crime Victimization Survey

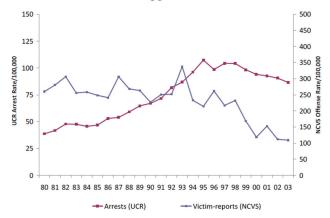


**Figure 1.**Trends in Adult Female Percentage of Violent Offending <sup>a</sup>: Arrests (*UCR*) and Victim-Based Counts (*NCVS*<sup>b</sup>), 1980–2003

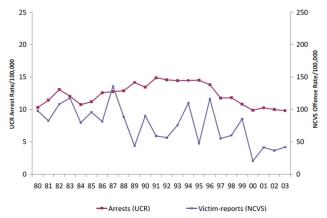
a. Rates are adjusted for the sex composition of the population and for changes in data coverage over time. The population base includes ages 18-64. Female Percentage = Female Rate / (Female Rate + Male Rate)\*100%.

b. NCVS Data are adjusted to take into account effects of the survey redesign in 1992. The multiplier is offense- and sex-specific and is calculated as: Multiplier =  $(ncvs_{92} + ncvs_{93} + nvs_{94})/(ncs_{90} + ncs_{91} + ncs_{92})$ .

Panel A: Female Aggravated Assault Rates

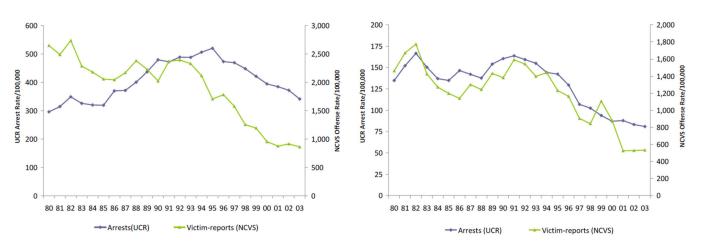


Panel B: Female Robbery Rates



Panel C. Male Aggravated Assault Rates

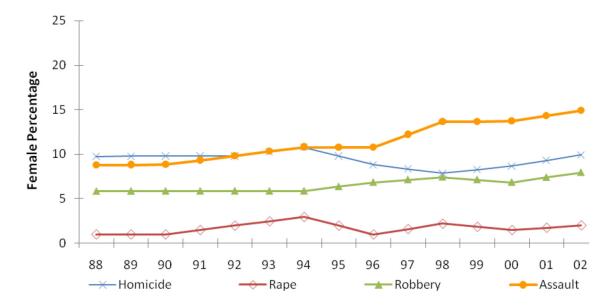
Panel D. Male Robbery Rates



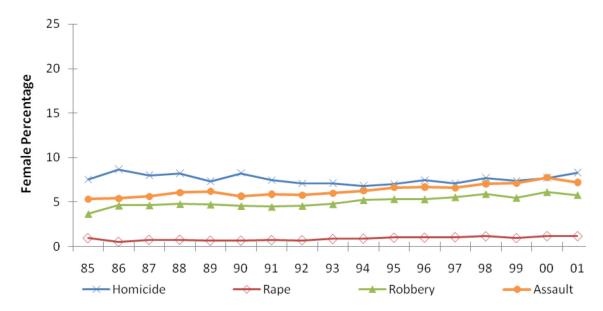
**Figure 2.**Trends in Adult Male and Female Arrest and Offending Rates<sup>a</sup>: Arrests (*UCR*) and Victim-Based Counts (*NCVS*<sup>b</sup>), 1980–2003

- a. Rates are adjusted for the sex composition of the population (ages 18–64) and for changes in data coverage over time.
- b. NCVS Data are adjusted to take into account effects of the survey redesign in 1992. The multiplier is offense- and sex-specific and is calculated as: Multiplier =  $(ncvs_{92} + ncvs_{93} + nvvs_{94})/(ncs_{90} + ncs_{91} + ncs_{92})$ .

# A. Convictions: National Judicial Reporting Program



B. Imprisonment: National Corrections Reporting Program



**Figure 3.**Trends in Adult Female Percentage of Violent Offending<sup>a</sup>: Convictions (*NJRP*) and Imprisonment (*NCRP*), 1980–2002

a. Rates are adjusted for the sex composition of the population and for changes in data coverage over time. The population base includes ages 18-64. Female Percentage = Female Rate / (Female Rate + Male Rate)\*100%.

Table 1

Trends in the Gender Gap for Adult Violence: Augmented Dickey-Fuller Time-Series Results for Arrests (UCR), Victim-Based Counts (NCVS), Convictions (NJRP), and Imprisonment (NCRP), 1980–2003<sup>a</sup>

Schwartz et al.

Violence Indicator	A. Arrests (UCR)	B. Victim-Based Counts (NCVS)	C. Convictions (NCRP)	D. Imprisonment (NJRP)	D. Imprisonment Summary of Change (NJRP) in the Gender Gap
Homicide	Trendless	n/a	Trendless	Trendless	No Change
Rape	Stable	Trendless	Trendless	Trendless	No Change
Robbery	Convergence $(\mathbf{a} = .0255^*)$	Trendless	Trendless	Trendless	Arrests only
Aggravated Assault <sup>c</sup>	Convergence $(\mathbf{a} = .0242^*)$	Stable	Convergence $(\mathbf{a} = .0663^{**})$	Trendless	Arrests, Convictions

p < .05

p < .01 (two-tailed tests)

Note: The terms trendless and stable both indicate no systematic change in the gender gap. A trendless pattern denotes random movement of the gender gap with no discernible upward or downward trend. A stable pattern means female and male rates adjust to one another, moving in tandem (cointegrated) so there is no yearly change in the gender.

<sup>a</sup>The gender gap is measured as:  $\log(\text{female rate}) - \log(\text{male rate})$ . The Augmented Dickey-Fuller first differenced equation is based on the following specification:  $y_1 - y_1 - 1 - y_1 - 2y + \delta 2(y_1 - 2 - y_1)$ -3)+...+µ For the NJRP data, 1 lagged difference was needed to minimize autocorrelation among residuals for all offenses except homicide and rape, which required no lagged differences. No lagged Page 39

differences were required for the UCR, NCVS, or NCRP series.

 Table 2

 Summary of Evidence and Support for Policy-Generated versus Offender-Generated Female Violence Trends

Hypothesis	Findings	Support (Policy- vs. Offender-Generated)	Strength of Support
Arrest Trends – H1 vs. H4: Are trends for assault similar to trends in more reliably measured violent crime types?	Gender Gap: Stable for homicide (slight widening), rape, and robbery (slight narrowing); Narrows for assaults. Female Rates: Homicide and rape rates are lower today (2000+) than in the past (1980s); Robbery rates today are comparable to the past; Female arrests for assault have tripled since the 1980s	Policy-Generated Policy-Generated	Strong Strong
Victimization Trends – H2 vs. H5: Are arrest trends matched by victim-based estimates that are independent of the criminal justice system?	Gender Gap: Stable for rape, robbery and aggravated assault. Female Rates: All violent crime rates are smaller today than in the past	Policy-Generated Policy-Generated	Strong Strong
Post-Arrest Trends – H3 vs. H6: Are arrest trends matched by conviction and imprisonment estimates that better take into account offense seriousness and offender culpability?	Gender Gap: Stable for homicide, rape, and robbery in both conviction and imprisonment counts; Narrows moderately in assault conviction data, but less than in arrest counts; Stable for assault imprisonment; Female Rates: Up for assault convictions and imprisonment; Stable (or down) for homicide, rape, and robbery in conviction and imprisonment data.	Policy-Generated Policy-Generated	Moderate (Conviction) Strong (Imprisonment) Strong