

John Lamberth, Ph. D.

A Study of Biased Police Practices: Data Collection and Evaluation of the Washtenaw County Sheriff's Department

This is the final report under a Professional Service Contract between John Lamberth, Ph. D. and Washtenaw County dated June 23, 2000. The contract called for a study of **Biased Police Practices, Data Collection and Evaluation** of the Washtenaw County Sheriff's Office.

In June of 2000, John Lamberth, Ph. D. was retained as a Consultant by Washtenaw County to determine if a Biased Police Practice, Racial Profiling, was being practiced by the Washtenaw County Sheriff's Department. Meetings were held between the Consultant and Sheriff's Department representatives in June and October of 2000, data collection studies were designed and data collection began in the Fall of 2000. Because of condition beyond the control of either the Consultant or the Sheriff's Department, data collection was not completed until the Spring of 2001. This report details the planning, implementation and results of the study that was undertaken.

The plan and logic of the study, which will be provided in more detail later in this report, relies on sampling of drivers and police activity in the county to reach conclusions. It is not possible to study every part of a county or highway to assess racial profiling. The logic of our work, elemental to statistical analysis in other contexts, is to sample county drivers on randomly selected days at randomly selected times of day. This methodology enables us to generalize to the police department's activity as a whole. The determination of locations in a jurisdiction to assess is necessarily determined by traffic patterns and police activity. Days and times of day are selected randomly to assure the greatest generalization possible. In the present study we assessed in great detail eleven locations in Washtenaw County and from those we generalize to the department as a whole.

Benchmarks

The debate over racial profiling has generated much discussion in the scientific community about the right way to analyze existing minority stop data. The general consensus of most experts is that an appropriate standard of comparison, or "benchmark", must first be established. The existing stop data must

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then be compared to the benchmark in order to assess the occurrence of racial profiling. Furthermore, most statistical experts agree that the appropriate benchmark is not county or surrounding area population that can be obtained in census data. The appropriate benchmark is the motoring population, or “transient” population. The racial composition of this transient population may or may not mirror the population of the county. Washtenaw County had a population that is 12.3 percent African-American in 2000. If we used this as the benchmark by which to compare the stops of the Sheriff’s Department, we would significantly underestimate the minority motoring population at eight locations benchmarked and overestimate it at three locations. The result would be to underestimate the extent of racial profiling in the County. For example, the transient population in Washtenaw County ranged from a low of 3.5 percent African-American motorists at Jackson and Zeeb (which is significantly lower than the census data), to a high of 38.6 percent African-American motorists at Clark and Prospect (which is significantly higher than census data.) This discrepancy between the transient population and census data and among different locations in the city is fundamental to understanding racial profiling and assessing whether it is occurring or not. It is this precision of measurement that the methodology used allows.

PROCEDURE

Benchmarking locations were chosen after an initial conference with Commander Clayton and other Sheriff’s Department official in June, 2000, consideration of citation data maintained by the department, and a two-day, on-site inspection of traffic patterns and surveying locations. Survey locations were picked on the basis of:

- stop activity
- geographic coverage of the area the department patrols, and
- surveyor accessibility

The locations chosen were:

1. Clark and Prospect
2. Clark and Ridge
3. Congress and Hewitt

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4. Ford and Holmes
5. Ford and Prospect
6. Harris and Ecorse
7. Jackson and Zeeb
8. Michigan and Harris
9. Plymouth and Dixboro
10. Textile and Bridge
11. Whittaker and Huron
12. Ann Arbor and Pleasant
13. Huron/ Mast/ Joy

The final two locations had an insufficient number of traffic stops by the department to allow meaningful analysis and will not be considered further in this report.

The Consultant conducted training for the surveyors in October of 2000 in order to help ensure reliability in the benchmarking process. Ms. Simone Shulman of the Sheriff's Department was present and provided logistical and transportation assistance. The training consisted of:

1. An overview of the survey in which racial profiling and the purpose of the study was discussed. The intent of this portion of the training was to provide surveyors with a basic understanding of the importance of the study, and the critical role that they would play in the study.
2. An explanation of the process in which the survey method and schedule were explained, roles were discussed, and the survey procedure was reviewed. The intent of this portion of the training was to provide surveyors with a basic understanding of how the survey would be conducted.
3. Hands-on practice in the field in which surveyors practiced on location, using the actual data sheets developed for the survey. During this portion of the training, the Consultant provided guidance, review, and feedback to surveyors of the method and tips for positioning and data recording. Surveyor data sheets were reviewed and feedback was provided on performance. The intent of this portion of

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the training was to provide surveyors a chance to practice in a “consequence-free” environment before conducting the actual survey.

Stationary surveys were conducted at all intersections. Each intersection was surveyed multiple times during randomly selected times of the week and hours of the day. These times included both week days and weekend days and both nighttime and daytime hours. Each survey team was comprised of four individuals. Each surveyor was responsible for capturing data for traffic moving in one direction (north, south, east, or west.) Surveyors captured data for one lane at a time and alternated lanes. Surveyors were instructed to first note the race/ethnicity of the driver and then the race/ethnicity of passengers. Then they were told to note the license plate state and number of every fifth car. They were told that the most important information was the race/ethnicity of the driver, followed by the race/ethnicity of the passengers followed by the license plate number. Race/ethnicity was noted as African American, Asian, Caucasian, Hispanic, Middle Eastern, Native American, Pacific Islander, Other or Unknown. At each intersection race/ethnicity was recorded for approximately ten minutes in one lane. Surveyors would then change to the next lane and repeat the process. The actual minutes surveying were adjusted for traffic flow and weather conditions. The goal was not to record traffic volume but to achieve a sample size that was adequate for stability, taking into consideration the expected frequency of minority drivers. On four occasions which were unknown to the Sheriff’s department an independent observer retained by the Consultant appeared unannounced to the survey team and shadowed them for that session. This control was instituted to assure the Consultant and members of the community that the surveying was being done in a professional manner. There were no differences discerned in the surveying results when the observer was present and when he was not. Furthermore, the observer only disagreed with the race/ethnicity of the surveyors he “shadowed” two or three times out of hundreds of observations. As he stated, these two or three disagreements were the result of differences in categorizing the race/ethnicity of individuals when it is hard to do so.

Due to circumstances beyond the control of either the Sheriff’s Department or the Consultant, the surveying was not completed as scheduled, but had to be finished in the Spring, from April 7 to April 21, 2001. Approximately two thirds of the surveying was done in the Fall and one third in the Spring. While this is not the ideal way to conduct a survey, it is apparent that this serendipitous circumstance revealed two things;

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1. There was little difference in the reported race of the transient population between Fall and Spring surveying.

2. This indicates the stability of traffic demographics over time, a result that has been observed in other benchmarking on highways.

Table 1 lists the eleven benchmark locations used for this study and their African American percentage in the Fall surveying and their percentage in the final survey.

Location	% A-A Motorists- Fall	Fall N	% A-A Motorists Total	Total N
Clark/Prospect	37.09	1017	38.57	2489
Clark/Ridge	20.75	1455	21.49	1717
Congress/Hewitt	24.72	2701	25.38	3085
Ford/Holmes	33.94	2098	34.89	2746
Ford/Prospect	8.00	1059	7.10	2410
Harris/Ecorse	32.12	2742	33.89	3700
Jackson/Zeeb	3.45	2432	3.53	4509
Michigan/Harris	20.56	3257	20.91	3711
Plymouth/Dixboro	4.48	1252	4.43	2845
Textile/Bridge	17.96	1894	18.09	2256
Whittaker/Huron	18.86	2717	18.47	3670

Table 1. Benchmark percentages of African American Motorists from Fall and Total Surveys.

Stop data were obtained from the The Sheriff's Department.. Data were available for both traffic citations and other stops made at the officers' discretion. These data are continuing to be collected by the Department but this report utilizes data collected from September, 2000 through April, 2001. All stop data were provided by the department to the Consultant and stops in a small radius around the benchmark locations were utilized. The database for the entire area covered by the police department encompassed approximately 3,715 stops, of which 1,775 occurred within the specified radius of the intersections that

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were benchmarked. For purposes of this report, we drew a radius around each of the benchmark sites that reflected the geography and traffic patterns of that part of the county to ensure the validity of our results. Increasing the radius of stops around each benchmark location might add more stops, but would be subject to the possible risk of decreasing the precision of measurements.

RESULTS

Surveyors observed 34,813 cars and race identified 33,138 (95.2 percent). This is a high rate of racial identification. With the further consideration of having to survey during poor weather conditions and longer periods of darkness that occurred because of the need to survey during the fall and spring months as opposed to summer months, this rate of racial identification is extremely high. In part, this rate may be attributed to the excellent lighting present in the County which significantly aided nighttime surveying.

The results of the survey and stop data comparison are contained in Table 2. Each benchmarked location is compared to the stops in that immediate geographic location. When stop data were considered, only African Americans had sufficient stops at each of the locations to allow us to make a meaningful comparison. There were stops of other minorities but in insufficient numbers to allow for stable samples.

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Table 2. Race Analysis

Location	Bench Mark N ¹	Bench Mark % A-A	Stop N	Stop % A-A	Diff	Likelihood Ratio
Clark & Prospect	2489	35.57	206	51.46	15.89	1.7
Clark & Ridge	1717	21.49	194	36.08	14.59	2.1
Congress & Hewitt	3085	25.38	140	30.00	4.62	1.3
Ford & Holmes	2746	34.89	319	39.50	4.61	1.2
Ford & Prospect	2410	7.10	41	7.32	0.22	1.1
Harris & Ecorse	3700	33.89	366	45.63	11.74	1.6
Jackson & Zeeb	4509	3.53	204	10.29	6.76	3.1
Michigan & Harris	3711	20.91	83	50.60	29.69	3.9
Plymouth & Dixboro	2845	4.43	40	7.50	3.07	1.7
Textile & Bridge	2256	18.09	131	44.27	26.18	3.6
Whittaker & Huron	3670	18.47	51	27.45	8.98	1.7

The first column in Table 2 refers to the location of the stops. The second column refers to the number of motorists (N) recorded in the benchmark. The next column refers to the percentage African Americans in benchmark data. The next column refers to the number (N) of stops within the radius of the benchmark in the stop data. The next refers to the percentage of African American stops. The next refers to the percent difference, and the final column refers to the Likelihood ratio of being stopped if you are African American.

The likelihood is best understood by filling in the ratio in the following sentence: If you are African American you are ___ times as likely to be stopped as if you are not African American. If no racial

¹ Note that the N (Numbers) for the Benchmark and Stop data are race identified numbers.

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profiling were occurring, all of the ratios would be 1. This would mean that African Americans are no more likely to be stopped than non-minorities.

As can be seen from Table 1, all likelihood ratios are above one. Likelihood ratios between 1 and 1.5 are generally seen as benign. Ratios between 1.5 and 2 provide a warning to police that profiling may be occurring. Ratios above 2 definitely point to the targeting of minority motorists. Three locations are in the benign range, four are in the range that would warn the department of a problem and four definitely point to the targeting of African American motorists. If there were no profiling occurring, then one would expect roughly half of the 11 ratios to be below 1 and half above 1. The fact that they are all above 1 strongly suggests that African Americans are being targeted.

It is possible to make an overall comparison (at all eleven locations) of the likelihood ratio of being stopped by Sheriff's Department Officers if you are African American versus if you are not African American. This simply compares the percentage of stops of African Americans at the eleven locations to the weighted percentage of African American motorists benchmarked at those locations. Over all an African American motorist is 2.3 times as likely to be stopped as a non-African American.

Each of the comparisons between the benchmark percentage of African Americans and the stop percentage of African Americans was analyzed using the Chi Square (χ^2) analysis. This analysis determines whether the observed differences reach statistical significance or not. By convention, statisticians use the .05 level of probability to determine statistical significance. That is, if the observed result would occur 5 or less times out of a hundred by chance, then it is treated as a real result, not a chance finding. As probabilities decrease, we become more sure that the result is real, so normally probabilities are reported as significant if they are .05 or less. We would expect these analyses to closely track the likelihood ratios, with the possible exception of those benchmark locations that have a relatively small N for stops.

Table 1A provides the χ^2 and probabilities for each of the 11 benchmark locations.

Table 1A, χ^2 Analysis

Location	Chi Square	Probability
Clark & Prospect	13.21	< .0003
Clark & Ridge	20.97	< .0001
Congress & Hewitt	1.50	N. S.
Ford & Holmes	2.65	N. S.
Ford & Prospect	0.00	N. S.
Harris & Ecorse	20.18	< .0001
Jackson & Zeeb	24.34	< .0001
Michigan & Harris	42.32	< .0001
Plymouth & Dixboro	0.87	N. S.
Textile & Bridge	54.05	.0001
Whittaker & Huron	2.68	N. S.

There are, of course, 6 statistically significant benchmark locations and 5 that are not statistically significant. Three of the five benchmark locations that do not reach statistical significance are the three locations that fell into the benign range in the likelihood ratio analysis, Congress & Hewitt, Ford & Holmes, and Ford & Prospect. The other two locations that did not reach statistical significance, even though the likelihood ratios were above 1.5, Plymouth & Dixboro and Whittaker & Huron were benchmark locations that had few traffic stops. However, each of the differences in the percentage of African American motorists in the transient population and of those stopped is for there to be more minority motorists stopped than would be expected. It is, therefore, important that we look at the overall statistical analysis. Across all 11 locations there were 1775 stops of which 652 were African American. The benchmark figures were 33,138 racially identified motorists, with 6567 being African American. The χ^2 for these data is 293.9, $p < .0001$.

Search Data

A second measure of racial profiling is the percentage of minorities who are searched. Once an Officer stops a motorist, there are a variety of things that he/she can do, including asking the motorist to answer questions unrelated to the stop, asking the motorist to exit the car, spending more or less time with the motorist and searching the motorist or the car. The issue for our purposes is whether minorities are treated in the same way that non minorities are. We do not have data on the type of questions that are asked of motorists, the treatment by the officer, the length of the stop and so forth, but we do know how many searches ensued following these stops.

The total number of traffic stops that we have data for is 3715, of which 761, or 20.5% were of African Americans. Following these stops, officers searched 371 cars and 384 occupants. In addition, we know that there were 665 searches either a car or an occupant and for the present analysis, these data will be used. In this way stops that resulted in a search are included, but multiple searches during the same traffic stop are not counted. Of the 665 discreet searches, 264 or 39.7 percent were of African Americans. To determine the likelihood of an African American being searched, we can use the percentage of African Americans who are stopped by the Sheriff's Department and determine that the likelihood of an African American being searched, once stopped is 2.5. Therefore, it is much more likely that an African American motorist will be stopped and once stopped, 2.5 times as likely that he/she will be searched.

Hit Rates for Motorists

One explanation for these data may simply be that African Americans are more likely to be carrying contraband and thus are stopped and searched more often by the police. Fortunately, there are data which speak to this issue. When we consider the 665 searches that resulted from a traffic stop conducted by officers for which we have data, African Americans are found to be carrying contraband 18.9% of the time and non African Americans 15.6% of the time ($\chi^2 = 1.37$, N.S.) which is a statistically insignificant difference. This means that there are no differences between African Americans and others in the rate at which they are caught with contraband. Therefore, the excessive rate at which they are searched is indicative of racial profiling.

Conclusions

The Washtenaw County Sheriff's Department stops many more African American motorists than their presence in the transient demographic calls for and once stopped searches these motorists at an even greater rate.

It is clear that African-Americans are being stopped at a higher rate than their presence in the transient traffic would predict at all 11 locations benchmarked. The combined data indicate that this is a highly statistically significant result. The likelihood ratios at all 11 intersections are above 1, which constitutes an even stronger indication that African-Americans are being targeted for stops. It should be noted that the degree of racial profiling shown here is not as severe as in other places where racial profiling has been assessed. For example, the likelihood that a African-American motorist would be stopped on the New Jersey Turnpike by the New Jersey State Police was 4.85 times the likelihood that a non-African-American motorist would be stopped. Here, the overall likelihood ratio is slightly less than half that. While this comparative relationship should be considered, it is still clear that there is significant targeting of African American motorists going on. Results of this magnitude suggest that there may be a systemic problem in the Sheriff's Department, rather than being the result of a few Deputies.

When the search data are also considered, there is even stronger evidence of the targeting of African Americans. The Hit Rate data further suggest that this targeting of African Americans is not productive with respect to uncovering contraband and is highly counterproductive in terms of relations between the Sheriff's Department and the community, particularly the minority community.

Racial Profiling in America did not appear overnight and the process of correction will not occur immediately. The belief that minority motorists are more likely to be carrying drugs, guns and other contraband is deeply held by significant elements of our society. Because Police are on the front lines of implementing the belief system of the society, they often are blamed for those behaviors that the society previously condoned when it becomes apparent that society's beliefs are unfounded. Only recently have we had the data to say with a high degree of scientific certainty that stopping and searching minority

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motorists is both unproductive and counterproductive police activity. To combat the Biased Police Practice found in the Sheriff's Department, the following recommendations are made.

Recommendations

1. The Washtenaw County Sheriff's Department should institute a training program for its staff that is aimed at educating both Command Staff and Deputies about Biased Police Practices. The content of this training, while it should speak to cultural diversity, should go well beyond that issue and deal with the deleterious effects of targeting minorities and its impact upon both the minority community and the negative impact upon policing in general.

2. The Washtenaw County Sheriff's Department should undertake a review of its reward, promotion and other practices and procedures to assure that it is not inadvertently encouraging the targeting of minority motorists. In other departments that have been found to be targeting minority motorists, the reward structure has been an important component to change. In these other departments, it has been important to pay particular attention to policies associated with drug interdiction to assure that the department is not adopting societal beliefs that have proved to have no factual foundation. The Field Training program should receive particular scrutiny by the Department.

3. If, after an appropriate amount of time has elapsed following the training recommended above and changes, if necessary, in departmental procedures and practices, the practice of targeting African American motorists persists, then the Command Staff of the Sheriff's Department, as a part of exercising its managerial responsibility, should undertake an analysis of individual officers and their stop behavior. However, it is important to retrain the Deputies and to assure that departmental procedures and practices do not encourage racial profiling before turning to an analysis of individual officer behavior.

4. The (County Board of Supervisors) provided resources to the Sheriff's Department to undertake this study to determine whether the biased police practice of racial profiling was occurring. The Board of Supervisors should join forces with the Sheriff's Department in assuring that the fiscal resources are available to the Department to implement these recommendations.