Juvenile Sentencing Guidelines Simulation: Documentation

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THIS PAPER REPORTS on the development of a computer simulation of Washington State's Juvenile Sentencing Guidelines. The successful simulation of the guidelines meets two primary needs. It provides:

- A statewide picture of juvenile sentences (including confinement at the state <u>and</u> county level), and

- A mechanism to assess the potential impact of proposed changes in the sentencing guidelines.

Neither of these needs could be met with the existing data systems prior to the development of the simulation model.

Juvenile Sentencing Guidelines Simulation

The Juvenile Sentencing Guidelines Simulation (JSGS) simulates the Washington State Sentencing Guidelines standard range sentences utilizing offense data extracted from Office of the Administrator for the Courts (OAC) Juvenile Information System (JUVIS) offense records.

JUVIS Offense Extract

JUVIS is the Washington State Juvenile Courts' case tracking system and provides data on each offense sentenced or diverted in the state. Each of the 39 counties in the state participates in JUVIS.[2] JUVIS is organized around "referrals." Each youth is assigned a unique ID number (JUVIS number) and each referral is assigned a unique referral number. Referrals may refer to one or more offenses. The final disposition of an offense in a referral may be diversion, a guilty plea, an adjudication of guilty, a deferred adjudication/disposition, or a decline (to adult court). Offenses on a single referral may be resolved at more than one disposition. A single disposition may involve more than one referral. JUVIS was designed to provide a record of the processing of court referrals. As such, it does not provide information in a format useful for analyzing sentencing policy.

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[1] John Steiger is currently on the staff of the Washington Caseload Forecast Council. This research was performed during his tenure with the Statistical Analysis Center within the Washington State Office of Financial Management.

[2] King County, the largest county in the state, maintains its own information system, but uploads offense data from its system to the statewide JUVIS database.

In 1996, several state agencies (OAC, Office of Financial Management (OFM), Sentencing Guidelines Commission (SGC)) with ongoing interests in juvenile justice data met to determine if JUVIS data could be recompiled into a more useful format (i.e., in lieu of being organized by referral). As a result of these meetings, agreement was reached to create a JUVIS Offense Extract. The extract was designed to provide comprehensive data on all diversions and court sentences, <u>organized at the level of court disposition</u>. The so-called "JUVIS Extract" is the input to the sentencing simulation.

The JUVIS data are recompiled to produce the JUVIS Offense Extract under the following business rules:

1. Only offense records meeting the criteria for use as "criminal history"[3] are included in the extract with the exception of offenses culminating in a "decline of jurisdiction" or a "deferred adjudication/disposition."[4]

2. Each offense appears once in the extract.[5]

3. Each offense record includes a "disposition date," based on the disposition or diversion date of the offense.

   a) If the disposition date is invalid or missing, the "adjudication date" is used as the disposition date.

   b) If the adjudication and disposition dates are invalid or missing, the "offense date" is used as both the adjudication and disposition date.

4. "Case outcome" variables, which may be repeated on individual offense records, are collapsed and summarized at a disposition level. For example, new disposition level variables are generated from three offense record level "disposition" fields.[6]

5. Demographic variables are summarized on each offense record.

OAC information services staff create the JUVIS Extract as an ASCII flat file using a SAS program.

Juvenile Guidelines Simulation

The simulation of the state juvenile guidelines is done as a two step process (Figure 1).

1. The JUVIS Extract (in ASCII format) is edited and imported into a Microsoft ACCESS <u>offense record</u> table. (Editing includes reformatting date variables into legal ACCESS date format and generating new variables.)

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[3] Only offenses either adjudicated in court or accepted for diversion can be considered "criminal history."

[4] In practice, some "non-offense" records (e.g., probation revocation) are included in the extract and must be deleted before the extract file meets the stringent definition of "criminal history."

[5] In practice, this condition is violated in the case of some "declined" offenses subsequently returned to juvenile court for disposition; these offenses are duplicated in the extract.

[6] Courts often record more than three disposition codes when a referral includes more than one offense by using the (three) disposition fields in subsequent offenses within the referral for the forth (etc.) disposition.

2. The ACCESS <u>offense record</u> table is used as input to a series of ACCESS BASIC procedures which organize offense records into "dispositions" (i.e., groups of offenses) based on JUVIS# and disposition dates.

    a) The program creates an ACCESS <u>disposition</u> table.

    b) The disposition table includes one record per disposition; the record includes a variety of summary variables including demographic variables, the number and type of current and prior offenses, and the simulated sentencing guidelines standard range sentence (under both the FY 1998 sentencing guidelines and new guidelines scheduled to go into effect in FY 1999).

    c) A single offense record may contribute to multiple disposition records (e.g., be included as a current offense on one disposition, and as a "prior" offense on subsequent dispositions).

ACCESS Simulation Edits

The output of the sentencing simulation is a Microsoft ACCESS Table (e.g., FY 1997 JUVIS Dispositions). The records in the table may be edited to exclude or recode cases with apparent JUVIS data entry errors. For example, the current simulation was based on 89,644 offense records. County was missing on 20 dispositions; age at disposition was missing/bad on 6 records; age at offense was missing/bad on 19 records.

Simulation of FY 1997 Juvenile Sentences

The simulation model was run to produce simulated sentences for all diversions and juvenile court dispositions in Washington State in FY 1997. The simulation was run using all offense records (89,644) available on those individuals (31,170) for whom there was a court disposition in FY 1997. Since some individuals had multiple dispositions within the target year, the total number of dispositions (35,064) exceeds the number of unique individuals (31,170).

Figure 1
JUVIS Database, OFFENSE Extract, and ACCESS Disposition Table
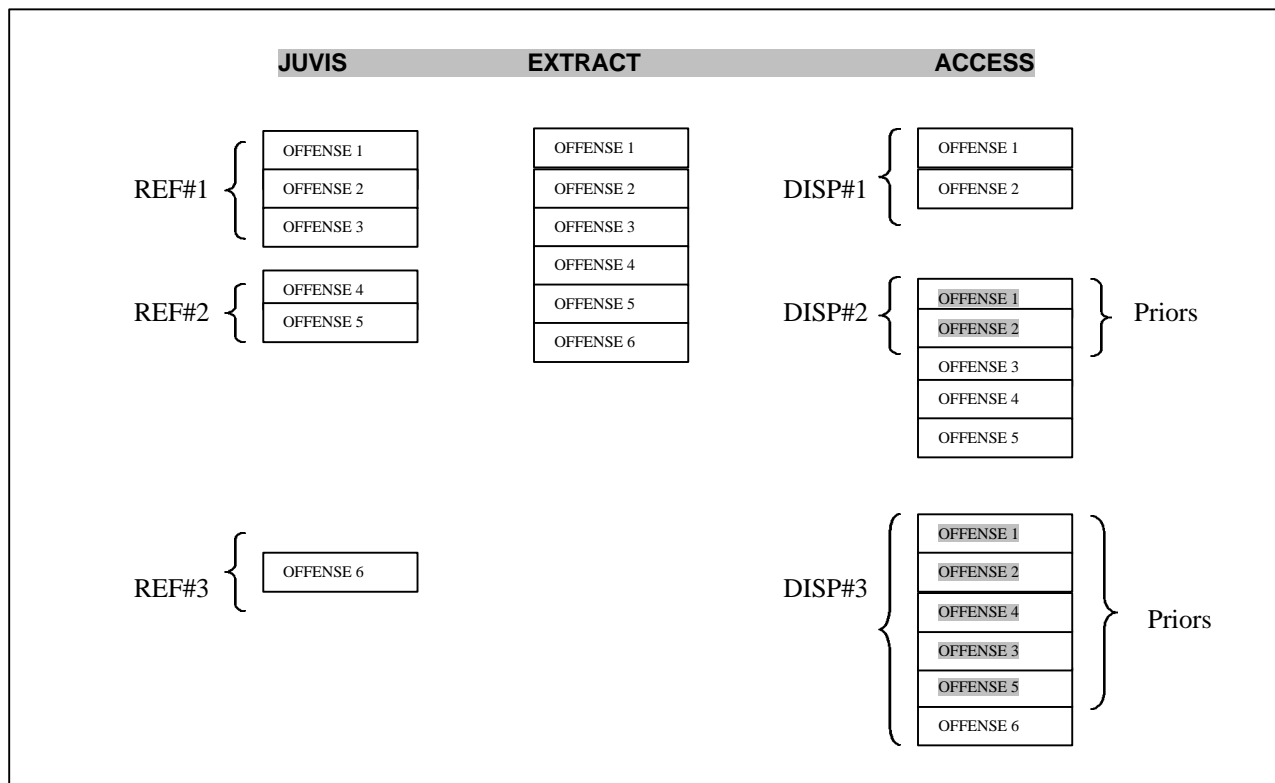
Simulation Comparing FY 1998 and FY 1999 Sentencing Guidelines

A sample simulation is described in the remainder of this paper to illustrate the value of the simulation. The sample uses FY 1997 JUVIS data to allow a comparison of the relative impact of two alternative sentencing policies: the "old" FY 1998 guidelines and the "new" FY 1999 guidelines. Both guidelines were applied to the population of offenders sentenced in FY 1997, thus allowing a fair comparison of the impacts of the two policies. The model produced two simulated sentence variables:

1) **FY98Min** - the simulated minimum sentence, using FY 1998 sentencing guidelines, and

2) **FY99Min** - the simulated minimum sentence, using FY 1999[7] sentencing guidelines.

Tables 1 to 5 are presented to illustrate the output of the simulation model. Since the two policies simulated are identical in terms of impact on less serious offenders who are diverted under Washington's juvenile guidelines, data are presented on only the 17,579 <u>court processed</u> dispositions in FY 1997.

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[7] The "FY 1999" guidelines reflect significant changes mandated by the state legislature in the 1996-97 Legislative Session under provisions of E3SHB3900.

Demographics

Table 1 presents a summary of demographic variables included in the simulation output, including gender, race/ethnicity, and age at offense and disposition. As seen in the table, the majority of offenders are male (81.7 percent). Most offenders are White (62.5 percent). The average age at offense is 15.5; the average age at court disposition is 16.0 years. These demographic variables may be cross-tabulated with other variables in the simulation (e.g., race or gender by offense class, prior offense history, etc.) to describe the population in more detail or to analyze relationships between variables.

Table 1
FY 1997 Dispositions: Demographic Variables

Gender	N	Race/Ethnicity	N	Age at Disposition	N	Age at Offense	N
Female	3,215	African American	2,094	Missing	3	Missing	5
Male	14,364	Asian	654	9	4	8	3
Total	17,579	Hispanic	1,969	10	34	9	14
		Native American	710	11	135	10	63
		White	10,993	12	446	11	197
		Other	123	13	1,376	12	729
		Unknown	1,036	14	2,519	13	1,753
		Total	17,579	15	3,709	14	3,076
				16	4,255	15	4,060
				17	4,240	16	4,287
				18	811	17	3,392
				19	33	Total	17,579
				20	14	Average	15.5
				Total	17,579		
				Average	16.0		

Table 2
FY 1997 Dispositions: Most Serious Current Offense

TITLE	N	TITLE	N
Accomplice to B+ Offense	3	Conspiracy to D Offense	1
Accomplice to Burglary 1	11	Criminal Mistreatment 2	1
Accomplice to Burglary 2	19	Criminal Trespass 1	390
Accomplice to C+ Offense	2	Criminal Trespass 2	315
Accomplice to Class A Offense	4	Custodial Assault as of 7-1-89	29
Accomplice to Class B Offense	10	Discharge of Dangerous Weapon	3
Accomplice to Class C Offense	19	Disorderly Conduct	58
Accomplice to Class D Offense	24	Driving Under the Influence	9
Accomplice to D+ Offense	1	Driving Without License	150
Accomplice to Residential Burglary	29	Escape 1	87
Accomplice to Taking Motor Vehicle	5	Escape 2	69
Accomplice to Theft 1	5	Escape 3	14
Animal Cruelty 1	11	Extortion 1	1
Animal Cruelty 2	1	Extortion 2	2
Arson 1	15	False Reporting	20
Arson 2	47	Firearm by Minor	1
Assault 1 as of 7-1-88	13	Fish and Game Class E Offense	1
Assault 2 as of 7-1-89	181	Forgery	157
Assault 3 as of 7-1-89	339	Furnishing Liquor to a Minor	3
Assault 4	2	Harassment Class D	114
Assault 4 as of 7-1-89	2,141	Hit & Run - Attended	8
Attempted Assault 4	11	Hit & Run - Injury	6
Attempted Burglary 2	22	Hit & Run Unattended as of 7-1-89	9
Attempted Child Molestation 1	7	Incest 1	10
Attempted Indecent Liberties	1	Incest 2	7
Attempted Other B+ Offense	47	Indecent Exposure - Victim 14 or Over	8
Attempted Other C+ Offense	20	Indecent Exposure - Victim Under 14	9
Attempted Other Class A Offense	8	Indecent Liberties as of 7-1-88	23
Attempted Other Class B Offense	32	Intent to Sell Legend Drug 7-1-89	4
Attempted Other Class C Offense	20	Intimidating a Witness	9
Attempted Other Class D Offense	9	Intoxicated in Public	13
Attempted Rape 1	1	Introducing Contraband 3	2
Attempted Rape of Child 1	2	Kidnapping 1	2
Attempted Rape of Child 2 7-1-89	1	Kidnapping 2	4
Attempted Residential Burglary	38	Malicious Harassment	5
Attempted Robbery 1	14	Malicious Mischief (Under $50)	122
Attempted Robbery 2	36	Malicious Mischief 1	143
Attempted Taking a Motor Vehicle	99	Malicious Mischief 2	360
Attempted Theft 2	18	Malicious Mischief 3	656
Attempted Theft 3	50	Manslaughter 1	2
Attempted Vehicle Prowl	11	Manslaughter 2	4
Bail Jumping B+ Offense	1	Motor Vehicle Violation - Attempt to Elude	109
Bail Jumping Class C Offense	2	Negligent Driving	4
Bail Jumping D+ Offense	3	O & A (Prostitution)	13
Bomb Threat	15	Obscene/Harassing Phone Call	25
Burglary 1	122	Obstructing Law Enforcement Officer	221
Burglary 2	657	Other C+ Offense	1
Burglary Tools Possession	2	Other Class B Offense	25
Carry/Display Dangerous Weapon	103	Other Class C Offense	82
Child Molestation 1	171	Other Class D Offense	106
Child Molestation 2 as of 7/1/89	5	Other Class E Offense	110
Coercion	2	Other D+ Offense	3
Comm w/Minor Immoral Purpose	10	Possess/Cntrl Explosive Device	1
Comm w/Minor Immoral Purpose Prior	1	Possession of Concealed Weapon	5
Comm w/Minor Immoral Purpose-Prior S/O	1	Possession of Dangerous Weapon	55
Conspiracy to B+ Offense	1	Possession of Less Than 40 Grams Pot	318
Conspiracy to Burglary 2	1	Possession of Prescription Drugs	2
Conspiracy to Class A Offense	5	Possession Stolen Property 1	139
Conspiracy to Class B Offense	4	Possession Stolen Property 2	209
Conspiracy to Class C Offense	1	Possession Stolen Property 3	226

Table 2
FY 1997 Dispositions: Most Serious Current Offense *(continued)*

TITLE	N
Possession/Consumption of Alcohol	1,092
Possession/Sale Illegal Fireworks	2
Pot Over 40 Grams	9
Rape 1	3
Rape 2	24
Rape 3	9
Rape of Child 1	130
Rape of Child 2 as of 7-1-89	12
Rape of Child 3	2
Reckless Burning 1	20
Reckless Burning 2	34
Reckless Driving	4
Reckless Endangerment 1 as of 6-13-94	13
Reckless Endangerment 2 as of 5-7-89	68
Repeat Harassment on 9.61.230	2
Repeat Harassment on 9A.46.020	46
Residential Burglary	883
Resist Arrest	36
Riot Without a Weapon	11
Robbery 1	101
Robbery 2	139
Student Carrying Weapon	31
Taking a Motor Vehicle	1,271
Tampering with Witness/Material Witness	6
Theft 1	334
Theft 2	503
Theft 3	2,526
Theft of a Firearm	12
Theft of a Firearm as of 7/23/95	73
Unlawful Imprisonment	19
Unlawful Inhalation of Toxic Fumes	5
Unlawful Issuance of Check <$250	2
Unlawful Possession of a Firearm	276
Unlawful Possession of a Firearm 1 as of 7/23/95	32
Vehicle Prowling 1	21
Vehicle Prowling 2	298
Vehicular Assault	5
Vehicular Homicide	1
VUCSA - Attempt Deliver Counterfeit Non-narcotic	1
VUCSA - Conspiracy Del Narcotics 7-1-89	2
VUCSA - Deliver Counterfeit Narcotic	4
VUCSA - Deliver Counterfeit Non-narcotic	3
VUCSA - Delivery in Lieu	11
VUCSA - Drug Paraphernalia	128
VUCSA - Illegal Obtaining	1
VUCSA - Intent/Deliver Narcotics 7-1-89	114
VUCSA - Intent/Deliver Non-narcotic	88
VUCSA - Narcotic Sale	7
VUCSA - Possession of Controlled Substance	235
VUCSA - Sale of Ctrl Sub 7-1-89	3
Weapon Display	6

Offenses

Table 2 presents the distribution of disposition by most serious current offense. The most common offenses include Theft 3 (14.3 percent) and Assault 4 (Simple Assault) (12.2 percent). Least common offenses include Animal Cruelty 2 (one case), Extortion 1 (one case), and Manslaughter 1 (2 cases).

Criminal History

Tables 3 and 4 present data on the criminal records of offenders in the sample. Table 3 presents data on the current and prior offenses of the sample. Offenders average 1.4 current offenses and 2.6 prior offenses. Offenders average 0.7 prior felony convictions. Table 4 presents the distribution of cases by the offense class of the most serious current offense. As can be readily seen, the most common offenses are gross misdemeanors (Class D) and C felonies. A, A- ,and B+ offenses, which include all serious offenses against the person, account for a very small number of dispositions (1,101 or 6.3 percent).

Table 3
FY 1997 Dispositions: Current Offenses, Prior Felonies, and Total Prior Offenses

Current Offs	N		Prior Felonies	N		Prior Offs	N
1	12,570		0	11,473		0	5,472
2	3,515		1	3,087		1	3,084
3	1,011		2	1,446		2	2,474
4	295		3	782		3	1,777
5	97		4	348		4	1,295
6	47		5	196		5	918
7	11		6	99		6	689
8	11		7	70		7	493
9	10		8	42		8	368
10	5		9	16		9	267
11	1		10	9		10	211
12	1		11	5		11	140
13	1		12	1		12	112
15	1		13	3		13	90
17	1		14	1		14	60
18 or more	2		15	1		15 or more	129
Total	17,579		Total	17,579		Total	17,579
Average	1.4		Average	0.7		Average	2.6

Sentence Ranges

Table 4 also presents the results of the simulation of the two sets of sentencing guidelines (FY 1998 and FY 1999). Under both sets of guidelines, the "standard range" or presumptive sentence is determined by reference to a "grid." Under the FY 1998 guidelines, sentence length is determined by a complex calculation relating age, the extent and recency criminal history, and current offense seriousness. Sentence ranges under the FY 1999 guidelines are a simpler function of Current offense seriousness and the number of prior convictions.

Policy Impact

The results of the simulation, presented in Table 4, suggest that the impact of the policy change is complex. For example, comparing offenders by offense class, it is clear that some classes of offenders "win" (get shorter sentences) under the new guidelines, while others "lose" (get longer terms of confinement). Interestingly, while the overall impact is relatively slight (a net increase in sentencing equivalent to requiring an additional 52 beds or an average of 1.1 additional days confinement per offender), the impact on certain classes of offenders is much more significant. For example, while the sentence for the most serious offender (class A) increase 3.6 percent, the sentences for less serious felony property offenders (class B) increase 55.4 percent. On the other hand, class A- and B+ violent offenders receive sentences from 5.5 to 13 percent shorter under the new guidelines.

Table 4
FY 1997 Dispositions: FY 1998 vs. FY 1999 Guidelines by Offense Class

Class	N	FY98Min	FY99Min	FY98 Beds	FY99 Beds	Net Beds	% Change
A	139	110.6	114.6	296	306	11	3.6%
A-	154	39.8	34.6	118	103	-15	-13.0%
B+	808	30.1	28.4	467	442	-26	-5.5%
B	2,482	5.6	8.7	267	416	148	55.4%
C+	518	5.6	4.3	56	43	-12	-22.4%
C	3,711	4.4	3.2	312	227	-84	-27.1%
D+	2,310	0.6	0.6	25	25	-1	-3.0%
D	4,722	0.5	0.6	43	53	10	23.9%
E	2,735	0.3	0.7	13	35	22	168.0%
Total	17,579			1,598	1,650	52	

State vs. Local, County Confinement

Table 5 presents the simulation results in terms of where offenders serve their confinement. In Washington, offenders serve sentences over 30 days in state facilities; shorter sentences are served in local, county detention centers. Table 5 illustrates the shifts in the destination of offenders should they be sentenced under the new FY 1999 guidelines rather than the old, FY 1998 sentencing policy.

As can be seen, most offenders would serve their sentences in the same location under either set of guidelines. A total of 14, 827 offenders would be sentenced to county level sanctions regardless of guidelines; similarly, 2,040 offenders would be sentenced to state facilities regardless of guidelines. On the other hand, 142 offenders who would be sentenced locally under the FY 1998 guidelines would end up in state facilities under the FY 1999 guidelines; 570 offenders sentenced to the state under FY 1998 guidelines would receive a "break" and be sentenced locally under the new guidelines.

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Table 5
FY 1997 Dispositions: FY 1998 vs. FY 1999 Guidelines

FY98	FY99	FY98Min	FY99Min	FY98 Beds	FY99 Beds	Net Beds	N
COUNTY	COUNTY	0.5	0.7	134	199	65	14,827
COUNTY	JRA	2.1	13.5	6	37	31	142
JRA	COUNTY	11.2	1.5	123	17	-106	570
JRA	JRA	34.0	35.6	1,335	1,397	63	2,040

Policy Impact for Minority Offenders

Finally, Table 6 illustrates the use of the simulation results to examine the impact of policy change on the sentencing of minority offenders. For example, Table 6 shows that the new FY 1999 guidelines actually **increase** average sentences for White offenders, while decreasing average sentences for Asian-American and African-American offenders. Average sentences remain constant for Hispanic offenders. These data, which describe the amount and proportion of disparity in the effect of the policy change, can be useful to review the impact of proposed sentencing revisions on various groupings of offenders by ethnicity.

Table 6
FY 1997 Dispositions: FY 1998 vs. FY 1999
Guidelines by Race/Ethnicity

Race/Ethnicity	N	FY98Min	FY99Min	Avg. Diff.
African American	2,094	6.6	6.3	-0.3
Asian	654	6.5	6.3	-0.3
Hispanic	1,969	5.7	5.7	0.0
Native American	710	5.7	5.8	0.1
Other	123	7.9	8.0	0.0
Unknown	1,036	4.6	5.0	0.4
White	10,993	4.0	4.3	0.3

Summary

This paper has briefly summarized the results of the development of a simulation of Washington's juvenile sentencing guidelines. The simulation model permits policy makers to the assess the potential impact of policy change not only on overall system parameters (e.g., beds), but also allows the examination of the impact on various cross-sections of the offender population. In this way, policy makers can examine proposed policy not only in terms of impact of difference categories of offender (burglars v. rapists), but also in terms of unanticipated impacts on racial or gender disparity in sentencing.