

# Crime rates and PR: an ode to Baltimore

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I live in Baltimore.

OK, so what was the first image that came to your head when you read that? For most folks, the associations with the word *Baltimore* are either crime, poverty, or general blight. Maybe you got that impression from a TV show like *The Wire*, or from a TV show like *Homicide: Life on the Streets*, or even from a pop song like *Baltimore* by Randy Newman, or a pop song like *Baltimore* by Lyle Lovett.

I recall everybody's reaction at my high school when I got accepted to the University of Chicago: "Y'know, it's cold there." I got that line maybe twenty times. Yes, it does get cold there. But what these people didn't realize is that half the year, Chicago is *obnoxiously hot*.

I suppose it's no real surprise that when I tell people I live in Baltimore, they assume I'm shot at every day. But they fail to realize that half the town is kinda nice. The Borders amp; Noble just opened four blocks from my house, bringing with it the eighth Starbuck's in the city, and an exceptional stats shelf. And if that's too pricey and megacorp for ya, the Book Thing is two blocks away. But nobody says to me 'Oh, you're from Baltimore? That's the city that reads!'

How do these stereotypes develop? How does a city get summarized into a verbal postcard that nobody bothers to think about anymore? More importantly, how do we get those stereotypes changed?

Detroit: Capital of the Rust Belt  $\Rightarrow$  Slowly returning to nature!

Baltimore: Stab wound or gun wound?  $\Rightarrow$  A hospital on every corner!

San Francisco: Everybody's gay!!  $\Rightarrow$  The rising creative class!

Seattle: Kurt Cobain drank coffee here  $\Rightarrow$  Monorail!

**Variance** There's a reason for Baltimore's portrayal in the media: crime rates really are significantly higher Baltimore than in other cities. Glaeser et al. [1996] point out that the variance in crime rates is absolutely gigantic. [The theory part of the paper always bothered me, though. OK, so you've proven that crime isn't a series of Bernoulli draws. Neither is anything else that's Normally distributed with variance not equal to the mean times (1-mean)/n.]

By the FBI's data, Baltimore had 11,248 violent crimes per person and a population of 641,097, for a violent crime rate of 1.75%. But the great majority of crimes are property crimes like larceny from vehicle (aka 'stealing from

somebody's car'), which is not the sort of thing that keeps people up at night. There were 269 murders and 162 rapes in Baltimore in 2005, giving us a rate of 41.96 homicides per 100,000 and 25.27 rapes per 100,000.

Now let's look at a few other haphazard cities:

	pop	crimes/100,000	murder/100,000	rape/100,000
Detroit	900,932	2,357.56	39.29	65.38
Bmore	641,097	1,754.49	41.96	25.27
Washington, DC	550,521	1,401.58	35.42	29.97
Houston, TX	2,045,732	1,172.54	16.33	42.63
Columbus, OH	730,329	836.75	13.97	70.93
Salt Lake City, UT	184,627	694.91	5.42	39
New York	8,115,690	673.05	6.64	17.4
San Diego	1,272,148	519.04	4.01	29.56
San José, CA	910,528	383.51	2.86	28.88

First, GSS's point is well-supported by the table: the variance in crime rates, by any of the above measures, is gigantic.

Also different types of crime vary differently. San Diego's murder rate is almost a tenth Baltimore's, but the rape rate is slightly higher. The murder rate generally follows the overall crime rate better, but is not a particularly close proxy. Among the top 100 cities by population, the correlation is 72%. [Correlation between rape and overall crime among the top 100: 49%; rape/murder correlation: 31%.]

Part of the problem is that we're talking about events per 100,000. With 72 rapes in Salt Lake City in 2005, the city beat out Baltimore on that scale—but what does that say about the odds that any one person will be raped in either city? If there had been 26 fewer rapes in SLC, then the rankings would be reversed.

Then there are aggregation problems. There are parts of Baltimore where I would not dare to tread. But the same could be said of every city in the entire country. The statement “around here, things go from rich neighborhood to poor neighborhood in just a block or two” has been made regarding every city I've ever lived in (which is many). This only makes it more difficult to work out what exactly the crime rates mean. If we have one city where the crappy parts are extra-crappy but the city center is average, it will look worse on the endless stream of Safest City stats than a city with an average crappy part and an average city center. But nobody in the city center, walking home from the Borders & Noble, would notice a difference.

LA County did us the favor of fragmenting things into over 80 submunicipalities. For example, the two highest crime-per-100,000 resident cities are Vernon, CA (pop: 94, crimes: 48) and City of Industry, CA (pop: 840, crimes: 140). Without the endless averaging of high- and low-crime areas you have a clear picture that that Vernon, CA, which seems to be a one block wide and five block long stretch just South of LA proper,<sup>1</sup> is a bad neighborhood, without all

<sup>1</sup> By which I mean La Ciudad del Rio de Nuestra Señora la Reina de los Angeles de Porciúncula. If I had my way, the city would be referred to as Nuestra Señora, which is hipper in so many ways.

the averaging of good neighborhoods getting in the way.

The summary: we'd like to read the stats above as a probability, so that when the FBI says that Detroit has a 2.4% crime rate and New York a 0.7% rate, that those are your odds of suffering a crime over a year. But there are too many complications beyond the simple numbers, especially for the very rare events like murder and rape. What neighborhood you're in, where you're walking at night, and with whom you're associating will all have a bigger effect on your odds of being raped or murdered than where your city ranks on a somewhat arbitrary unidimensional scale.

## References

Edward L Glaeser, Bruce Sacerdote, and Jose A Scheinkman. Crime and social interactions. *The Quarterly Journal of Economics*, 111(2):507–48, May 1996.