

Geographic and Social Movement of Sex Offender Fugitives

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Abstract

The Adam Walsh Child Protection and Safety Act (AWA) established the U.S. Marshals Service (USMS) as the nation's lead agency in the pursuit of sex offenders who violate a sex offender registry and cross state, tribal, or national borders. This study examines the flight behavior of 195 AWA violators investigated by the USMS during 2011 and focuses on the strategic choices fugitives made including the distance offenders traveled, whether they lived alone or with others at capture, and whether they were arrested in a community they were familiar with (e.g., a city they had lived in before). A number of personal, criminal, geographic, and social indicators were taken from law enforcement and public records in an effort to model patterns across these three strategic choices. The data showed that 37% of AWA violators fled to a familiar area, 65% lived with friends or family at capture, and 50% traveled more than 370 miles (with 35% residing in an adjacent state to the last known address). Analyses also showed that these three outcomes varied as a function of offender demographics, geographic history, social networks, and criminal history. Implications for policy and research are discussed.

Keywords

sex offenders, sex offender registry, fugitives, geography

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The Adam Walsh Child Protection and Safety Act (AWA) was passed in January 2006 and became the principle law governing sex offender registries in the United States (H.R. 4472). The AWA contained a broad array of new legislations affecting various aspects of sex offender registries. It established uniform definitions and rules regarding which offenders should be required to register and what information should be displayed to the public. It also increased sanctions for failure to comply with a registration requirement and established the U.S. Marshals Service (USMS) as the nation's lead agency responsible for enforcing violations of the Act. To this end, the AWA requires three criteria to establish that a violation has occurred: (a) an offender had to know they were required to register, (b) the offender must have engaged in prolonged interstate travel or commerce without notification to their registry, and (c) the travel must have occurred after the AWA became law. The USMS closed their first case within days of the law's passage and continuously pursued violators thereafter—initiating approximately 8,000 investigations, issuing more than 1,400 registration warrants, and arresting more than 1,100 AWA violators by 2011—the year data were downloaded for use in this study (*RU112-2: Reauthorization of the Adam Walsh Act*).

Research examining sex offender registries has grown since the passage of the AWA. Areas of growth include studies on whether registries reduce sexual recidivism (e.g., Agan, 2011; Letourneau & Armstrong, 2008) or deter first-time sex offenders (e.g., Letourneau, Bandyopadhyay, Armstrong, & Sinha, 2010; Prescott & Rockoff, 2011). A small amount of literature has examined whether violating a registration requirement is a significant indicator of sexual recidivism risk (e.g., Duwe & Donnay, 2010; Levenson, Letourneau, Armstrong, & Zgoba, 2010). Other research has focused on policy that guides registries, such as investigating whether the required tier system is a meaningful indicator of risk (e.g., Freeman & Sandler, 2010). Likewise, researchers have examined the collateral consequences of being registered (e.g., Burchfield & Mingus, 2008). Finally, the literature has focused on measuring the public use and perception of registries (e.g., Craun, 2010; Craun & Theriot, 2008; Kernsmith, Craun, & Foster, 2009).

A number of studies examine migration patterns of registered sex offenders. For example, Hipp, Turner, and Jannetta (2010) studied registrants in California and found that sex offenders tended to migrate over time toward socially disorganized areas. However, these studies addressed a very different population and question—assessing how law-abiding registrants chose a place to live. In contrast, we know little about the way sex offenders move once they violate a registration requirement—how fugitives migrate.

Other literature examines how criminals, including sex offenders, travel over geographic space to engage in crime (e.g., Beauregard, Proulx, Rossmo,

Leclerc, & Allaire, 2007; Bichler, Christie-Merrall, & Sechrest, 2011). While these studies examine the distances traveled by offenders in the act of committing a sexual offense, there is no comparable work on the movement of sex offenders while in a state of flight.

Despite the important research conducted to date, we know very little about the behavior of sex offenders after they violate a registration requirement. There is no research assessing how far they travel, with whom they live, and how they choose locations. The absence of empirical information on these factors limits the field's ability to understand why individuals choose to violate a registry, the personal and social contexts of being a registry violator, and any heightened risk these fugitives pose. Geographic and social movement is an important aspect of any fugitive's behavior and understanding that movement is likely to facilitate prompt capture.

Fugitive Research

Only a handful of studies have examined the arrest of fugitives (e.g., Helland & Tabarrok, 2004; Miles, 2005; Peterson, 2006) or the lives of fugitives while on the run (e.g., Goffman, 2009). Rossmo (1978) examined fugitive movement over geographic space and found that they tended to move to areas just beyond the extradition boundaries of their warrants. Although this was important research, Rossmo's analysis was restricted to failure-to-appear warrants for misdemeanor crimes in Canada. In a much larger and more recent study, Flannery and Kretschmar (2012) examined approximately 40,000 fugitives as part of *Safe Surrender*, a voluntary-surrender program administered by the USMS in 20 cities (Tabarrok, 2012). Their survey data suggested that many fugitives changed behaviors in specific and strategic ways to evade capture, such as avoiding some forms of employment, choosing not to apply for public benefits, or otherwise limiting their interaction with formal institutions that could signal their location to authorities (Cahill, 2012). In a smaller but more in-depth study, Goffman (2009) used ethnographic and self-report methodologies to explore the meaning of fugitive status to Black men living on the streets of Philadelphia. This work suggested that fugitives must derive strategies to deal with informal ties to people or areas to navigate their stigma as law violators and especially their increased risk of victimization and exploitation by other criminals. Collectively, this literature suggests that fugitives spend time and effort strategizing how to meet basic needs and avoid capture while on the run. It also suggests that these strategies, or the ability to enact them, likely vary between offenders.

With this in mind, three strategic behaviors are likely pervasive and important to fugitives: (a) distance—how far fugitives travel, (b) familiarity—whether they go somewhere new or somewhere they have lived before, and

(c) solitude—whether they reside alone or with others. These aspects of fugitive behavior are referred to as “strategic” because they reflect concrete actions fugitives take to facilitate their flight—actions they likely believe play an important role in whether, and for how long, they can avoid arrest as well as meet other needs (e.g., access to food, shelter, money, safety, social connections).

Strategic Behaviors

Offenders likely make, or at least consider, strategic choices when they become fugitives—a series of decisions which may be driven by their perception and prioritization of “core needs.” The most obvious core need is to avoid capture, but others likely include access to shelter, income, safety, and social or emotional support (Goffman, 2009; Goldkamp, 2012). For fugitives, traditional avenues to meeting these needs are often inhibited or blocked. For example, housing and employment opportunities can be hindered by background checks conducted by employers and landlords. Likewise, fugitives experience increased risk of physical danger and risk of exploitation because other offenders could take advantage of a fugitive’s inability to seek protection from police or courts (Goffman, 2009).

We pose three potentially important issues for understanding fugitive flight behavior: perspectives, needs hierarchy, and constraints. First, differences in behavior are likely a function of how a fugitive believes that certain choices will affect one or more of their core needs (perspective). Some fugitives may believe that traveling farther from home minimizes the risk of capture and prosecution—perhaps because they believe it reduces the probability of being recognized by police or informants. However, some fugitives may think traveling long distances would lead to greater chances of getting caught. Perhaps they believe that travel takes them farther from networks that help them hide. Thus, individual perspectives could alter behavior between two otherwise identical fugitives.

Second, these strategic choices may be in conflict; any given strategy may represent a trade-off between meeting one core need while inhibiting another (hierarchy). A fugitive may believe that traveling farther away, living alone, and living in a new area minimize the chances of getting caught. But the fugitive also may believe that staying close to home allows better access to labor opportunities, off-the-books housing with friends or family, and/or the ability to stay connected with important people in his or her life. Thus, strategic choices likely differ based on the way a fugitive prioritizes core needs—on their individual hierarchy.

Finally, fugitives make choices in a restricted context (constraints). As found in other studies of criminal behavior, choice is often restricted by the social and personal opportunities present (Felson, 2002). Offenders differ in cognitive landscape (Cantor, 2008)—what distance they believe constitutes lengthy travel and what style of living seems possible or acceptable. Offenders vary in personal capital to facilitate a given strategic plan—the resources to flee, knowledge of where to go, or skills to adapt to that environment (Felson, 2002). Choice can also be a function of situational constraints such as the press of time, the actions of law enforcement, or the fugitive's ability to draw on social or criminal capital to facilitate flight (McCarthy & Hagan, 2001). For example, far fewer family and friends may be willing to assist a fugitive sex offender than a person wanted for other less stigmatized crimes. This results in behavioral modifications that are imposed by internal constraints (e.g., resources and skills) but further complicated by external conditions (e.g., the actions and attitudes of others).

Current Study

Little is known about the strategic decision-making of fugitives on the run, especially of sex offender fugitives. The literature to date suggests that fugitives make strategic choices—balancing important interests such as avoiding capture, maximizing safety, accessing income, and maintaining emotional support or social ties. The same is likely true of AWA violators—sex offender fugitives who flee across state, tribal, or national borders. As a first step to unraveling the complex variables involved in fugitive behavior, this study presents an empirical description and exploratory model of three strategic decisions related to flight location: distance, familiarity, and solitude. These alternatives are likely perceived as definitive behavioral choices in terms of avoiding capture as well as meeting basic or core needs of fugitives. That being said, there is great complexity and heterogeneity in the choices fugitives make. This analysis specifically addresses three questions:

Research Question 1: How far do fugitives travel on average, and what predicts distance traveled?

Research Question 2: How often do fugitives flee to areas where they lived before, and what predicts migration to a familiar area?

Research Question 3: How often do fugitives live alone, and what predicts living alone?

Given the level of complexity, predictions regarding distance, familiar areas, and solitude are far from simple. The most significant factor inhibiting

predictions, however, is the absence of basic descriptive facts regarding fugitive behavior. There are no empirical data, to date, to suggest which decisions are important, how fugitives tend to behave with respect to each choice, or what predicts these choices. To advance theoretical ideas on fugitive behavior, the field requires empirical description of these behaviors, as well as information on the perceptions and preferences of fugitives, themselves. This article focuses on this first requirement for the field: descriptive information about strategic behavior of fugitives.

Method

Sample

The AWA established the USMS as the nation's principle agency in enforcing criminal violations of the Act. The current study focuses on all investigations that were closed (i.e., the fugitive was located) by the USMS in the first half of calendar year 2011, and confirmed as containing a true AWA violation ($n = 201$).¹ Females were dropped from the analysis due to small cell sizes precluding their use in analyses ($n = 6$).

Data Sources

Several data sources were used to generate information for this study. The primary data set was the USMS central data repository—the *Judicial and Detainee Information System (JDIS)*. *JDIS* houses case information, such as warrant issue date(s), closure date(s), and demographic data (e.g., age, race, gender).² Importantly, *JDIS* does not contain information on the addresses of subjects or relationship between subjects and the arrest locations or cohabitants. Second, investigators were instructed to identify the last known address of the subject when they became an AWA offender, the address at which the fugitive was living when they were arrested, and the relevance of the latter address to the offender (e.g., grandmother's house, girlfriend's apartment). The text responses were then coded into categories as described in the "Measures" section below. Third, we obtained all prior known addresses associated with each fugitive via public record data sources (*PRDS*).³ The number of addresses ranged from a low of 1 to a high of 20 known locations between 1990 and the date the subject became an AWA fugitive. Fourth, the data were merged with the *National Sex Offender Registry (NSOR)*.⁴ This data set contains information on all sex offender registry requirements for each fugitive (some offenders may have more than one sex offense conviction and, therefore, separate registry requirements) and their registry address

(redundant with their last known address). As described in the Variables section below, these data were also used to generate the count of prior sexual assault conviction events. Note that this is separate from the number of sexual assault victims or acts—it refers to distinct prosecutions. The data were collapsed to the person level for analysis. Fifth, recent warrant history for each fugitive was obtained from the National Crime Information Center's (NCIC) *Wanted Persons* file, regardless of whether the warrant was investigated by the USMS (see Bierie, 2014). The version of these data available for our analysis only contained warrant records from January 2006 through present. Therefore, measures derived from this source refer to the 5-year period prior to the study.

Measures

Demographics. Offender characteristics were taken from official data (*JDIS*) and supplemented by other data sources listed above if missing in *JDIS*. Age was computed in a year metric and referred to the date the warrant was issued. The underlying data differentiated four race groups, including Black, Native American, Asian, and White. Importantly, Hispanic ethnicity is not differentiated in any of these data systems—they are grouped as White. There were too few cases of Native American or Asian fugitives to allow distinct dummies (10 total across these two categories). Thus, a single race dummy was created to differentiate Black from all other race groups.⁵

Criminal history. A count of warrants between January 2006 and June 2011 was coded from the *Wanted Persons* file. A count of each unique conviction event (i.e., not charges) that resulted in a requirement to register was computed from the *NSOR* data. A dummy was created to indicate whether the subject failed to register (i.e., never registered at all). A count of unique appearances at trial was created via a national record of court dockets (*PRDS*). Finally, a variable was coded to indicate which of the potential alerts identified in the condition variable of the *Wanted Persons* file were present. The conditions were as follows: drug offense, armed, escape, sexually violent predator, history of violence, other, and none. A second global measure (dummy) was coded to indicate whether any of these alerts had been filed (vs. none), regardless of category. Collectively, these items were intended to reflect criminal capital or propensity.⁶

Geographic and social history. Two aspects of prior geographic movement were created. The first was a count of prior addresses associated with the offender, as measured by the public database chosen, which may reflect skill or comfort

with moving. Second, the total count of unique states associated with an offender was computed. This count was generated to capture an offender's cognitive map of distance—reflecting a familiarity with crossing state boundaries. A person who has moved to a greater number of states may find it easier to travel greater distances and have a more dispersed social network. The *PRDS* also contained a list of likely associates and relatives (coded into counts for this analysis). These items were intended to reflect social capital on which fugitives may draw when making strategic choices about their flight.

Dependent variables. Three dependent variables were created. First, the item Familiar location was coded such that a value of 1 indicated one of two conditions was met: (a) the city the offender was residing in at arrest was the same as their last known address or a city listed in one of their prior historic locations or (b) the zone improvement plan (ZIP) code the offender was residing in at arrest was the same as their last known ZIP code or one of their historically known ZIP codes. A value of 0 indicated that neither of these conditions was met.⁷ An additional measure of same location was created and coded as 1 if either of the following conditions was met: (a) the city the offender was residing in at arrest was the same as their last known city, or (b) the ZIP code of their arrest residence was the same as the offender's last known ZIP code. A value of 0 indicated that neither condition was met. Importantly, this approach to matching locality stipulates that an exact match of prior address is not necessary.

Second, the driving distances between last known address and residence at arrest were computed and measured in miles. This measure treats driving distance as the best representation of distance. This is noteworthy in that driving distance becomes less meaningful if offenders tend to fly when traveling. However, we assume that fugitives are unlikely to attempt air travel because post-9/11 security measures allow the Transportation Security Agency to check passengers for warrants and execute arrests (49 USC § 114). We therefore presume that fugitives are likely to travel by car, bus, or train.

Third, a variable describing the social connection between an offender and their ending residence was collected. Here, the text data entered by the lead investigator were collapsed into one of six living-with categories: romantic partner, family, friends, self, homeless, and institution (e.g., hospital). A second binary item was created to represent the global categories of living alone (e.g., self, homeless, institution) versus living with others. Although the categorical item living-with is assessed via bivariate comparisons below, regression models were restricted to this binary representation of solitude because of small cell sizes. See Table 1 (below) for descriptive statistics of the sample.

Table 1. Descriptive Statistics: Comparing Fugitives Captured in Varying Geo-Social Categories.

	All subjects														
	Observed			Unfamiliar area			Familiar area			Reside with others			Reside alone		
	Minimum	Maximum	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	
Demographics															
Age at warrant issue (years)	194	19	39.09	12.26	38.33	12.14	40.39	12.44	37.70	11.85	42.49	12.77			
Race—Black	195	0	1	0.27	0.44	0.27	0.44	0.26	0.44	0.33	0.47	0.41			
Criminal history (count)															
Warrants	195	1	5	1.42	0.78	1.44	0.81	1.39	0.74	1.48	0.80	1.21	0.49		
Registry requirements	195	1	7	1.32	0.94	1.30	0.89	1.36	1.03	1.28	0.80	1.47	1.35		
Never registered	195	0	1	0.15	0.36	0.14	0.35	0.17	0.38	0.12	0.33	0.17	0.38		
Number of dockets	167	1	62	8.26	10.15	9.42	11.99	6.41	5.76	8.63	12.23	8.92	7.92		
NCIC alert															
Any alert	195	0	1	0.21	0.41	0.22	0.42	0.19	0.40	0.20	0.40	0.17	0.38		
Armed	195	0	1	0.03	0.17	0.04	0.20	0.01	0.12	0.05	0.22	0.00	0.00		
Other	195	0	1	0.03	0.17	0.03	0.18	0.03	0.17	0.03	0.17	0.02	0.14		
Violent	195	0	1	0.10	0.30	0.10	0.30	0.10	0.30	0.10	0.30	0.08	0.27		
Drug	195	0	1	0.02	0.12	0.02	0.13	0.01	0.12	0.01	0.10	0.02	0.14		
Escape	195	0	1	0.01	0.07	0.00	0.00	0.01	0.12	0.00	0.00	0.00	0.00		
Sexually violent predator	195	0	1	0.04	0.20	0.05	0.22	0.03	0.17	0.03	0.17	0.06	0.23		
Suicide	195	0	1	0.01	0.07	0.00	0.00	0.01	0.12	0.00	0.00	0.00	0.00		
Geographic history															
Count of prior address	194	1	20	8.44	6.61	6.53	6.45	11.67	5.56	8.29	6.63	8.64	6.35		
Count of prior states	194	1	9	2.21	1.55	1.71	1.33	3.06	1.53	1.99	1.32	2.49	1.74		
Social connections															
Number of acquaintances	194	0	110	17.99	15.21	18.48	15.90	17.17	14.02	16.88	13.35	17.44	16.66		
Number of relatives	194	0	50	26.27	18.99	25.54	19.40	27.50	18.34	26.23	18.24	27.87	19.65		
Number of spouses	194	0	3	0.12	0.46	0.08	0.33	0.19	0.62	0.13	0.51	0.10	0.36		

(continued)

Table 1. (continued)

	All subjects				Unfamiliar area		Familiar area		Reside with others		Reside alone		
	Observed	Minimum	Maximum	M	SD	M	SD	M	SD	M	SD	M	SD
						M	SD	M	SD	M	SD	M	SD
Outcome—Familiarity of arrest area													
End same as start state	162	0	1	0.10	0.30	—	—	—	—	0.10	0.30	0.16	0.37
Linked city or ZIP	195	0	1	0.37	0.48	—	—	—	—	0.32	0.47	0.51	0.50
Linked city	195	0	1	0.31	0.46	—	—	—	—	0.26	0.44	0.43	0.50
Linked ZIP	195	0	1	0.25	0.43	—	—	—	—	0.25	0.44	0.34	0.48
Outcomes—Social ties													
End alone	152	0	1	0.35	0.48	0.28	0.45	0.46	0.50	—	—	—	—
End subgroups													
Family	158	0	1	0.24	0.43	0.29	0.45	0.17	0.38	—	—	—	—
Partner	158	0	1	0.28	0.45	0.28	0.45	0.30	0.46	—	—	—	—
Friend	158	0	1	0.08	0.27	0.09	0.29	0.05	0.22	—	—	—	—
Self	158	0	1	0.18	0.38	0.06	0.24	0.37	0.49	—	—	—	—
Homeless	158	0	1	0.13	0.33	0.16	0.37	0.07	0.25	—	—	—	—
Work	158	0	1	0.03	0.16	0.04	0.20	0.00	0.00	—	—	—	—
Outcome—Distance (miles)	180	0	3,132	679.4	737.2	785.7	748.4	520.0	695.12	558.1	617.7	854.4	944.8
Ended adjacent state	180	0	1	0.39	0.49	0.32	0.47	0.51	0.50	0.44	0.50	0.35	0.48
International	151	0	1	0.06	0.23	0.09	0.29	0.00	0.00	0.05	0.22	0.04	0.19

Note. NCIC = National Crime Information Center; ZIP = zone improvement plan.

Analytic Strategy

Differences between groups (i.e., solitude vs. social living; familiar vs. unfamiliar areas) are described in terms of bivariate differences as well as multivariate models. Bivariate differences used all available data for a given item, and multivariate models were restricted via listwise deletion. Binary outcomes were estimated with logistic regression, and distance (miles) was modeled using negative binomial regression (see Alm & Winters, 2009; Pizarro, Corsaro, & Violet, 2007). Coefficients were translated into odds ratios (logistic) and incident rate ratios (IRRs; negative binomial) to ease interpretation. Tests of multicollinearity showed an average variance inflation factor of 1.36 with no item above the value 2. Analyses, below, were computed with STATA 12.

Results

Table 1 provides descriptive information for the study cases. The data show that just more than one quarter of the sample was Black. They were approximately 40 years old, on average, at warrant issue date, and 10% were younger than age 24 years (data not shown). Subjects averaged 1.42 warrants (including the current) between 2006 and 2011, ranging from 1 to 5. They also averaged 1.32 separate unique registry requirements (a separate requirement indicates a unique sex crime conviction). This count was skewed by a minority of offenders with a high count of registry requirements (82% had one requirement). In all, 21% of offenders also had a special alert placed in *Wanted Persons*. The most prominent reason for an alert was to indicate violence (10%), followed by sexually violent predator (4%).

AWA violators varied considerably in their connections to people and places according to the public record search. Fugitives had an average of 8.4 prior addresses across 2.2 states. Approximately 10% of the fugitives were arrested in the same area as the warrant. These fugitives violated the AWA by crossing state or national boundaries, but were captured after returning to their initial state of registration. Just more than one third (37%) were captured in an area they had lived prior to the registry violation warrant (but different from the jurisdiction issuing that warrant). Almost half (39%) of the fugitives were located in an adjacent state, and 6% were captured across national borders. Finally, the data show that there was an average of 679 miles (median 376 miles) between the warrant issue location and the address where fugitives were captured.

Fugitives averaged 18 linked associates (e.g., people who shared housing at some point but were unrelated), 26 relatives (other than spouse), and only 8% had one or more spouses in their history. Most of the fugitives were living

with other people when arrested (75%). The most common relationship types were romantic partner (28%) or family (24%). The data do not allow us to determine whether romantic partners traveled with the sex offenders on their run or represent new relationships formed after they fled to a new area.

Familiar Areas

The first research question focused on describing fugitives who resided in familiar versus unfamiliar areas (columns 6 through 9 of Table 1). Several significant bivariate differences were observed. Those fleeing to familiar areas had marginally fewer criminal records ($p < .07$) and significantly more prior addresses and prior states ($p < .001$). They were also significantly more likely to be living alone when arrested ($p < .05$) and traveled significantly smaller distances ($p < .02$).

Table 2 reports multivariate logistic regression results of area-familiarity on demographic, geographic, and other covariates.⁸ The data indicated that three variables predicted this outcome. Fugitives captured in familiar areas had a greater number of prior addresses ($p < .01$), lived in a greater number of states ($p < .05$), and were more likely to be living alone ($p < .01$). They also had fewer acquaintances ($p < .05$). The coefficients were transformed into odds ratios to facilitate interpretation of the magnitude of each effect. A value greater than 1.0 corresponds to higher odds of the group with the attribute (e.g., those residing alone) experiencing the event (i.e., being captured in a familiar area) compared with those without the attribute.

Residing Alone

The second research question focused on whether offenders would be captured living alone or with others. Bivariate comparisons (columns 10 through 14 of Table 1) indicated that those living alone at capture were older ($p < .05$) by 5 years on average, had fewer prior warrants ($p < .05$), had lived in a greater number of states ($p < .05$), were more likely to have a prior connection with that area ($p < .05$), and traveled a greater distance ($p < .05$). The more precise multivariate models of Table 2, however, showed that the count of prior states dropped from the model as not significant. It also showed that the count of prior addresses was significant—an effect previously masked in the bivariate analysis of Table 1. Fugitives who resided alone had fewer prior warrants ($p < .01$), were more likely to have never registered as a sex offender ($p < .05$), and were more likely to live in a familiar area ($p < .01$). Finally, those living alone were more likely to have an “alert” placed in *NCIC* and to have traveled further distances to the arrest location (both marginally significant, $p < .10$).

Table 2. Modeling Strategic Behavior of Fugitives (*n* = 124).

	Familiar area (logit)			Living alone (logit)			Distance (negative binomial)		
	Coefficients	SE	Odds ratio	Coefficients	SE	Odds ratio	Coefficients	SE	IRR
Age at warrant issue (years)	0.01	0.02	1.01	0.02	0.02	1.02	0.00	0.01	1.00
Race—Black	-0.19	0.53	0.82	-0.56	0.51	0.57	-0.17	0.28	0.84
Criminal history (count)									
Prior warrants	0.12	0.38	1.13	-1.50**	0.58	0.22	0.10	0.24	1.11
Sex offender registry requirements	-0.33	0.24	0.72	0.26	0.24	1.30	-0.23	0.15	0.79
Never registered	-0.88	0.74	0.41	1.64*	0.72	5.16	-0.22	0.40	0.80
Number of dockets	-0.02	0.03	0.98	-0.01	0.02	0.99	0.02	0.01	1.02
Any alerts	-0.13	0.68	0.88	1.27†	0.72	3.57	-0.13	0.40	0.88
Geographic history (count)									
Prior addresses	0.14**	0.05	1.15	-0.14*	0.05	0.87	-0.04	0.03	0.96
Prior states	0.50*	0.224	1.66	0.12	0.22	1.13	0.25*	0.13	1.28
Social connections (count)									
Acquaintances	-0.04*	0.02	0.96	0.02	0.02	1.02	0.01	0.01	1.01
Relatives	-0.01	0.01	0.99	0.01	0.01	1.01	0.00	0.01	1.00
Spouses	0.34	0.51	1.40	-0.40	0.47	0.67	-0.05	0.27	0.95
Strategic behavior									
Familiar area	—	—	—	1.74**	0.58	5.70	-0.29	0.34	0.75
Lived alone	1.65**	0.57	5.21	—	—	—	0.36	0.29	1.43
Distance traveled (×100 miles)	-0.03	0.03	0.97	0.06†	0.03	1.06	—	—	—
_cons	-2.03†	1.056	—	-1.10	1.02	—	6.17	0.60	—
LL	-59.57			-63.25			-897.84		

Note. IRR = incident rate ratio; LL = log likelihood.
 †*p* < .10. **p* < .05. ***p* < .01. ****p* < .001.

Distance Traveled

Table 2 shows that only one item predicted distance traveled. Offenders who had lived in a greater number of states traveled the furthest. The final column of Table 2 presents IRRs, similar to the odds ratio of logistic regression. Here, the data show that the average offender traveled 28% further for each unit increase in prior states. It is surprising and interesting to note that demographics, criminal history, and other aspects of prior living history had little impact on the distance a fugitive traveled.

Discussion

Almost nothing is known about the behavior of fugitives, especially sex offender fugitives. Most fugitives must consider three strategic questions

when fleeing a jurisdiction: how far should they travel; should they go somewhere familiar; should they live alone? These questions are implied in the decision to evade police, and they likely represent pervasive and fundamental aspects of the fugitive experience. Understanding these choices can provide important guidance both for law enforcement (e.g., helping them prioritize leads) and scholars attempting to better understand fugitives or registry violators. This study describes and models these three strategic behaviors among all AWA violators captured by the USMS in the first half of 2011.

The data indicated that 37% of offenders were captured in an area associated with their historic address file. Only 10% were arrested in the same state as their warrant—highlighting the importance of USMS coordination between states. The data also revealed that the odds of residing in a familiar area increased with the number of prior addresses and states in the offender's historic residence file. Far more important, however, was the impact of living alone; offenders who were residing alone at capture had more than five times the odds of residing in a familiar area compared with those who were living with others.

The data also showed that approximately 35% of offenders were captured living alone (e.g., renting an apartment with no roommates, homeless shelter, camping in the woods). The data suggest that offenders who were residing alone at capture had fewer prior warrants, were more likely to have never complied with any registry, had fewer prior addresses, and lived in a familiar area. For example, fugitives who never registered as a sex offender had five times the odds of living alone, even after controlling for demographic and other background factors in the model.

Finally, the data revealed that there was a great variation in the distance fugitives traveled. However, that variation had little to do with the items measured here. The only significant item was the count of prior states. Fugitives who had lived in a greater number of prior states traveled the furthest distances. This effect held regardless of other items included in Table 2, which might otherwise explain the state effect (e.g., older fugitives might have more time to increase the count of states they've lived in and may have more experience or finances to facilitate flight).

The models collectively offer some important insight into the choices fugitives make and the outcome of those choices. The data tell us that fugitives who live alone choose familiar areas, and those who go to an unfamiliar location tend to reside with friends, partners, or family. Together, these two discoveries imply that fugitives often need some connection to the life they had prior to their warrant—few can truly disappear to seek a new life wholly unconnected with their prior one. The vast majority of fugitives need familiarity with an area or people invested in them when they are on the run. The

data also suggest some support for the concept of cognitive landscapes; those with greater experience in travel tend to run further distances.

This study has several strengths, including the use of a highly relevant fugitive population to policy makers and the public (sex offenders); a population which we clearly can identify as having knowingly fled law enforcement (a condition of an AWA violation). The study also benefited from the ability to use and cross-reference important law enforcement data sets, many of which have rarely or never been accessed for social science research. This includes the use of the *NCIC Wanted Person* file, *JDIS*, and data systems used to generate address and social histories of subjects.

This research also has important limitations. First, the study used a substantively small sample. This can reduce the power to detect differences and lead to biased estimates when using logistic regression. Caution is warranted when interpreting models in Table 2 until further research replicates findings with a larger sample. Second, there were no data on important constructs—factors that likely affect the ability to make decisions about flight (e.g., history of drug or alcohol abuse, education, finances). Third, we do not know whether the patterns associated with the three outcomes examined here offer insight into where and how the offender traveled in the interim. We have no way to tell, from these data, how often offenders traveled to other areas during their period of evasion, whether they changed between living alone versus with others, or whether they oscillated between unfamiliar and familiar areas. Fourth, patterns identified here may not generalize to other fugitives or even to other registry violators pursued at the local (rather than federal) level. For example, fugitives are selected into the USMS in part based on the presumption of an offender having crossed state or national boundaries. This implies a lengthier distance traveled than cases not brought to the USMS for assistance. Likewise, it is unknown whether patterns observed in these closed cases (in which the fugitive was located) are the same as those cases which remain open. Perhaps those that evade capture are different with respect to the outcomes measured here (e.g., distance traveled), the levels of independent variables (e.g., resources for flight), or patterns identified in Table 2.

Collectively, these limitations, as well as the findings in this study, suggest two important steps be taken. First, this study should be replicated with a larger and more useful sampling strategy. A prospective cohort design which begins with a representative cohort of warrants, for example, would allow modeling of selection to USMS, description of differences between cases remaining open versus closed, and the outcomes examined here. Future research would do well to expand measurement to include more measures of criminal history, race, and indicators of ability to travel (e.g., financial resources). Future studies should more fully integrate models of distance

with insights from analogous fields (e.g., migration and human geography). This, in turn, might lead to better models of distance as well as additional dependent variables (e.g., examining which type of cities or neighborhoods are most appealing to fugitives).

Second, the field should pursue qualitative or survey research with fugitives directly. Doing so would offer greater insight into the meaning of variables described here. For example, we assumed that fugitives care about these three distinct behaviors (distance, solitude, and familiarity). The field would benefit from studying the meaning of these decisions to fugitives directly, identifying other key decisions, and understanding the fugitive's perception of the costs and benefits associated with different strategies.

These suggestions imply a long-term and aggressive research strategy. The recommendations to pursue larger quantitative research projects, new data collection, and qualitative studies were derived from the observation that there has been little scientific data or theoretical work about fugitives. Although there are no published estimates on the prevalence of warrants among the U.S. population (or among offenders), recent research suggests that the experience may be pervasive. Bierie (2014) found that there were more than 2 million active warrants in the United States on a randomly selected day in 2011, including 28,000 for a contact sexual offense, 13,000 sex offenders with warrants for court violations, and more than 7,500 with warrants for registry violations. The sheer volume of active warrants suggests that the experience of being a fugitive is far from rare. Rather, it is likely a meaningful and pervasive aspect of the life course of offenders. As such, understanding fugitive behavior may serve as an important avenue to improving criminological research as well as enhancing the effectiveness and efficiency of criminal justice operations.

Authors' Note

The views expressed in this article do not necessarily reflect those of the U.S. Marshals Service or the U.S. Department of Justice.

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Notes

1. As noted above, the Adam Walsh Child Protection and Safety Act (AWA) requires three criteria to establish that a violation has occurred: (a) the offender had to know they were required to register, (b) the offender must have crossed state or national borders for commerce or residency without notifying their registry, and (c) the travel must have occurred after the AWA became law (January 2006). Criteria (b) is not required if the offender was convicted federally for a sexual crime requiring registration under the AWA.
2. *Judicial and Detainee Information System (JDIS)* contains data for all investigations opened by U.S. Marshals Service (USMS) deputies; investigations which generally require a warrant to be issued or an investigation of a registry violation to have been initiated by USMS. The system tracks some information automatically (e.g., the agent opening and controlling the case, dates of opening and closing cases, the field office a case is assigned to). The system also contains closed fields that result from manual data entry (e.g., fugitive race, age, gender, warrant information) derived primarily from official data such as the warrant itself or local police records.
3. Public record data source (*PRDS*) data systems are created by third-party vendors who mine electronic repositories of data and create structured data systems for access in support of law enforcement investigations. This includes automated searches of court records to identify dockets; home purchase records, bankruptcy filings, birth and death records, and myriad other public and posted records are synthesized to identify address data that may be contained on each. These data were accessed to facilitate investigations of sex offenders and summarized (e.g., count of relatives was computed manually for each case) as described in the Variables section below. It is unclear how accurate these data systems are as they generally lack manual oversight or avenues for corrections to mistakes identified by users. They are merely automated routines that link individuals and addresses.
4. This study drew on the law enforcement version of the *National Sex Offender Registry (NSOR)*; a data system maintained by the Federal Bureau of Investigation (FBI) and accessible to law enforcement only. Unlike the National Sex Offender Public Website (*NSOPW*), this data system contains more personal identifiers (which facilitated matching for this study) and also registration events that may be excluded from the publicly viewable version. Several studies have criticized the *NSOPW* because of the presumption that details on sexual behavior or risk are misleading (Freeman & Sandler, 2010), especially because the registry appears to contain a large amount of double counting of cases. For example, the registrants that moved between states are often listed as an offender in all states—which leads to an overestimate of the number of actual registered sex offenders (Levenson & Harris, 2011). These well-known problems should not

have affected this study. We did not use the elements of data which are most troubling (e.g., the tier levels or conviction type), and we eliminated duplicate registration events before computing counts. However, the data used here (*NSOR*) are still reliant on state and local agencies to accurately record and transfer registration data to the *NSOR*. Manual data entry errors may occur, as with any data system. There is no research that allows us to identify how often these data contain such errors.

5. No available data set allowed the category "White" to be disaggregated into Caucasian and Hispanic. Native American and Asian were grouped with "White" because that category was already inherently multiple race groups. This allowed, at least, one conceptually clear category in the analysis (Black). However, altering this coding decision by grouping Native American and Asian with Black did not alter the findings.
6. An additional alert of "suicidal" was available as a response to this alert item. This alert was exceptionally rare in these data. The item is included as a dummy variable in Table 1, but was not included as a part of the item "any alert" in the multivariate models of Table 2. The item was omitted because being suicidal was not conceptually similar to the other alerts as a proxy for criminal propensity or experience. However, repeating the analysis by including the suicidal dummy as part of the construction of "any alert" did not alter findings.
7. In most cases, zone improvement plan (ZIP) is redundant with city (i.e., ZIPs are contained within cities). However, there are rare instances in which rural areas have large ZIPs (i.e., covering a large portion of land) with more than one small town or unincorporated area existing within that ZIP. We code for inclusion in these circumstances, such that returning either to a city or ZIP code from one's past indicates "familiarity."
8. Cases removed due to listwise deletion were similar to included cases with respect to 10 of 13 items. However, deleted cases were significantly less likely to be Black ($p < .01$), slightly more likely to have never registered ($p < .05$), and have slightly fewer count of addresses ($p < .05$).

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