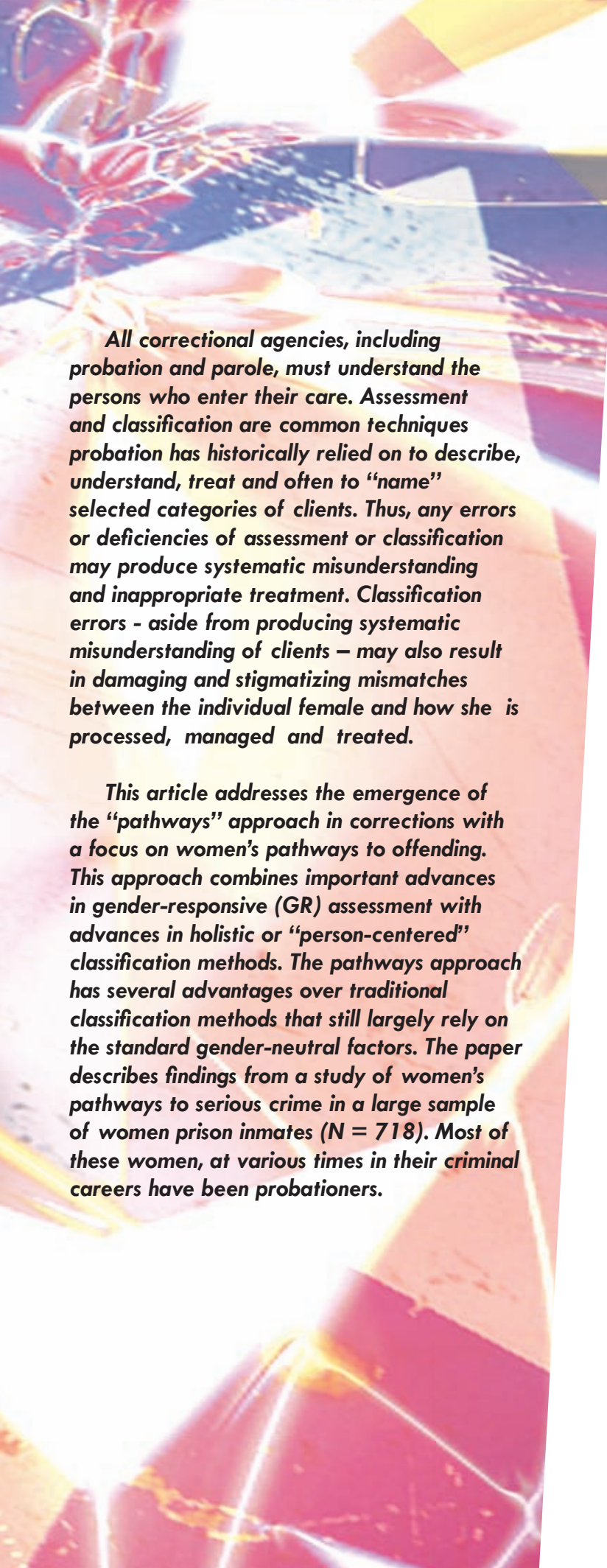


The background is an abstract composition. On the left, there is a dark purple silhouette of a woman's profile, looking towards the right. The rest of the image is filled with vibrant, overlapping brushstrokes in shades of blue, purple, pink, orange, and yellow. The strokes are dynamic and expressive, creating a sense of movement and depth. The overall effect is a complex, layered visual that suggests themes of identity, emotion, and perhaps the 'unraveling' mentioned in the title.

**Unraveling  
Women's  
Pathways to  
Serious Crime:  
New Findings and Links to  
Prior Feminist Pathways**

by Tim Brennan, Ph.D., Markus Breitenbach, Ph.D. and William Dieterich, Ph.D.



**All correctional agencies, including probation and parole, must understand the persons who enter their care. Assessment and classification are common techniques probation has historically relied on to describe, understand, treat and often to “name” selected categories of clients. Thus, any errors or deficiencies of assessment or classification may produce systematic misunderstanding and inappropriate treatment. Classification errors - aside from producing systematic misunderstanding of clients – may also result in damaging and stigmatizing mismatches between the individual female and how she is processed, managed and treated.**

**This article addresses the emergence of the “pathways” approach in corrections with a focus on women’s pathways to offending. This approach combines important advances in gender-responsive (GR) assessment with advances in holistic or “person-centered” classification methods. The pathways approach has several advantages over traditional classification methods that still largely rely on the standard gender-neutral factors. The paper describes findings from a study of women’s pathways to serious crime in a large sample of women prison inmates (N = 718). Most of these women, at various times in their criminal careers have been probationers.**

## **The challenge to gender-neutral assessments**

For decades most correctional agencies used the same assessment tools for both men and women – assuming that the same criminogenic factors were equally applicable to both genders. This practice remains widespread despite rising evidence of gender differences in both criminal behaviors and in the causal dynamics of anti-social behavior. A robust debate has emerged regarding the use of “gender-neutral” assessments. Among many women practitioners, feminists and researchers there is a rising concern over whether gender-neutral factors—educational factors, job skills, social bonds, etc validly identify the risks and needs of women offenders. Two broad issues are critical to this debate:

### **Content and theoretical validity of an assessment instrument**

A first concern is over the content validity or “information content” of any assessment or classification system used for female offenders. This selection is driven by prevailing theories of criminality, by treatment goals and ideally, this selection should include all relevant factors for persons being classified. Thus, a current controversy is whether traditional risk factors should be augmented by adding gender-specific factors that have high relevant for women offenders. (Van Voorhis, et al 2008; Blanchette and Brown 2006). An on-going feminist critique focuses on the theoretical gaps and weak content validity of current gender-neutral assessment instruments if applied to female offenders. Feminists reject the assumption that the same factors can explain both male and female criminality and hold that male-centered or standard theories are blind to several factors that appear unique and specifically relevant for female criminality. The opposing view emphasizes research supporting current “general” criminological theories and emphasizes empirical findings showing that gender-neutral risk-need factors apply equally to men and women. This position argues that if male and female criminality are equally predicted by gender neutral theories and factors and if gender-specific factors add little incremental explanatory power there may be no need for such additional factors.

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## How should assessment factors be combined? Linear models versus configural and pathway approaches

The second issue has not been as clearly on the “radar screen” of feminists, but seems equally critical for women offenders. The question is “How should risk and need factors be combined”? Most current gender-neutral assessments (e.g., LSI-CMI, VRAG, PCL, etc.) simply add up the separate factors to give a single overall score that determines the person’s classification level. Thus, in such linear models the separate factors are combined by additive summation of risk factors (often with equal weighting). However, if the purpose of classification shifts away from prediction and toward explanation, case conceptualization and treatment planning, the linear model approach has been criticized for largely obliterating the “person” by compressing all factors into a single score. An alternative procedure, the “person-centered” or configural assessment offers an attractive alternative to additive linear models by providing a more holistic and individualized approach that appears more consistent with feminist calls for methods that retain the “whole person”. Configural scoring, by retaining the persons total profile across all risk and need factors is consistent with feminist “pathways” approaches (Daly 1992) and can also help identify “common pathways” among women with highly similar profiles (Brennan 2008).

### **Prior work on women’s pathways to crime**

This section briefly reviews critical work that has prepared the way for the identification of women’s pathways to crime. The major themes are as follows:

#### **Qualitative research and the recognition of typified pathways**

A number of insightful qualitative studies grounded in feminist criminology have produced compelling biographies and case narratives of women offenders. First, they have identified many key psychosocial risks and needs of women offenders that substantively differ from men offenders (e.g., Belknap, 2007; Daly, 1992, Owen, 1998). Second, they have proposed several “typified pathways” to crime among women, as follows: (1) Childhood victimization path that was linked such abuse to a pattern of mental illness, substance abuse, depression/anxiety and other consequences (Chesney-Lind, 1997; Covington, 1998; Daly 1992); and (2) A pathway of extreme poverty, homelessness and educational/vocational problems that is found in many women offenders (Holtfreter et al., 2004; Reisig et al., 2002). This pin points the complex intersection of gender, race and class with extreme marginalization (Richie 1996; Bloom and Owen 2003). (3) A relational pathway has been proposed that links dysfunctional abusive intimate relationships to an erosion of the woman’s self-efficacy with on-going victimization, depression/anxiety and substance abuse.

#### **Emergence of Gender Responsive Assessment tools**

A second critical development is the emergence and validation of a set of Gender Responsive (GR) assessment instruments. In a multi-year project, with funding from the National Institute of Corrections (NIC), Van Voorhis and colleagues designed and validated gender-responsive (GR) assessment instruments to address many of the critical events and factors long proposed as influencing and determining women’s

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pathways to crime and that differentiate these from male pathways (Van Voorhis et al., 2008; Wright, Salisbury, & Van Voorhis, 2007). Many of the GR factors in this instrument have been centrally relevant in the previously described qualitative biographies, case studies and “gendered pathways” of women offenders (e.g., child and adult victimization, trauma, relationship dysfunctions, depression/anxiety and so on). This tool paves the way for large sample studies to more precisely identify women’s pathways to crime and to address the nature, generalizability and prevalence of women’s pathways.

## Current influential formulations of women’ pathways to offending

A final critical element in furthering the study of women’s pathways to crime has been the emergence of systematic formulations of hypothesized pathways. Two systems in particular have become influential. These are the qualitatively identified pathways of Kathleen Daly and the theoretical taxonomy of Terrie Moffitt .

Kathleen Daly has offered perhaps the most influential statement on the diversity of women’s pathways to crime (Daly 1992). These were qualitatively developed from a sample of thirty-four women offenders. Briefly, they are as follows:

- *Street Women – Escape and Survival:* This involves women or girls fleeing abuse and violence and entering street life, where they may become drug addicted and/or rely on prostitution, drug dealing or theft to survive.
- *Drug-connected Women:* This reflects women who become users, or are co-opted into trafficking drugs, often in collaboration with intimate partners or family members.
- *Harmed and Harming Women:* This path involves serious child abuse (physical and sexual) and neglect, leading to adolescent school and family problems, delinquency; a hostile aggressive or a withdrawn suspicious demeanor and ultimately chronic adult criminality.
- *Battered Women – Situational Offenders:* This path emphasizes violent abusive intimate partners. Criminal behavior by the woman is seen as unlikely except for her involvement in this relationship. She may escape and/or exhibit retaliative violence. Her subsequent criminal behavior is linked to basic coping and survival.
- *Economic Offending:* This path reflects instrumental or economic crimes (fraud, theft and embezzlement). Two sub-types were offered: poor women coping with poverty, and women motivated by greed or social aspiration – who themselves may not be marginalized or have any history of abuse, addiction or violence.

As noted, Daly’s pathways emerged from small sample qualitative research and very few replication studies have as yet tested this system (for example see: Reisig, Holtfreter, & Morash 2006; Simpson, Yahner & Dugan 2009; Brennan, Breitenbach, & Dieterich, 2008). Thus, there is little firm knowledge of the replicability, reliability of identification and particularly a lack statistical characterization of each pathway.



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Moffitt's Pathways: Terrie Moffitt's developmental taxonomy is also very influential in the field of developmental psychopathology and describes two pathways that apply to both men and women's offending (Moffitt 1993, Moffitt et al. 2001), as follows:

- *The Adolescent Limited (AL)*: In this pathway the adolescent girl - after a normal childhood – reacting to parental constraints and limits, begins to affiliate with, or mimic more delinquent youth in an attempt to obtain more autonomy and freedom. This often leads to a temporary delinquency phase that typically dissipates by late teens or early adulthood. However, some girls may persist into longer criminal career if caught by “snares” such as chronic drug use, early pregnancy or school dropout that may derail their on-going social development.
- *The Life Course Persistent (LCP)*: This path is defined by a complex biosocial etiology and a fearless and risk-taking callous temperament. This pathway emerges in early childhood with sustained childhood problems, on-going failure and school disruption, family problems, adolescent psychological difficulties and persistent delinquency and eventually with a serious adult criminal career. Recent research suggests this path may involve a complex genetic adaptation.

Moffitt acknowledges that her taxonomy represents “hypothetical constructs” that will require empirical validation. Only a handful of studies have tested Moffitt's pathways on female offenders (e.g. Moffitt et al 2001, Kratzer and Hodgkins 1999; Tibbetts and Piquero 1999, Brennan 2008; Simpson, Yahner and Dugan 2009). These studies have only partially supported her dual pathway taxonomy and several key questions remain unresolved:

- *Does the LCP pathway exist among women?* Moffitt, et al (2001) found that LCP's made up less than 1 percent in their female community samples. This raises questions about whether the category even exists among women.
- *If female LCP's exist, what are their characteristics?* The small sample sizes of most prior studies and the low incidence of this category has hindered attempts to reliably characterize these women.
- *Do some AL criminal careers extend into adulthood?* While most AL's are expected to end their delinquent careers by the late teens or early adulthood, Moffitt's position is that some may continue if caught in the snares mentioned above.
- *Are two developmental pathways enough?* While evidence has emerged supporting the existence of both the AL and LCP pathways among women, several prior studies suggest that Moffitt's taxonomy does not capture the full heterogeneity of women offenders and that additional sub-categories women offenders may exist.

## Goals

This article has the following goals:

- To identify and describe “common” pathways leading to serious crime in a large prison sample of serious female offenders.
- To describe the “prototypical narrative” of each common pathway.
- To test the stability and replicability of each pathway in cross-validation tests.
- To examine potential convergence and differences with prior pathways, particularly the pathways of Daly (1992, 1994) and Moffitt, et al (2001).

## Methods

In describing methods for this study only brief descriptions are given below. Interested readers may consult original technical document for full details (Brennan, Breitenbach and Dieterich 2008) available at [www.northpointeinc.com/home.aspx](http://www.northpointeinc.com/home.aspx).

## Sample

The sample consisted of 718 soon-to-be-released women inmates from two California prisons. To be eligible a woman inmate had to be within 60 to 180 days of their expected parole release date. Cases were randomly selected from the total roster of eligible inmates. Following an intensive training session interviews were conducted by trained facility staff and by the research team.

## Measures

Two assessment instruments were used in face-to-face interviews as follows.

- *Gender-Responsive Inventory (GR)*: This instrument (Van Voorhis et al., 2008) assesses a comprehensive range of factors of particular relevance for women offenders that typically are missing from gender-neutral instruments. It includes the following domains:
  - Physical and sexual abuse in childhood and adulthood.
  - Mental Health: Mental illness history, current depression/anxiety and current psychosis.
  - Intimate Relationships: Support from Significant Other, Conflict with Significant Other, Dysfunctional relationship, Housing Safety (v. violent/unsafe), Support from Family of Origin, and Conflict with Family of Origin.
  - Parenting issues: Parenting Stress, Parenting Involvement (Children under 18).
  - Personal Factors: Anger/Hostility, Self Esteem, Self Efficacy, Employment/Financial (weaknesses), Educational Strengths.

# COVER

## Reentry COMPAS

This broadband gender-neutral inventory assesses social, psychological and criminogenic factors demonstrated by recent meta-analytic research to be significantly linked to recidivism following prisoner reentry. Full details are provided in Brennan, Dieterich and Ehrens (2008) and in technical documents available at <http://www.northpointeinc.com/home.aspx>. The domains and key factors include:

- **Official Criminal History:** Age at first arrest and full details of current and prior arrests and convictions, prison misconduct, substance abuse and gang affiliation, prior detentions in both jail and prison; parole and probation revocations.
- **Social and environmental context:** social environment, housing problems, financial problems, work and educational resources, family support and family crime
- **Psychosocial risk/protective factors:** Anti-social attitudes, anti-social personality, low self-efficacy, empathy, social isolation vs. social support and life goals/aimlessness.

Prior studies of these two instruments have shown that most of the scales meet or exceed generally accepted psychometric standards with most alpha coefficients being close to or greater than 0.70. (Brennan, Dieterich and Erhet 2008; Van Voorhis et al 2008)

## Methods of Analysis

We subjected the female sample to quantitative pattern recognition analyses designed to identify highly similar or “recurring” profiles of women who are following mutually similar pathways. Such groups were identified based on their high mutual similarity over the spectrum of GR, criminogenic and life history factors. Technically, we used a bootstrapped K-Means analysis using 1,000 replication samples. The analysis also involved a split-half design, in which we replicating the pattern seeking analyses on both samples to determined the stability of patterns across the split random samples. We repeated the analyses iteratively at steadily increasing numbers of pathways (from three to nine) since there is no current agreement on the number of women’s pathways to crime. Stability of the emerging patterns was assessed using the Kappa coefficient that measures similarity between any two classifications.

## Results

### How many women’s pathways exist?

A first key finding was that six major pathways emerged, although two of these had sub-types embedded within them to give a more precise eight pathway solution that was highly stable and replicable. The cross-validation analysis indicated that the six and eight pathway solutions produced impressively high kappa coefficients of 0.85 and 0.75 showing strong replication. The descriptions below are thus provided for the eight pathway solution.

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## Pathway descriptions – With links to prior pathways research

The following profile narratives, based on z-score profiles, indicate the characteristic factors of each pathway (Full tables are available on request from first author). In these descriptions a feature is mentioned only if it has z-scores exceeding +/- 0.30. This is often taken as a rule of thumb to characterize any group (Costa 2002). Brief comments are also included regarding convergence and replications to prior pathways research.

### *A. “Normal” Women - Two pathways largely matching Moffitt’s AL with snares - Pathways 1 and 5:*

Two relatively “normal” woman pathways, representing lower risk, lower need non-violent offenders, emerged that appear to match Moffitt’s AL. Both reflect the snares predicted by Moffitt to extend criminality of an AL into adulthood i.e. chronic drug abuse and/or single parenting. Similar categories have been identified in other studies and have been named as “normal” and appear to identify replicates of this lower risk (Aalsma and Lapsley, 2001; Stefurak and Calhoun, 2006; Brennan 2008; Simpson, Yahner and Dugan 2009).

***Cluster 1 (N = 144, 15.4 percent) Normal female offenders – lower risk and needs - higher human capital - drug involved single mothers:*** This pathway includes relatively well-educated women women who are mostly single mothers (65 percent) and have an average age of 35. They have more vocational, financial strengths and social supports than most female prisoners and far fewer residential or homeless problems. Their families appear supportive and free of crime and drug problems. Ninety-five percent report no physical or sexual abuse, no mental health problems and have low scores for antisocial personality and attitudes. Significant other (SO) relations appear benign and non-abusive. These women appear to avoid men who may lead them into trouble.

Drug and property offenses dominate. They have an average of 9.7 arrests and 83 percent have been arrested while on probation. Their current offenses include: drug possession (21 percent), drug trafficking (13.9 percent) fraud (14.6 percent), property/larceny (32 percent), and burglary (22 percent). Most have never had a parole revocation (73 percent) and over half are in prison for the first time.

***Cluster 5 (N = 106, 11.3 percent) Normal female offender – lower risk and needs - higher human capital - older, not parenting - drug involved:*** This path largely replicates pathway 1 and differs only in being older (avg. 39) and not parenting (96 percent). Similar to pathway one they have more educational, vocational and financial resources, fewer housing problems, reside in safer areas and do not lack self-efficacy in comparison to most female prisoners. They report the highest job readiness at release, lower family crime and more family support than other female inmates. Most report no physical or sexual abuse as children and no mental health issues. Their SO relationships are not abusive or seen as leading them into trouble. Antisocial personality is not a strong risk factor.



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This pathway also has a lower criminal involvement than most women prisoners, the highest percentage of first time incarcerations (30 percent) and relatively few parole revocations (25 percent). Yet, drug issues are chronic. Seventy- percent have at least one prior drug possession charge, and 25 percent have prior drug trafficking charges. They average eight prior arrests, mostly drug and property related.

## *B. Marginalized “Socialized” Offenders: Two pathways with extreme marginalization, poverty and social learning in antisocial drug sub-cultures – Pathways two and three*

Pathways two and three both reflect the extreme “socially marginalized” theme of poverty, low social and human capital and economically motivated offenses (e.g. Owen 1998; Daly 1992; Salisbury and Van Voorhis 2009). Both also reflect social learning within drug or antisocial sub-cultures often seen leading to a “socialized or sub-cultural” offender (Warren 1971, Lykken 1995). Both of these pathways support Lykken’s assertion that such sub-culturally “socialized” offenders do not have mental health issues. Pathway three differs from two in consisting of younger single mothers, who are more involved in SO relationships that may co-opt them into crimes. Thus pathway three additionally incorporates basic elements of Daly’s Relational and Drug-connected paths within this already severely marginalized pathway.

***Cluster 2 (N = 86, 9.2 percent) Marginalized, Addicted and Aimless - poor, older and childless women – often homeless:*** These single older (average 41 years) and addicted women reflect poverty, low self-efficacy, vocational/educational deficits and histories of drug treatment. They have few life goals or beliefs, appear socially isolated, have little or no social supports and are uninvolved in parenting. Poverty, unemployment and housing are key issues. There is no suggestion of sexual or physical abuse as children or as adults, or of mental health issues. Antisocial personality and antisocial attitudes are about average.

These women have a very high criminal history, averaging 15 arrests, with multiple probation and parole revocations, arrests on probation and prior jail and prison terms. Their history, as with most women, is dominated by non-violent property and drug offenses including drug possession/use and trafficking. Most have had two or more prior drug possession arrests suggesting chronic addiction. Their offenses also imply an economic motive e.g. current drug trafficking (14 percent), property/larceny (27 percent), burglary (16 percent) and above average prior trafficking arrests. A surprising 42 percent have at least one prior violent felony arrest.

***Cluster 3 (N = 119, 12.7%) Marginalized, Addicted and Stressed – single younger mothers in conflicted relationships:*** This pathway consists of younger (average 34) single mothers with extreme vocational and educational failure, poverty and unstable housing in high crime areas. Their marginalization is compounded by extreme parenting stress, conflicted SO relationships, low self-efficacy and social isolation. While their parental families had above average crime and drug involvement there is no clear evidence of child sexual or physical abuse. The profile shows no clear mental health or antisocial personality issues and no evidence of abuse in their adult SO relationship.

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Drugs also dominate this pathway. Their criminal history is a little above average (11.8 arrests) and mainly for non-violent drug and property offenses, often with an economic motive. Their current offenses include: drug possession/use (30 percent) and drug trafficking (18 percent) fraud (14 percent), property/larceny (29 percent); 72 percent have two or more prior arrests for drug possession; and 20 percent have two or more prior drug trafficking arrests, again above average.

### *C. Serious, Chronic and violent women offenders: Two pathways reflecting high risk/high need women largely matching Moffitt's LCP and Daly's Harmed/Harming Women – Pathways Six and Seven*

Pathways six and seven appear to offer matches to Moffitt's LCP and Daly's "Harmed and Harming" pathway. It may be noted that several other studies have identified similar profiles of high need and serious chronic offenders e.g. Butler and Adams (1966) "Impulsive aggressive"; Stefurak and Calhoun's (2006) "Externalizing Impulsive"; Brennan's (2008) "Serious Delinquent/Low Self Control". Pathways six and seven reflect many key features of Moffitt's LCP e.g. early onset, persistent delinquency, school and vocational failure, anti-social personality, serious/violent adult crime, impulsive low self-control. These two pathways, however, also incorporate Daly's economic and battered woman pathways as well as a pattern of internalizing and mental health issues often linked to serious child sexual and physical abuse.

***Pathway 6 (N = 67, 7.2 percent): Chronic Serious and Non-compliant Offenders – Anti-social personality and hostility – mental health issues – lifelong abuse – battered - marginalized and often homeless.*** This pathway – with just over 79 percent of the sample – contains mostly single mothers who have very high risk and need profiles. First, these women reflect a pattern of depression, anxiety, low esteem, low self-efficacy, psychotic symptoms, no clear life goals, pessimism, anti-social personality, impulsivity and anger. Second, they have a history of physical and sexual child abuse and out-of-home placements. Third, their parental families had high crime and drug history and remain non-supportive. Fourth, physical and sexual abuse has extended into adulthood in conflicted SO relationships. Many of their male partners have criminal records. Fifth, they experience extreme educational-work failure, poverty, unstable housing and homelessness. They have highest need for temporary housing at release, the poorest history of full-time employment and the highest expected difficulty in finding and keeping a job.

This Pathway has the highest criminal history (with Pathway two) with a high number of prior arrests (15), multiple prior jail and prison sentences. Many have parole revocations (58 percent), returns to prison (55 percent) and arrests while on probation (94 percent). An atypical feature is the percentage of these women with violent institutional infractions (24 percent). Yet, as with most women their history is dominated by non-violent drug and property offenses.

***Pathway 7 (N = 27, 2.8 percent) Chronic serious non-compliance offenders - extreme mental health problems and violent hostility – lifelong abuse – marginalized - high parenting stress.*** This pathway shares all the key features of pathway six, including

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childhood and adult abuse, educational and vocational failure and poverty and an antisocial personality pattern. However, it is differentiated by far more extreme mental health issues, psychoses, depression, anxiety and suicidal issues. It has more parenting involvement and very high parenting stresses, but fewer housing problems and somewhat more family support. There is less evidence of the “Relational Model” perhaps resulting from extreme mental health problems, social withdrawal and fewer SO relationships.

While this pathway mostly reflects drug and property offenses, it has atypically high scores for violent offenses; prior weapons offenses; fights with other inmates and prison misconducts. It also has above average percentages for domestic violence offenses, current assaults and current violent felonies, suggesting retaliation against an abusive SO.

#### *D. Lifelong victimization: Two pathways that jointly incorporate Daly’s Battered Woman, Drug Connected and Relational Pathways - Pathways four and eight*

Pathways four and eight both reflect the prototypical lifelong “Victim Pathway” (Salisbury and Van Voorhis 2009). Both incorporate the basic elements of Daly’s Battered Women, Drug Connected and Relational Pathways. Many have antisocial SO partners who influence their anti-social behaviors, personal drug abuse and drug trafficking.

Pathway eight differs in being older, not parenting, and in having more elements of the sub-cultural socialization of Lykken’s (1995) “common sociopath,” or Warren’s (1971) “sub-cultural identifier”. Sub-cultural socialization is suggested by the pattern of criminal abusive parents, anti-social/criminal significant others, strong ties to an anti-social culture with chronic drug abuse, trafficking and habitual crime. The absence of mental health problems also fits Lykken’s (1995) description of the common sociopath.

***Cluster 4 (N = 89, 9.5 percent) Lifelong Victims - Stressed depressed single mothers in abusive relationships - addicted - retaliative violence:*** These single mothers (average age 34) reflect a pattern of lifelong victimization and extreme child sexual and physical abuse that extends into current abusive adult relationships in many cases. The domineering SO’s often have criminal records, are involved in the woman’s offenses and appear to lead the women into trouble. These women appear overwhelmed and stressed by parenting. They exhibit depression, anxiety and feelings of being mistreated, but no evidence of other mental health problems. Their parental families offer little or no current support. They average 9.1 arrests and have several prior probation revocations and detentions. The pathway is atypical in having a high percentage for a current violent felony (19 percent), for being angry at the time of the current offense, for having domestic violence convictions and hitting/hurting someone in the last three years. Otherwise they mainly commit drug and property offenses. Many are in prison for the first time (64 percent).

***Cluster 8 (N = 8.6 percent) Lifelong victims - Older Addicted Women in abusive SO relationships - not parenting - chaotic lives - retaliative violence:*** This pathway consists of older (average 40) single or divorced women, who are not parenting and who

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have a history of extreme lifelong abuse, within criminal families and also in current antisocial adult relationships. They account for 8.6 percent of the sample, straddle all ethnic/racial groups. Their victimization extends from childhood physical and sexual abuse to current adult victimization by domineering and criminal males. Their abusive parental families had high levels of crime and substance abuse and remain non-supportive. These women see their violent SO as increasing their criminal involvement. They describe their lives as one crisis after another. Surprisingly, this pathway is close to the prison average for poverty, education and vocational problems and does not reflect serious mental health issues or anti-social personality features.

This category has above average criminal involvement and multiple arrests for drug trafficking and possession. Their criminal history reflects anger/hostility, above average levels for hitting/hurting someone in the last three years and an atypically high proportion with prior violent felony arrests. Most (75 percent) were under the influence of alcohol or drugs at their current offence.

## Conclusions

### Do “gendered pathways” exist?

Our findings support the existence of “gendered” pathways, showing that GR factors are major constituents of six out of the eight pathways. In these profiles GR factors appear coherently linked with each other and with the central narrative of each pathway. These GR features mostly exceed z-scores of 0.30 showing that they strongly characterize the pathway; and differentiate certain pathways from each other. For example, the victimized single mothers of Pathway four are centrally defined by child sexual abuse (1.01), adult physical abuse (0.62), adult sexual abuse (0.46) as well as parenting involvement (.83), parenting stress (.74), depression (.38) and tend to have a highly conflicted and violent SO (.37) relationship. These scores show that this pathway is highly atypical on these defining features and is well separated from many other pathways. Similar coherent profiles emerge for most of the identified pathways

### The high complexity of these “person-centered” holistic pathways

These profiles illustrate the high complexity of these holistic pathways. Each pathway clarifies how several GR themes (e.g. child abuse, poverty, mental health) may jointly co-occur with other social and psychological factors in full contexts of these pathways. The pathway profiles also show that several more gender-neutral criminogenic factors (anti-social personality, poverty, etc) can also be key constituents of these pathways. For example, Gottfredson and Hirschi’s (1990) “General Theory” links cruel inept early parenting and neglect to anti-social hostile personality and high criminality is exemplified. These factors are all clear components of Pathway six. However, this pathway is even more complex than the Gottfredson and Hirschi’s General Theory, and additionally contains several of Daly’s themes. For example path six women are also battered and victimized, have serious deficits in human/social capital, are poor and often homeless, and thus also exhibit Daly’s relational and drug-connected themes in their complex profile.



## How many pathways exist?

Our conclusion was that the six and eight level classifications were optimal in balancing pathway stability, interpretation and clinical requirements. However, our interpretations also show that the eight pathways can be organized into four general superordinate categories. Yet, the six and eight levels produced particularly reliable cross-validations, high Kappa coefficients and also had meaningful pathway interpretations. Thus, we only report the detailed interpretations at the eight pathway level.

## Are these pathways reliable and stable?

These pathways demonstrated substantial stability across fairly stringent cross validation tests. With 1,000 replications across the bootstrapped samples the analysis is likely to converge on the most stable solutions in our data. Second, the stringent reliability and stability tests that we applied to the selected pathway solutions produced high kappa coefficients of 0.85 and 0.75, showing strong replication of the recovered six and eight level pathways across samples.

## Prevalence Issues

The lack of comparable studies and comparable pathways does not give any basis for comparisons regarding the relative prevalence of these pathways. However, these results produce useful baselines for other studies. First, the two lower risk / lower need Pathways one and five, but who are chronic drug users accounted for 15.4 percent and 11.3 percent respectively, and jointly for almost 27 percent of this prison sample. At the other extreme the two LCP-like Pathways six and seven were far smaller at 7.2 percent and 2.8 percent respectively; and together comprise only 10 percent of the sample. This fits with prior expectations for small frequencies of the LCP type from other studies. The frequencies of our other pathways, illustrated are as follows: Pathway two (9.2 percent), Pathway three (12.7 percent), Pathway four (9.5 percent) and Pathway eight (8.6 percent).

## An Outlier Category of Non-Classifiable Cases

This study suggests that it would be a mistake to attempt to classify all women into a pathway category. This agrees with several prior studies (Brennan 2008, Lykken 1995). However, the exact percentage of unclassified cases will depend crucially on the assignment method used. More specifically, this study suggests that about 75-76 percent of female prisoners can be

reliably classified into one of the eight pathways. Our cross-validated eight pathway solution reliably assigned 76.6 percent of our sample to their appropriate pathway, leaving 23.4 percent of the women unclassified as outliers. However an alternative method (discriminant function analysis) classified 85 percent of the women into their correct pathway leaving 15 percent of cases in an unclassified category.

## Implications for Moffitt's Theoretical Taxonomy

We listed several questions regarding Moffitt's theoretical pathways. Our analysis suggests the following comments on these questions.

First, the LCP pathway does appear to exist. Pathways six and seven offer two empirical profiles that substantiate the early onset, chaotic and abusive parenting, negative hostile personality and unfolding of multiple lifelong problems described by Moffitt.

Second, Moffitt's AL pathway appears to be extended into adulthood in certain circumstances, as in Pathways one and five. These exhibit two of the main "snares" that Moffitt suggested could extend their criminal careers into adulthood. One caution is that although these two pathways have dramatically fewer problems and more social resources than other women prisoners, our basis of comparison is the "average female prisoner" and this should be kept in mind when interpreting these relative differences. One caution is that although these two pathways have dramatically fewer problems and more social resources than other women prisoners, our basis of comparison is the "average female prisoner" and this should be kept in mind when interpreting these relative differences.

Third, Moffitt asked 'are two pathways enough?' We discovered several additional pathways missing from Moffitt's taxonomy, particularly those involving socio-cultural processes that were not a main focus in Moffitt's theoretical and biological approach. For example, she omits the "socialized" offenders that emerge from particular socio-cultural family, peer and community contexts i.e. Pathways two and three.

## Implications for Daly's Pathways

Our results suggest that while each of Daly's "feminist pathways" emerged in these pathways, they do not emerge as

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separate unitary explanatory processes. Instead they appear “folded into” or hybridized, often with each other, and within complex pathways that contain additional causal processes. Thus, one or more of Daly’s processes may co-occur with economic marginalization, sub-cultural socialization, mental health and trauma.

## Next Steps

The above exploratory work to identify women’s pathways to serious offending is only the beginning discovery phase of a longer term project. Each of the pathways described above will be further studied to further clarify underlying causal process and also to explore differential treatment implications. Replications on other kind of female offender samples will also be important in clarifying the degree to which these pathways generalize across different kinds of institutional samples. ▶▶

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