

Traffic Stop Study Literature Search—Eric Jakobsson, August 18, 2014

In 2002 Engel et al¹ published a widely cited comprehensive review of traffic stop profiling studies up to that time and criticized them in general for not having a theoretical framework that enabled inquiry into why the observed disparities existed. They argued that the existence of the disparities (which have been found almost universally) was only part of the story. Without study design that asked “why”, the problem underlying the statistics would be almost impossible to fix, because one would not know what policies or practices to change.

A recent study from Iowa City² may be relevant to Urbana. Iowa City is similar to Champaign-Urbana in size and demographics³. The Iowa City study analyzed data from two time periods, 2005-2007 and 2010-2012. In the earlier time period, there was no statistically significant racial disparity in either stops or citations. But in 2010-2012 a disparity had emerged. The authors postulate that the altered statistics reflect a change police and patrol patterns following a 2008-2009 spike in violent crime in one section of town. The spike turned out to be statistically modest and short-lived, but during the event was disproportionately covered by the media and possibly influenced police behavior in the later time period.

A 2004 paper by Engel and Calgnon⁴ had also raised the issue of bias due to police perceptions of likely criminal behavior, in this paper specifically the war on drugs. The logic of the argument was that profiling for drug trafficking had been transformed to racial profiling leading, as we now understand, to a well-documented disproportionate imprisonment of minorities for drug offenses. Ironically, the disproportionate stopping of black and Latino drivers turned out to be an ineffectual tool for drug confiscation, as searches of the cars of minority and white drivers yielded drugs at about the same percent.

Anwar and Fang⁵ considered disparities not in traffic stops but in searches subsequent to stops. The sample was one particular state highway troop in Florida, north of Miami. The officers looked at statistical tendencies based on the race and ethnicity of both the drivers and the officers making the stops. The officers' behavior was probably again influenced by the war on drugs, as the area was considered a major conduit for drugs to move from Miami to the northern states. One interesting disparity was that white officers did more searches than Hispanic officers, who in turn did more searches than black officers. For all three groups of officers, the fraction of searches done was lower for white motorists than for minority motorists. And for all three, the fraction of successful searches was higher for white motorists than for minority motorists.

There is a lot more literature to search through, but I chose these papers to focus on initially because each of them (except the Iowa City paper) are very widely cited, so perhaps influential. The Iowa City paper I chose because of the possibly direct relevance to Urbana, since we are so demographically similar. One pattern I did not realize would emerge so strongly was the relationship of stop/search disparity to other criminal justice issues, especially the war on drugs in most of the papers, and

in the case of Iowa City, a temporary crime outbreak that appeared to modify police behavior.

My tentative lesson to draw from these readings is that, as we move forward, we need to know as well as possible what motivates our police officers to patrol the areas they patrol, stop the cars they stop, and search the cars they search.

I wonder if it would be possible to design a survey instrument that police officers could respond to anonymously, that would give insights. The survey would attempt to ascertain what factors, other than traffic or other automotive violations, enter into police decision-making.

¹ Engel, Robin Shepard, Jennifer M. Calnon, and Thomas J. Bernard. "Theory and racial profiling: Shortcomings and future directions in research." *Justice Quarterly* 19, no. 2 (2002): 249-273.

² Barnum, Chris, Robert Perfetti, and Matt Lint. "Iowa City Police Department Traffic Study." (2014).

³ http://en.wikipedia.org/wiki/Iowa_City,_Iowa

⁴ Engel, Robin Shepard, and Jennifer M. Calnon. "Examining the influence of drivers' characteristics during traffic stops with police: Results from a national survey." *Justice Quarterly* 21.1 (2004): 49-90.

⁵ Anwar, Shamena, and Hanming Fang. *An alternative test of racial prejudice in motor vehicle searches: Theory and evidence*. No. w11264. National Bureau of Economic Research, 2005.