Technology and Social Dynamics: using technology to reduce youth violence in Seattle

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2010 Census Block Data

1 Dot = 1 Person

- White
- Black
- Asian
- Hispanic
- Other Race / Native American / Multi-racial

What am I looking at...?

Dustin A. Cable | University of Virginia | Weldon Cooper Center for Public Service | Reference Data by Stamen Design

Terms of Use

Introduction

- Background in Civil Engineering and computer programming
- Work with Bill and Melinda Gates Foundation
- Youth violence prevention efforts in Seattle as a case study

- The i-team
  - Five pioneer cities in 2011
    - Atlanta, Louisville, Chicago, Memphis, New Orleans
  - Increases to 12 additional cities
  - Seattle receives Bloomberg grant in 2015
  - Several high profile shootings occur– many within the East African population
  - Mayor places focus on youth violence prevention

A visible problem

Seattle's attempts to address violence

- Previous efforts
  - Seattle Youth Violence Prevention Initiative
    - Created in 2009
  - Spawned a number of programs focused on 12-17 year olds
  - Total of ~$5.7 million in yearly investment
  - Won national commendations, yet
- Violent crime spiked last summer and the summer before – is it a trend?

Problem Investigation

- Team conducted interviews and focus groups:
  - Over 80 youth in various circumstances
  - Parents groups
  - Social workers and support staff
  - Teachers
  - Human Services Department vendors
  - Clergy
- Data was essential for understanding the representativeness of anecdote

Youth Violence Program Assessment

- Based on work of Dr. Charlotte McGill at George Mason University

- Worked closely with the Seattle City Auditor's Office

- Fed into work commissioned by Seattle City Council to assess effectiveness of efforts of violence prevention program

- Learned four major things about youth violence (age 12-24) that guided us

Percentage of youth crime that is youth violent crime

- Youth violent crime was 16% of all youth crime
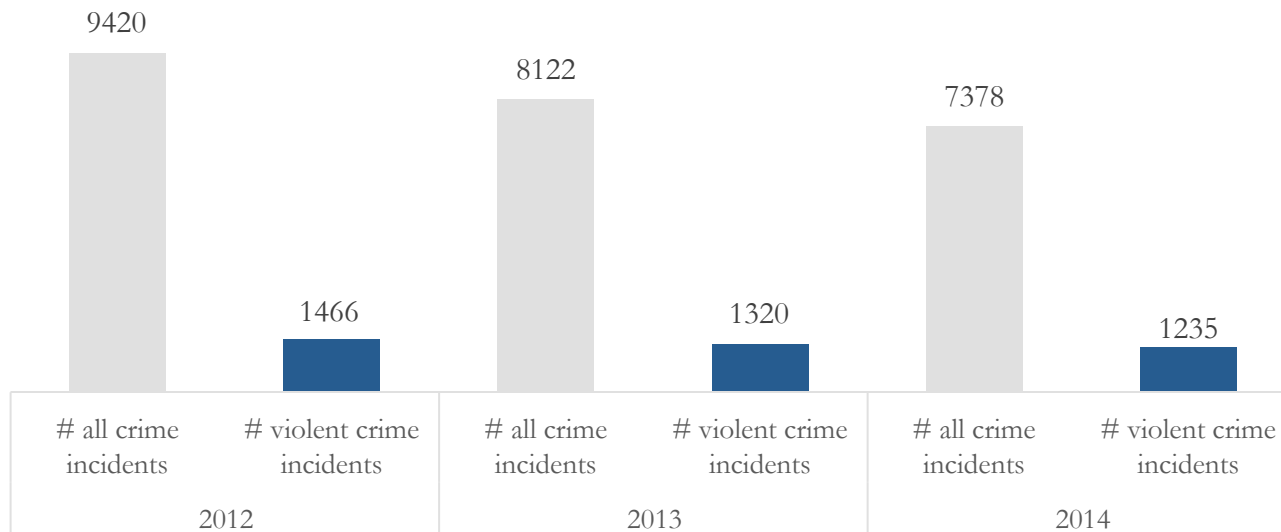
2012-2014 Seattle Crime Incident Data

Youth violent crime by category

- A plurality of youth violent crime is simple assault
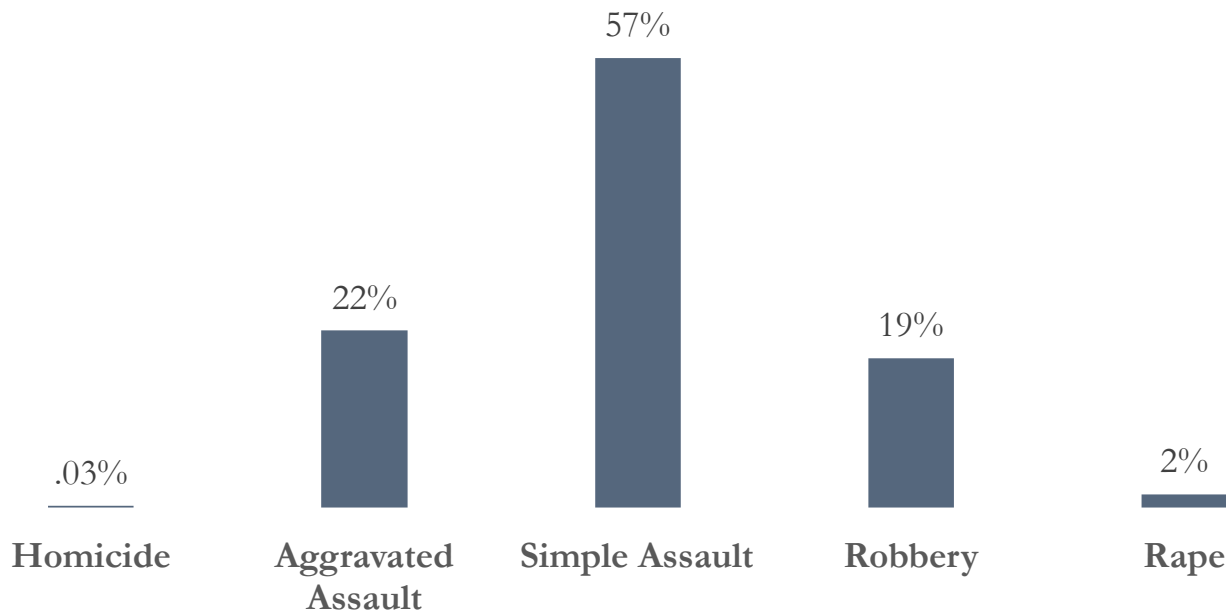
2012-2014 Seattle Crime Incident Data

Percent of youth crime that is DV-related

- A substantial proportion of youth violent crime is domestic violence related

Crime	Percent
Robbery	5%
Simple Assault	53%
Aggravated Assault	42%
Homicide	4%

2012-2014 Seattle Crime Incident Data
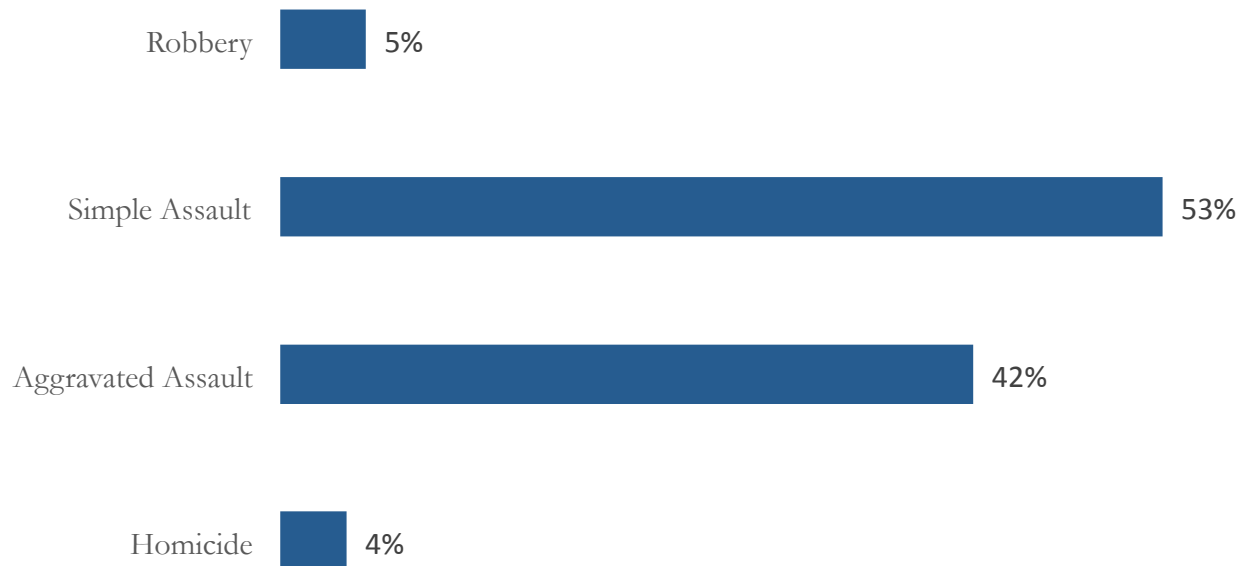
Youth violent crime by age

- Most youth violent crime of any type is committed by 18-24 year olds
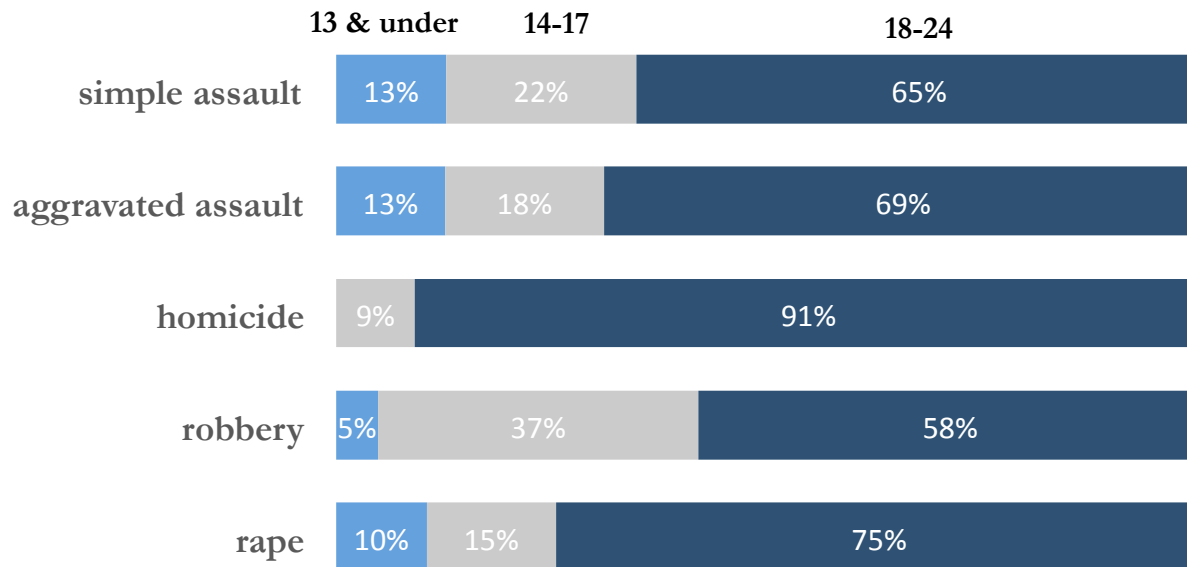
2012-2014 Seattle Crime Incident Data

Impetus for program additions

- Our violence prevention program regardless of effectiveness, was not addressing the group committing most youth crime

- We have to do more about domestic violence

- We have poor ability to distinguish demographic groups from each other

- We don't know more than aggregated geographic trends

Seattle's Black population

GENERALIZED LAND-USE TYPES

INDUSTRIAL AND RAILROAD PROPERTY

CEMETERIES, PARKS AND OTHER RELATIVELY LARGE TRACTS OF PUBLIC PROPERTY

VACANT PROPERTY

CONCENTRIC CIRCLES DRAWN FROM POINT OF HIGHEST LAND VALUE AT ONE-MILE INTERVALS

NEGRO POPULATION
SEATTLE: 1920

EACH DOT REPRESENTS
25 PEOPLE

TOTAL NEGRO POPULATION
WITHIN CITY IN 1920: 2,894

IN AREAS WITH FEWER THAN
25 NEGROES, DOTS PLACED AT
ESTIMATED GEOGRAPHICAL
MEAN POINT OF NEGRO
POPULATIONS OF CONTIGUOUS
CENSUS TRACTS.

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NEGRO POPULATION
SEATTLE: 1960

EACH DOT REPRESENTS
25 PEOPLE

TOTAL NEGRO POPULATION
WITHIN CITY IN 1960: 26,901

IN AREAS WITH FEWER THAN
25 NEGROES, DOTS PLACED AT
ESTIMATED GEOGRAPHICAL
MEAN POINT OF NEGRO
POPULATIONS OF CONTIGUOUS
CENSUS TRACTS.

Seattle's Black population in 1960

From http://www.socialexplorer.com/6f4cdab7a0/explore

Seattle's Black population in 1970

From http://www.socialexplorer.com/6f4cdab7a0/explore
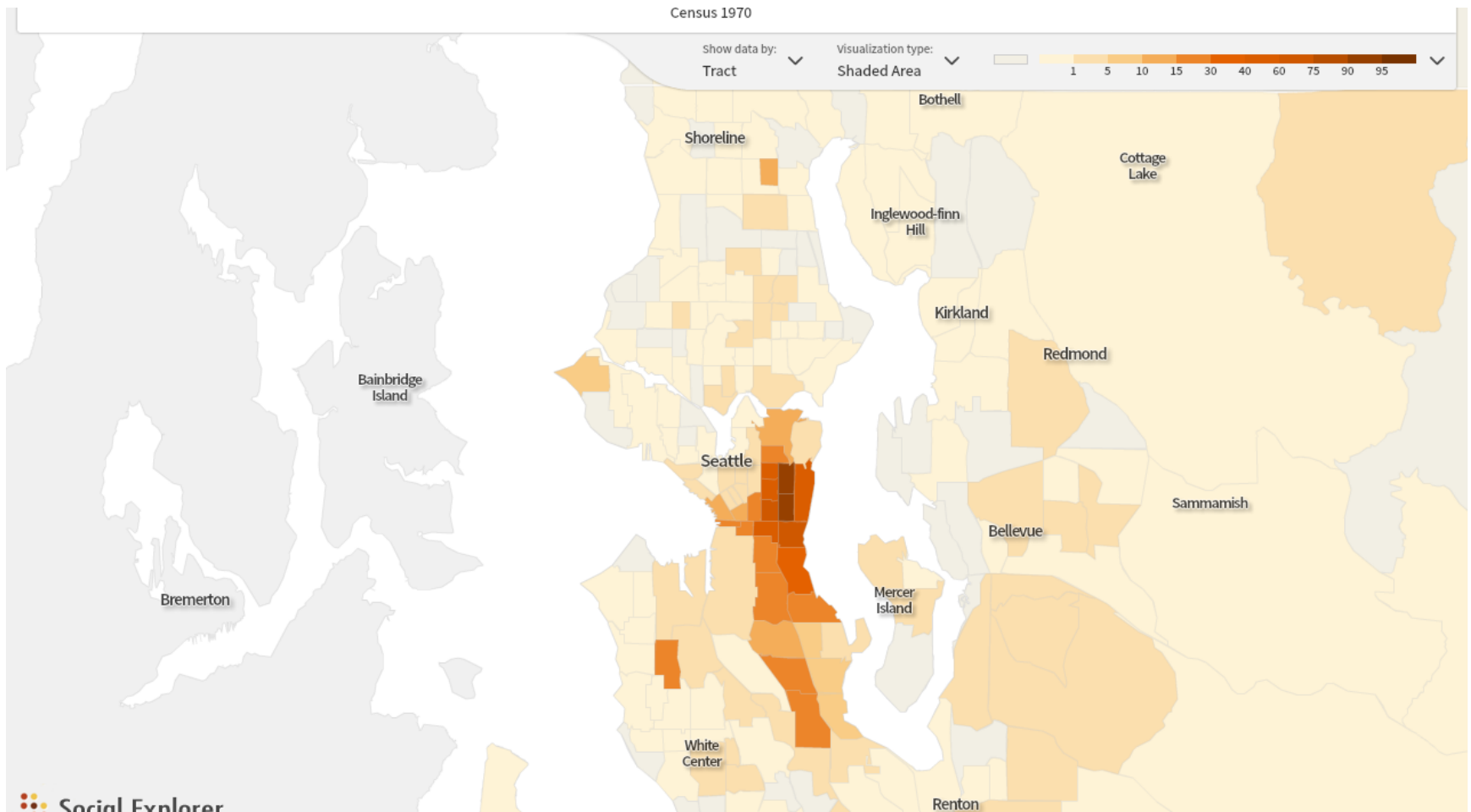
Seattle's Black population in 1980

From http://www.socialexplorer.com/6f4cdab7a0/explore
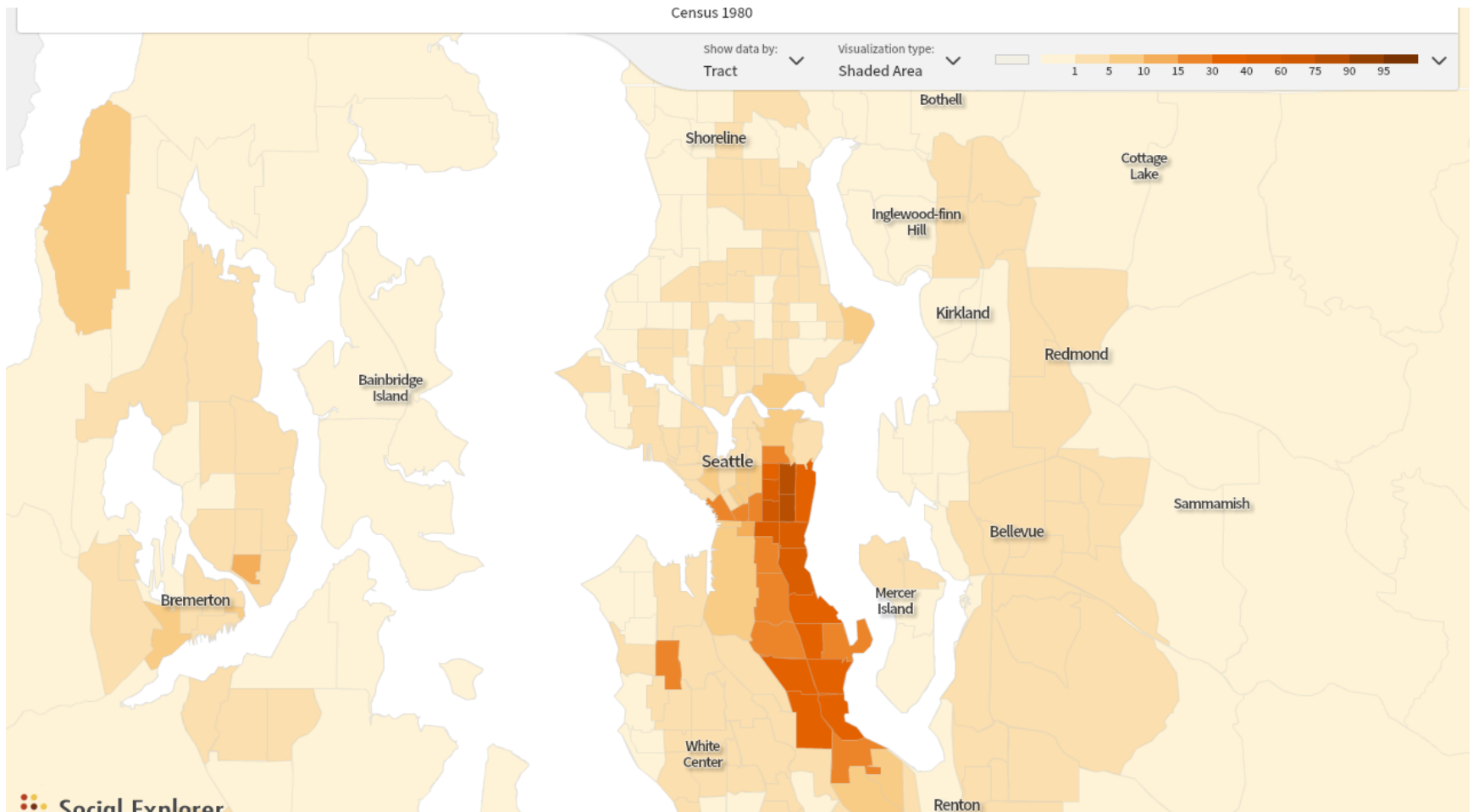
Seattle's Black population in 1990

From http://www.socialexplorer.com/6f4cdab7a0/explore
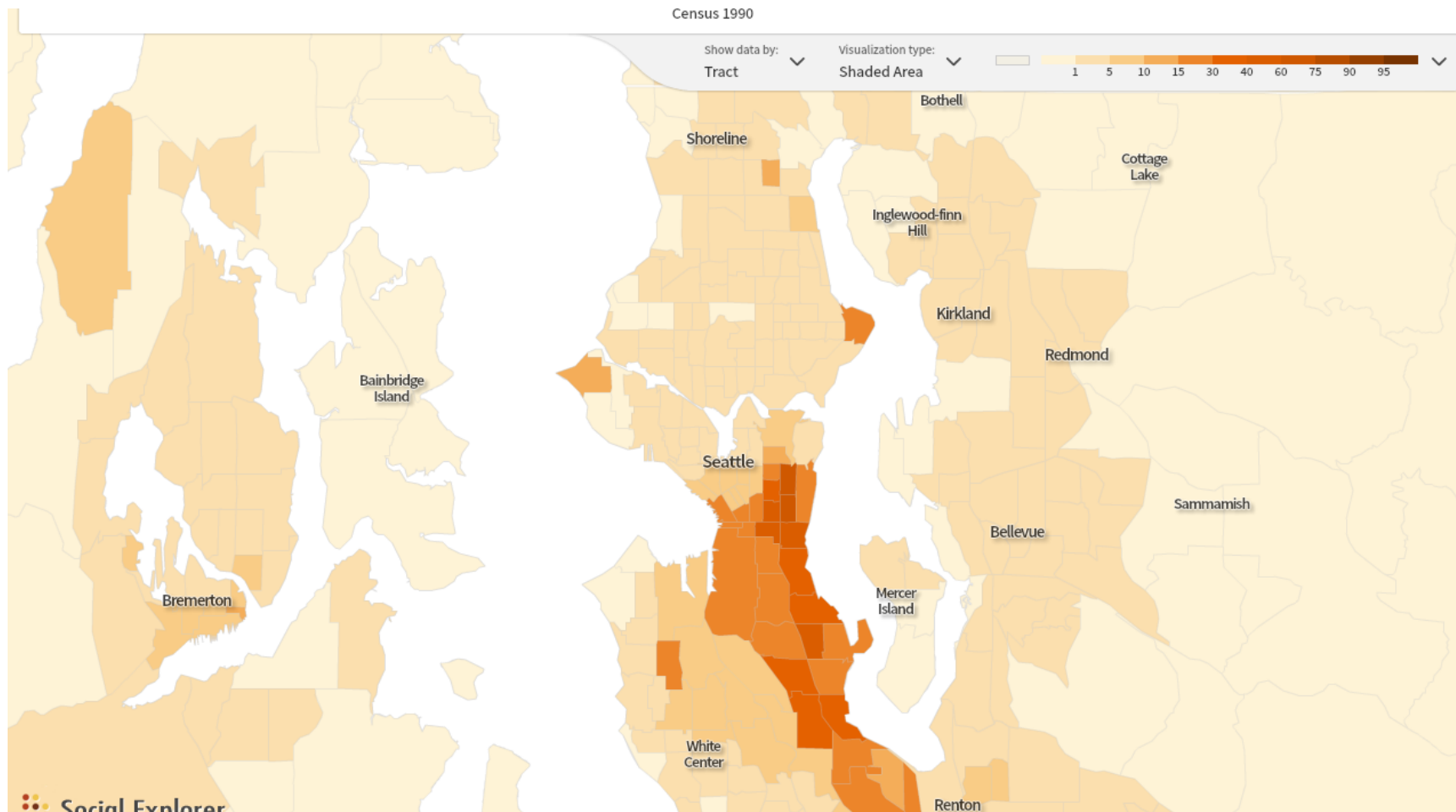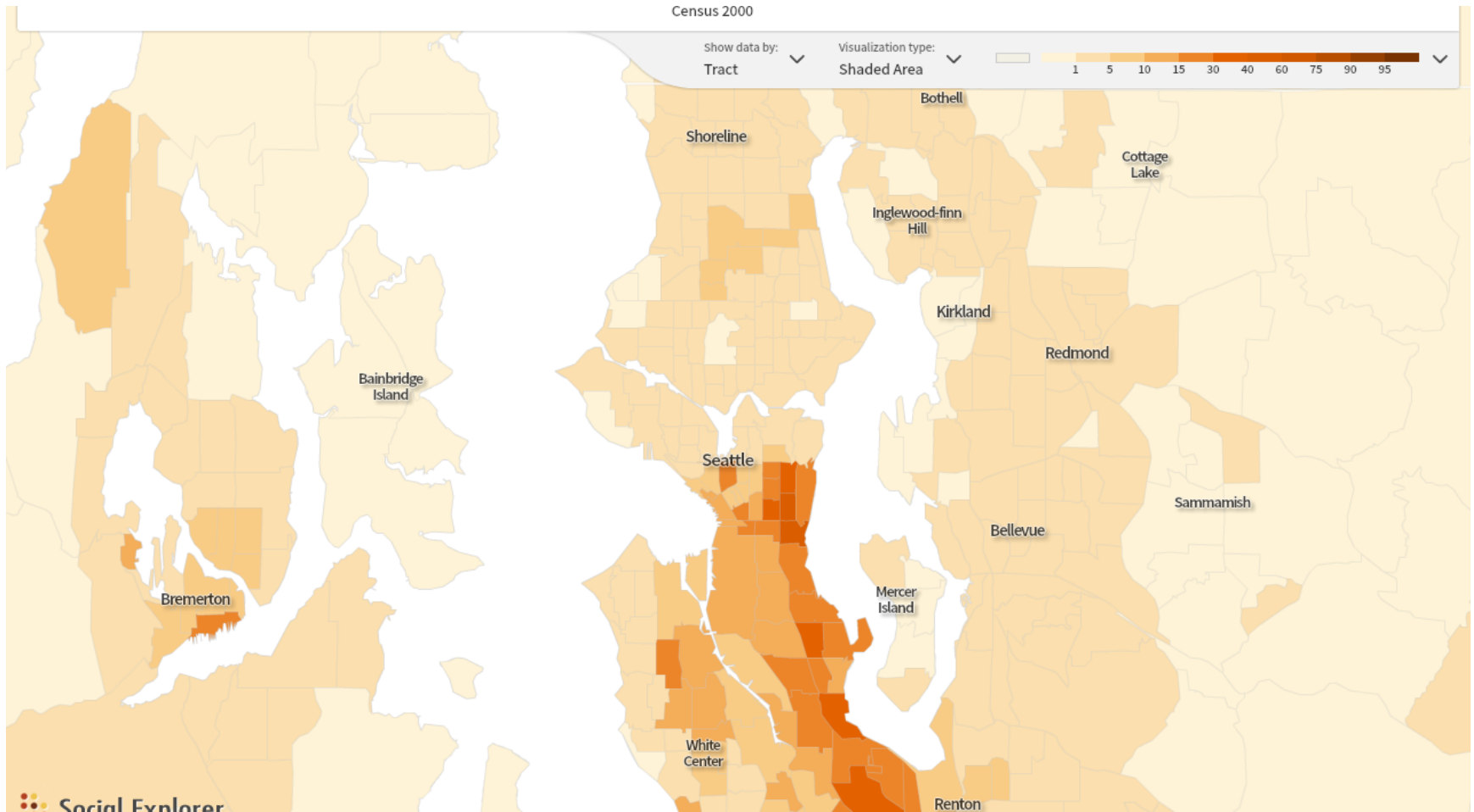
Seattle's Black population in 2000

From http://www.socialexplorer.com/6f4cdab7a0/explore

Seattle's Black population in 2010

From http://www.socialexplorer.com/6f4cdab7a0/explore

Seattle's Black population in 2014

From http://www.socialexplorer.com/6f4cdab7a0/explore
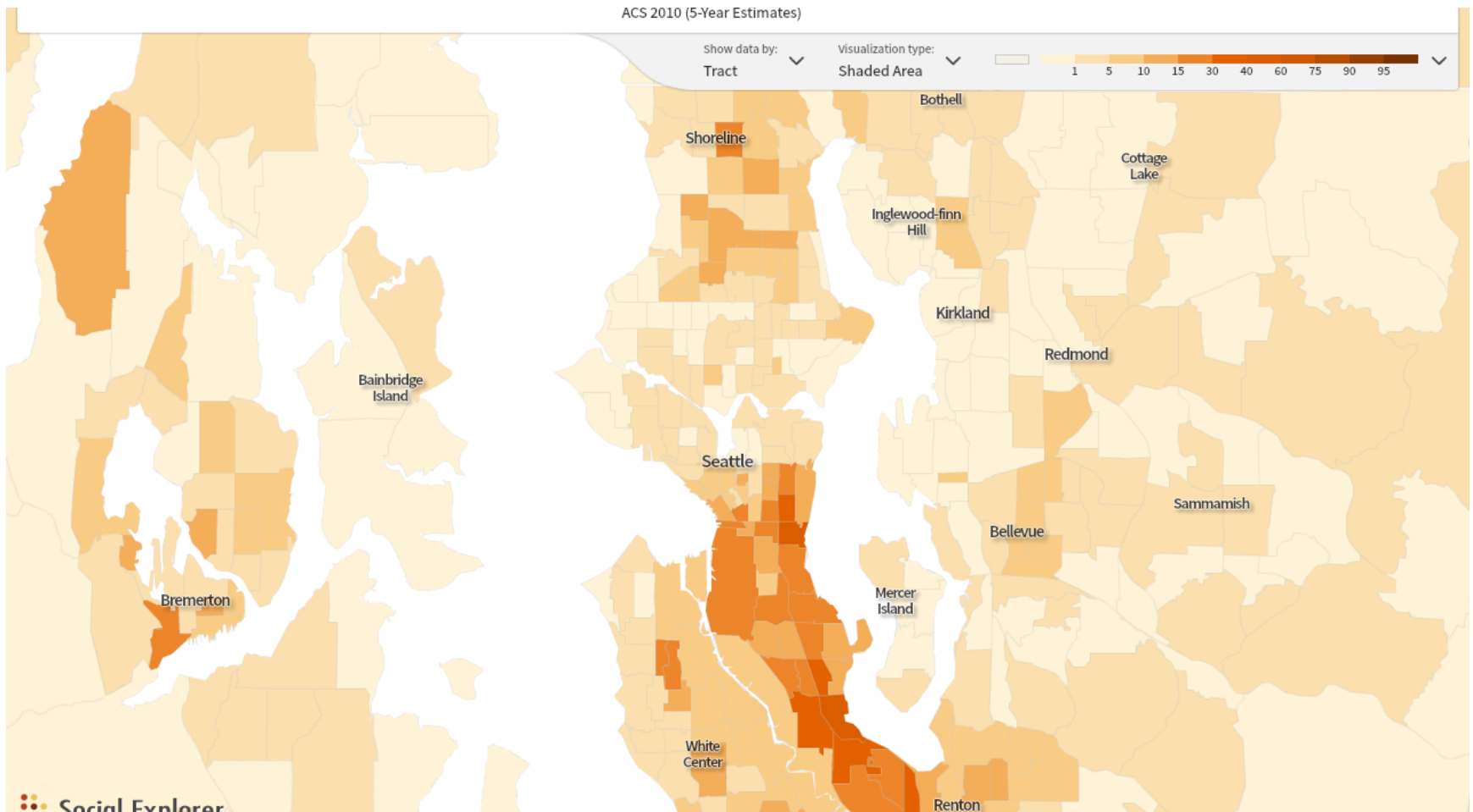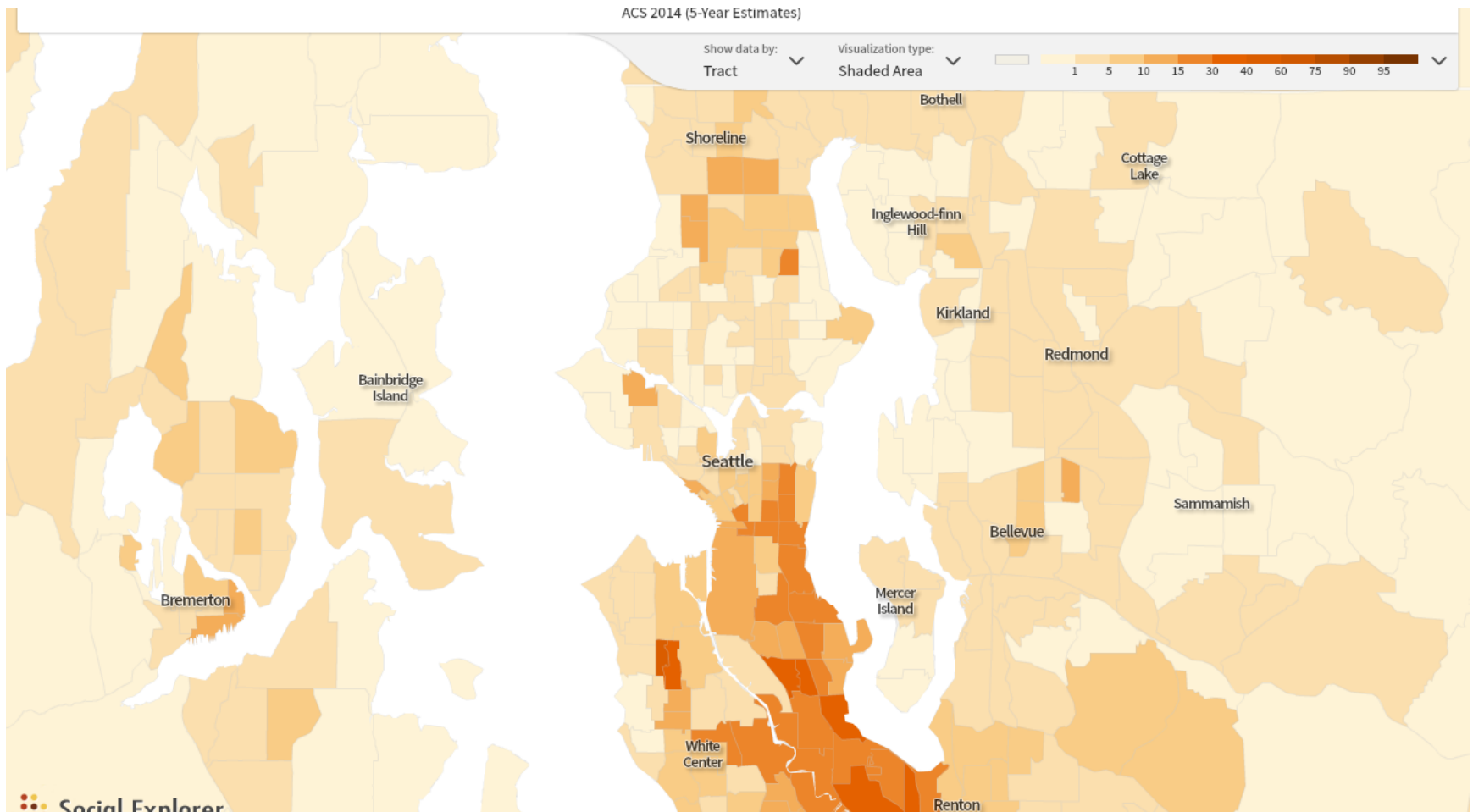
Data trends vs. anecdotes

- We heard that people in the Central Area feel a lost sense of community
- Many people of all professions reported difficulty in affording Seattle
- Young people reported living farther south than many friends and had difficulty holding jobs because of commute times
- Areas south of the city reported increasing crime and gang activity

A need for deeper analysis

- Black population has been dispersed
- Immigrant population has grown at same time
  - No ability to count or locate them until recently
- Crime data shows trends, but
  - Hides Hispanic population
  - East African population indistinguishable
  - Has one category for those of Asian descent
  - Does not preserve details for youth offenders
- Equity can't be effectively addressed

King County Juvenile Court Relative Rate Index Findings

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                    ┌──────────────┐                              ┌──────────────┐
                    │  Diversions  │                              │  Probation   │
                    └──────────────┘                              └──────────────┘
                         3.55                                          6.76

          0.68                                          0.92

┌──────────────┐        ┌──────────────┐      ┌──────────────┐        ┌──────────────┐
│  Referrals   │←─1.54──│   Filings    │─0.92─│  Delinquent  │        │    Secure    │
└──────────────┘        └──────────────┘      │   Findings   │        │  Confinement │
     5.22                    8.02             └──────────────┘        └──────────────┘
                                                    7.37                   7.51
          1.71                                          1.02

                    ┌──────────────┐
                    │    Secure     │
                    │  Detention   │
                    └──────────────┘
                         8.92
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Diversions 3.55 — 0.68 — Referrals 5.22 — 1.54 — Filings 8.02 — 1.71 — Secure Detention 8.92 — 0.92 — Delinquent Findings 7.37 — 0.92 — Probation 6.76 — 1.02 — Secure Confinement 7.51
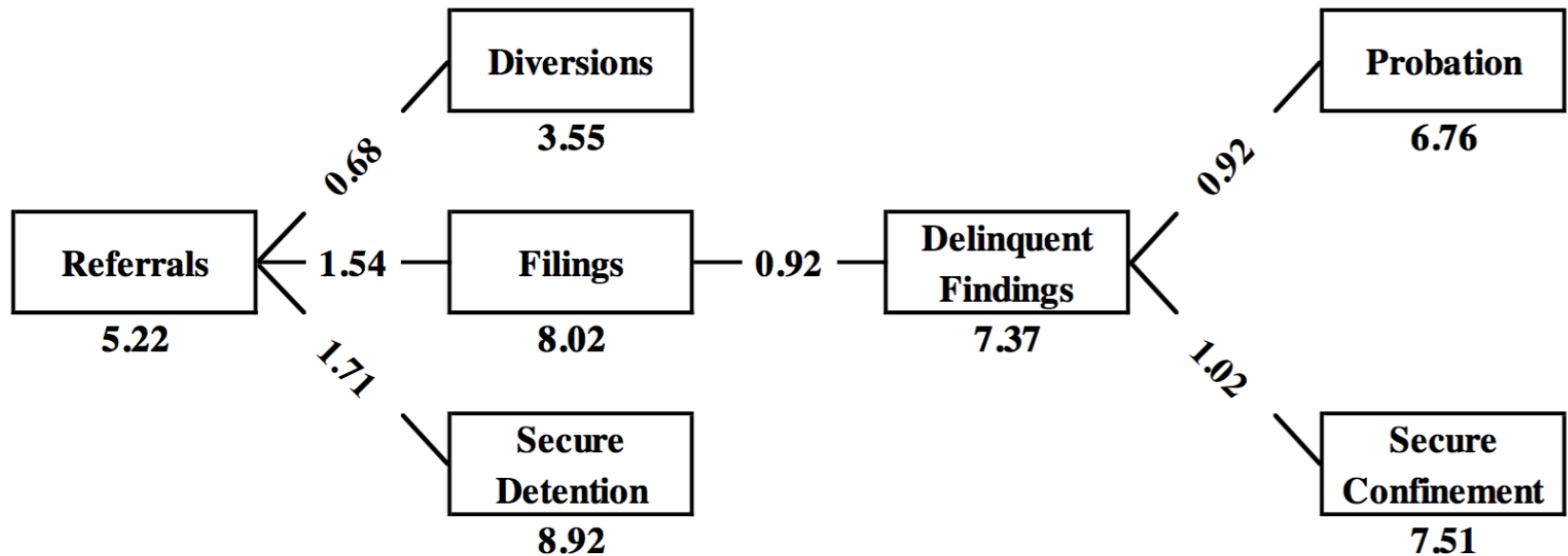
* General Population Updated with 2011 NCHS Estimates

**Note: This analysis is strictly a starting point for the discussion on disproportionality. It is an aggregate comparison that includes all offenses/offense types and does not distinguish between differences in the severity of offenses, nor does it factor in gender, age or other differences.** The figures above represent the difference between African American youth and Caucasian youth at various stages in the juvenile justice system in King County (disproportionality). The figures under each box represent the cumulative disproportionality at each stage, while the figures in each path represent the incremental change between stages.

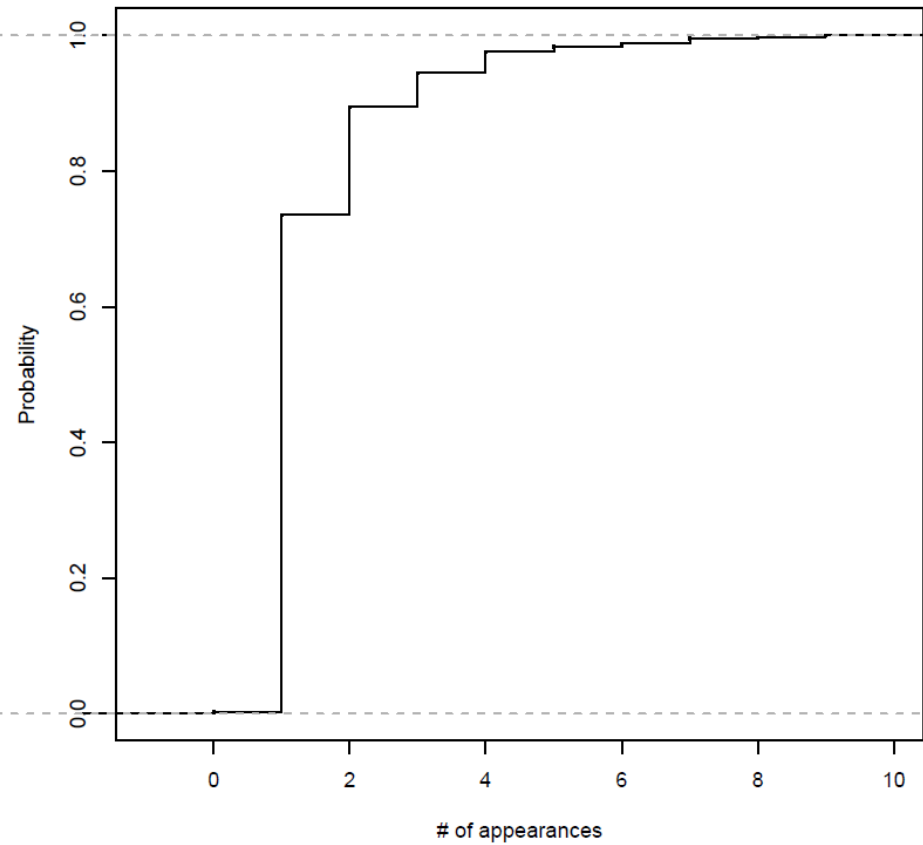# Aggregated Juvenile Court DV Referrals 2005-2014
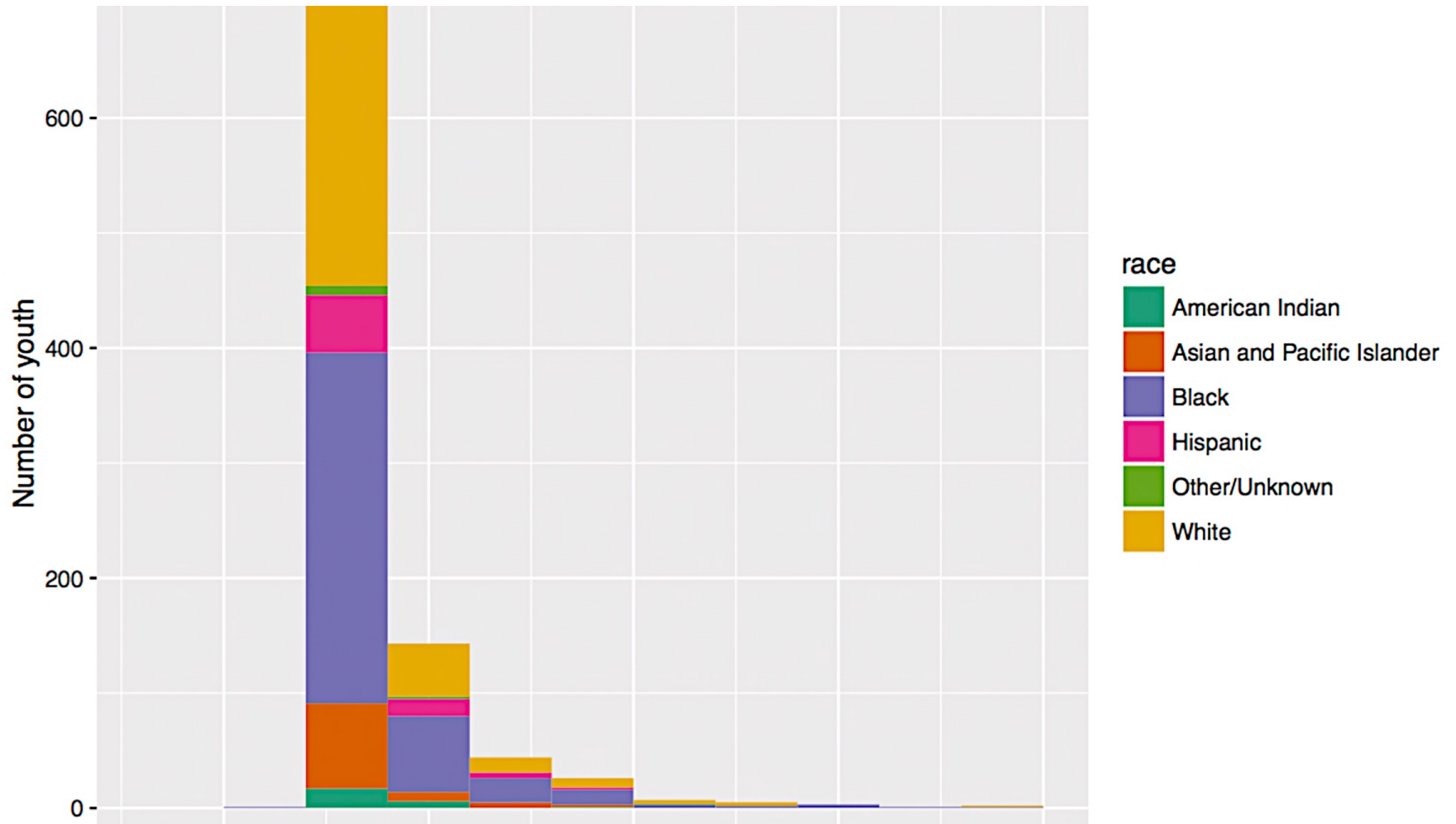
Re-offense rates

Empirical CDF of number of juvenile court appearances for all Seattle Youth 2005−2014
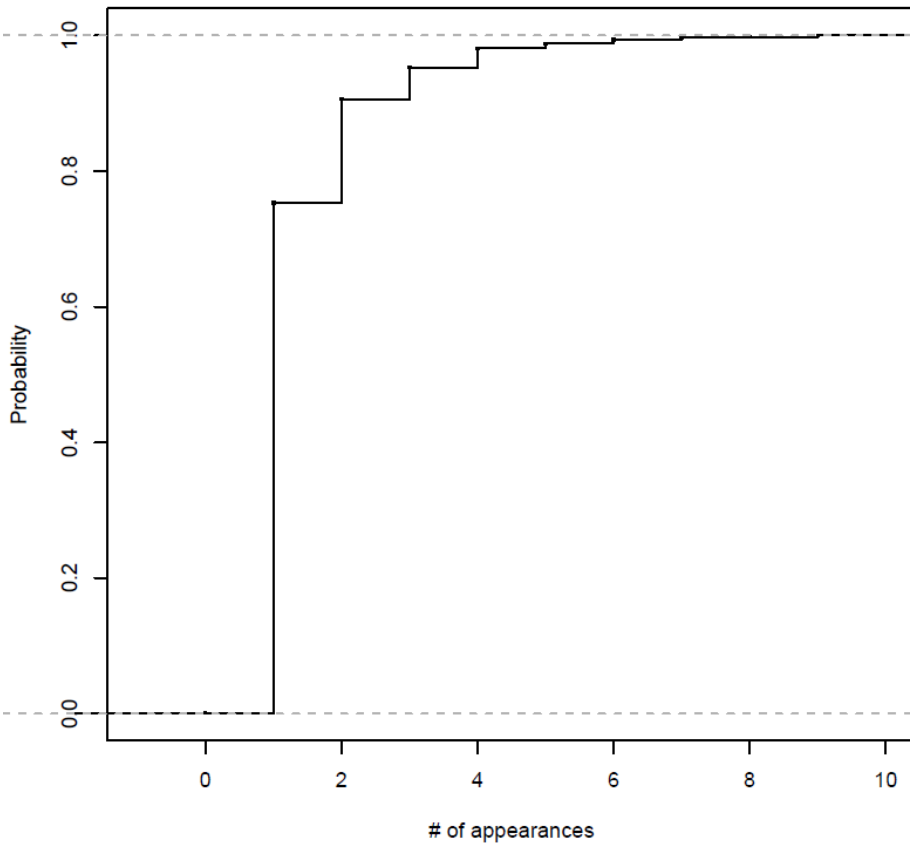
Empirical CDF of number of juvenile court appearances for Seattle Black Youth 2005−2014

Tabulated Juvenile Re-offense Rates

Race/ ethnicity	All crimes	Domestic Violence
All Youth	0.35	0.25
Caucasian	0.25	0.23
Native American	**0.51**	0.28
Asian and Pacific Islander	0.26	**0.16**
Black or African American	**0.46**	0.26
Hispanic non-White	0.38	0.30
Other/unknown	0.11	0.28

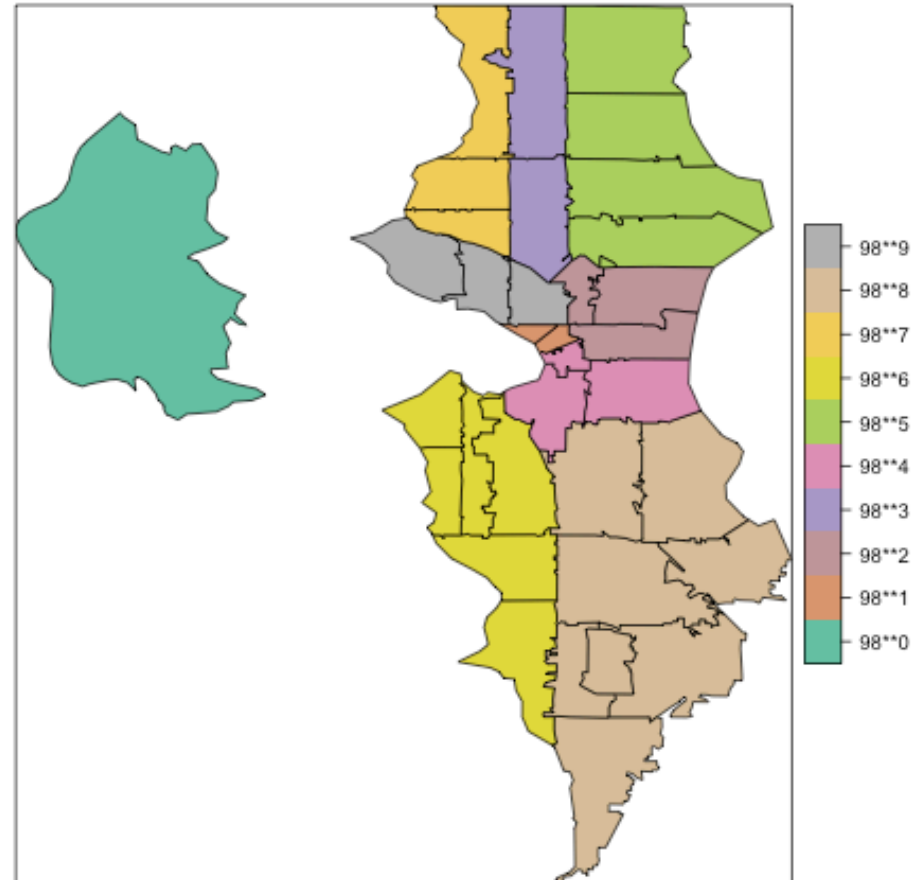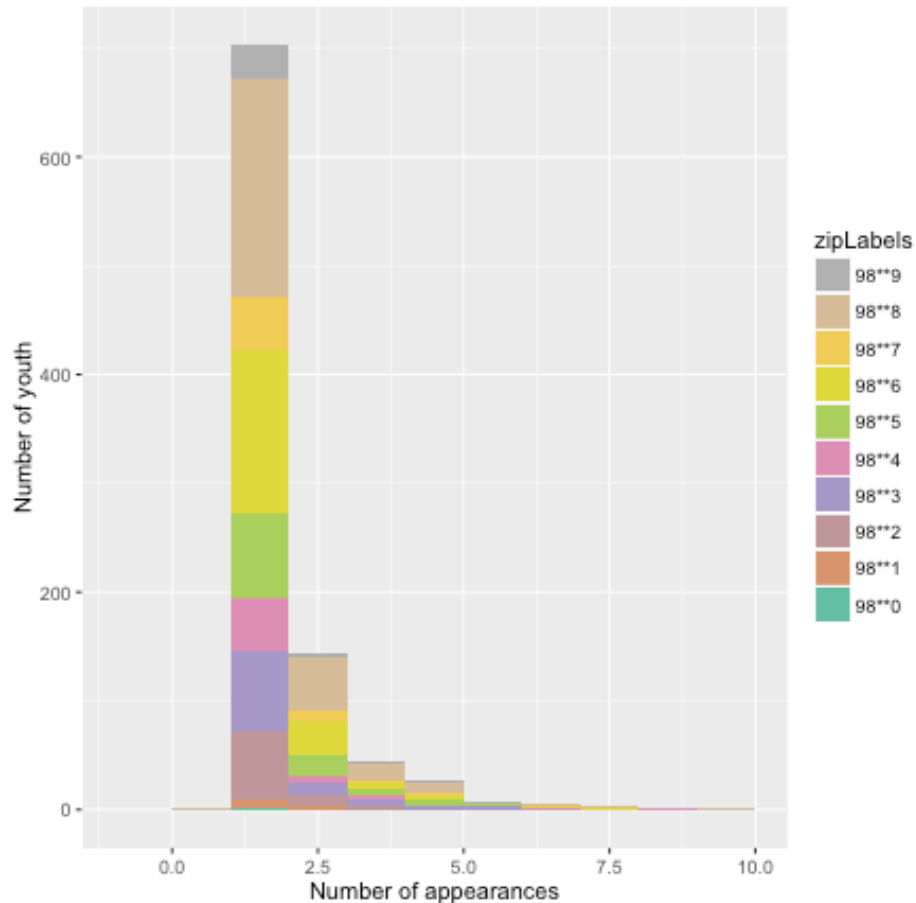# Predicting number of court appearances

Factors most relevant in predicting number of Juvenile Court appearances among Seattleites
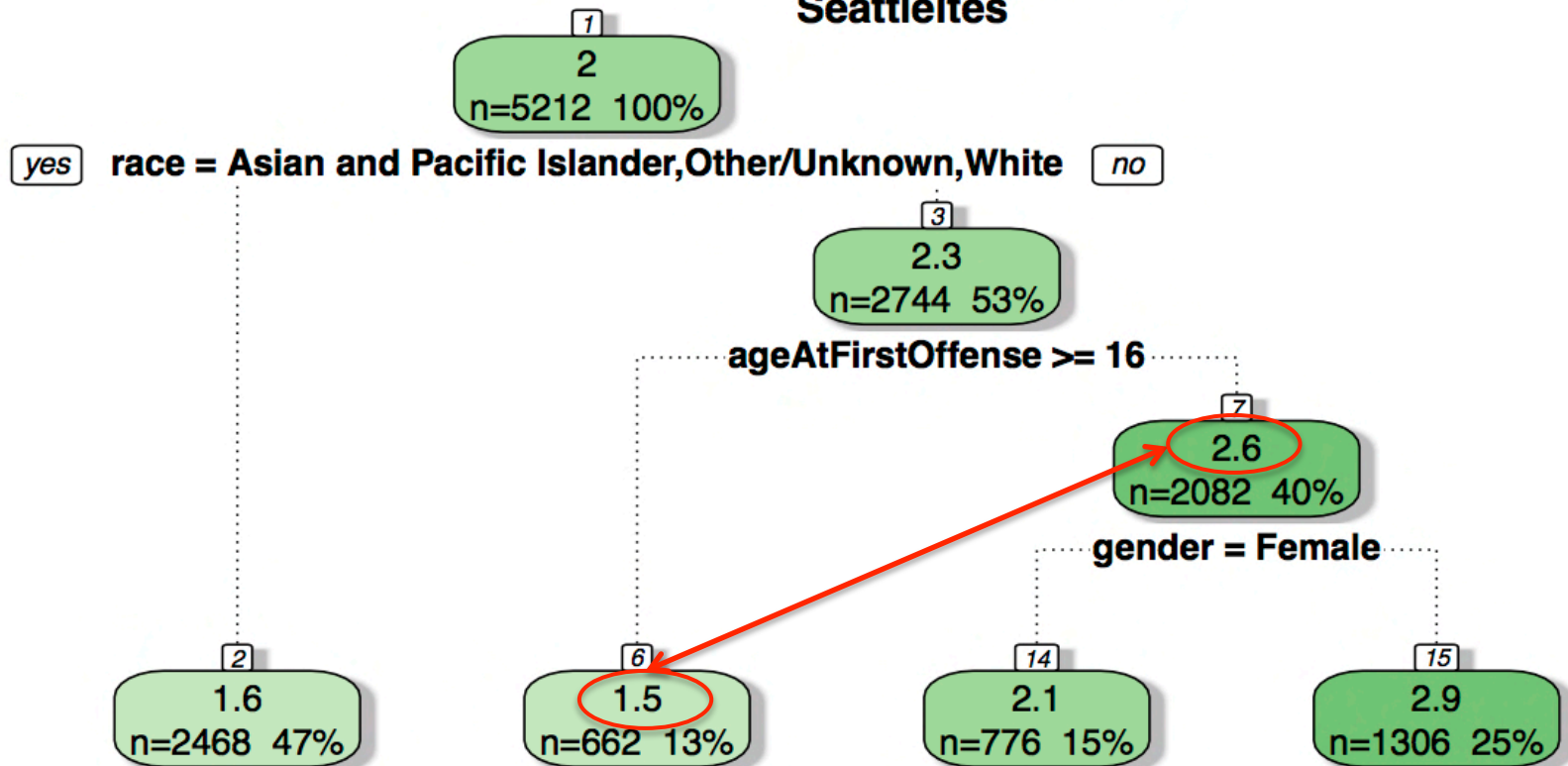
Domestic Violence Referrals
2005-2014

Appearance frequencies of Seattle youth in Juvenile Court 2005-2014

Black Youth DV Referrals 2005-2014

Appearance frequencies of Seattle Black Male youth in Juvenile Court 2005–2014
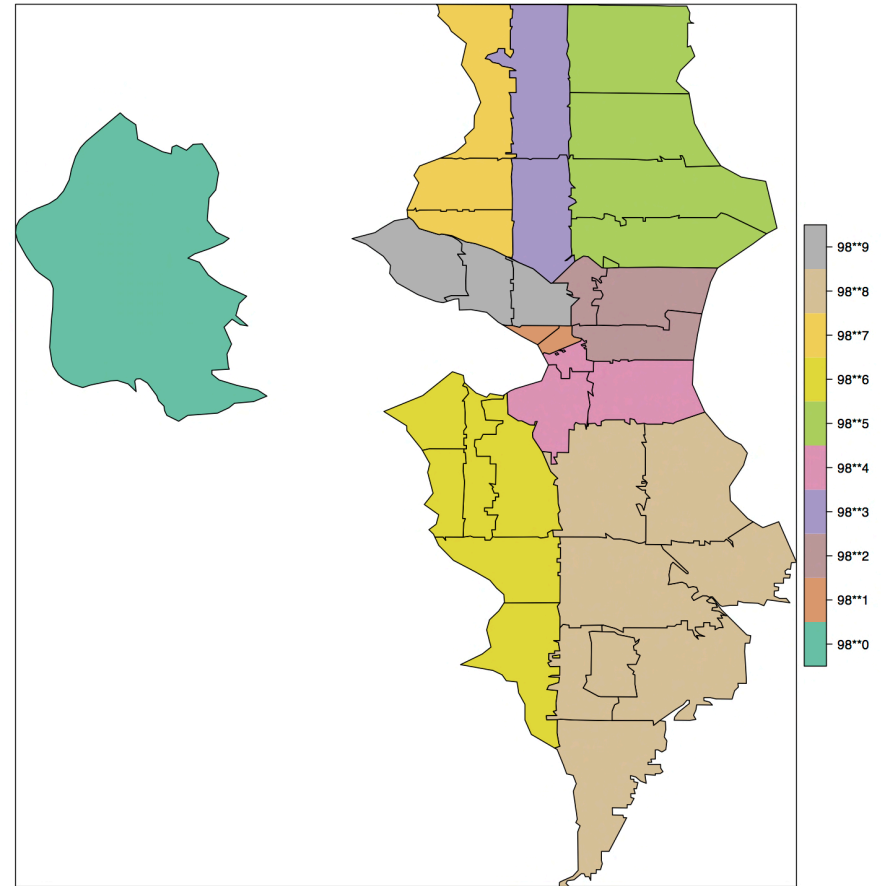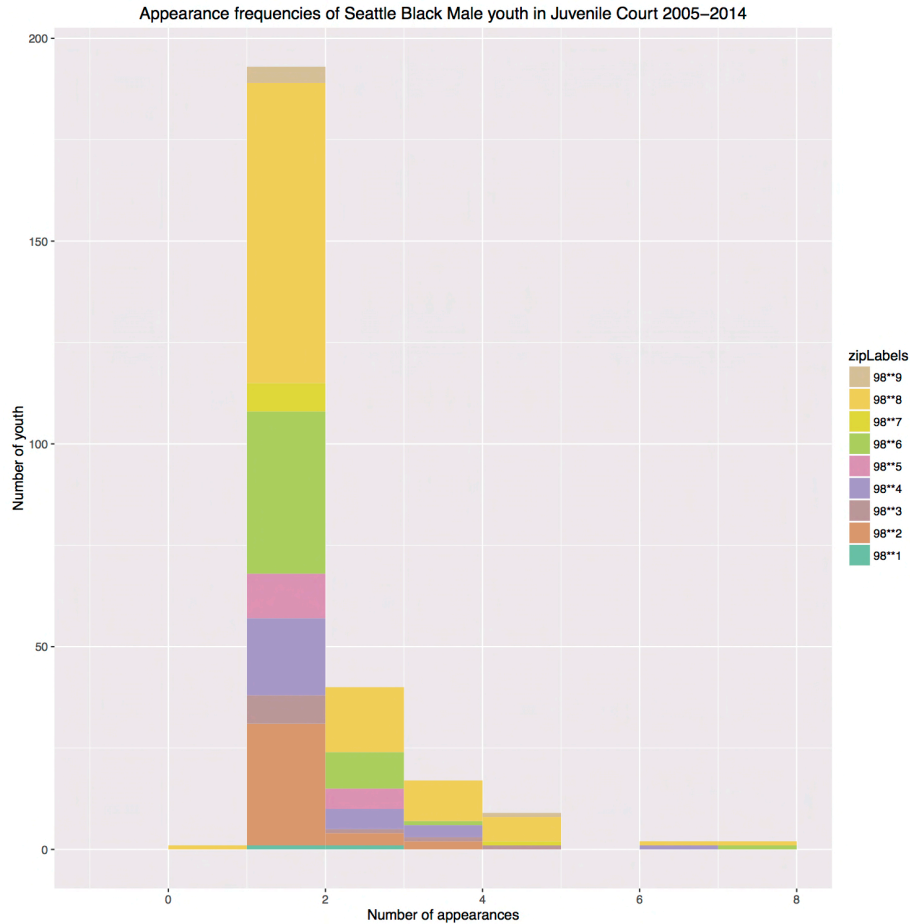
Targeting locations

- We know where violence are happening
- We have a sense of among whom
- We can begin to match geographies to demographics to reach out to the community
- We can start to think of programs
- We can include equity considerations to make it palatable to the community

What cities are like Seattle?

- When does it not make sense to look to other cities for inspiration

- What programs have worked in other cities?

- When might adaptation to the Seattle context invalidate the core of a model?

- Who are our peers and possible co-learners?

Correlation of variables

Similarities to Seattle in Population Density

Similarities to Seattle based on PopulationDensity_sqmi

Similarities to Seattle in Population Percent Change

Similarities to Seattle based on Population_Pct_Change_4.1.10_7.1.14
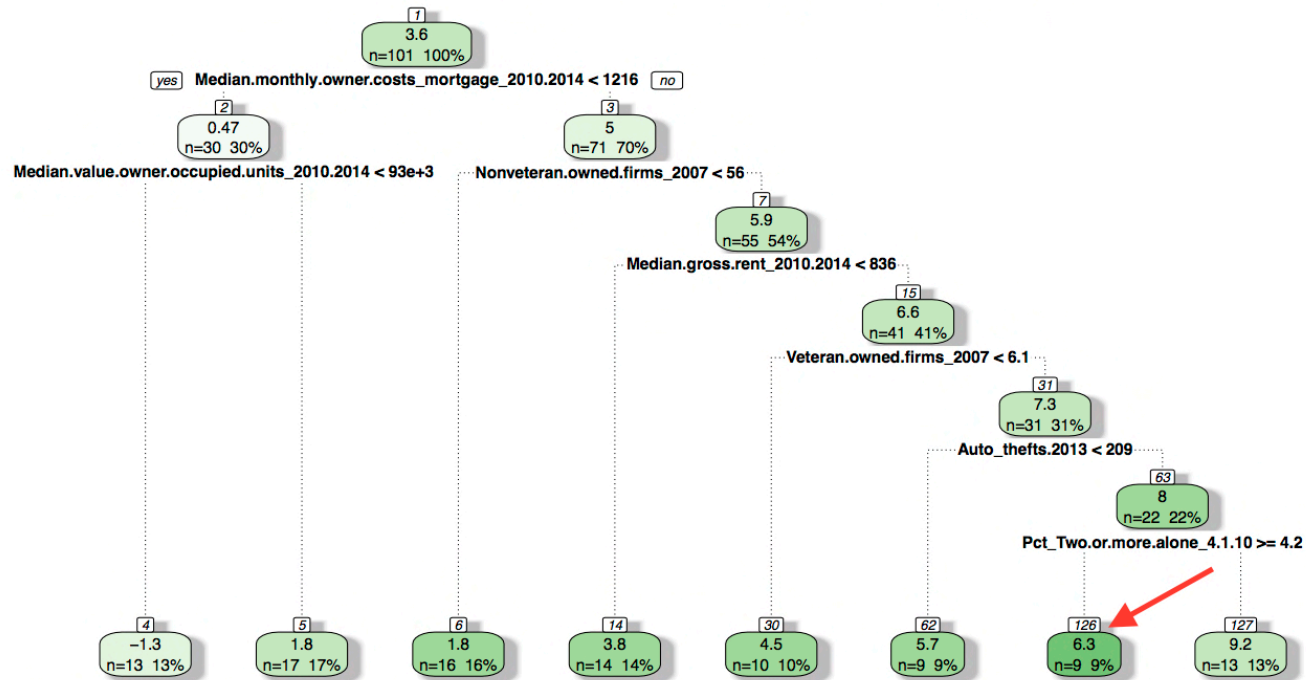
Similarities to Seattle in Low Income to High Income Ratio

Similarities to Seattle based on LI.HI.ratio
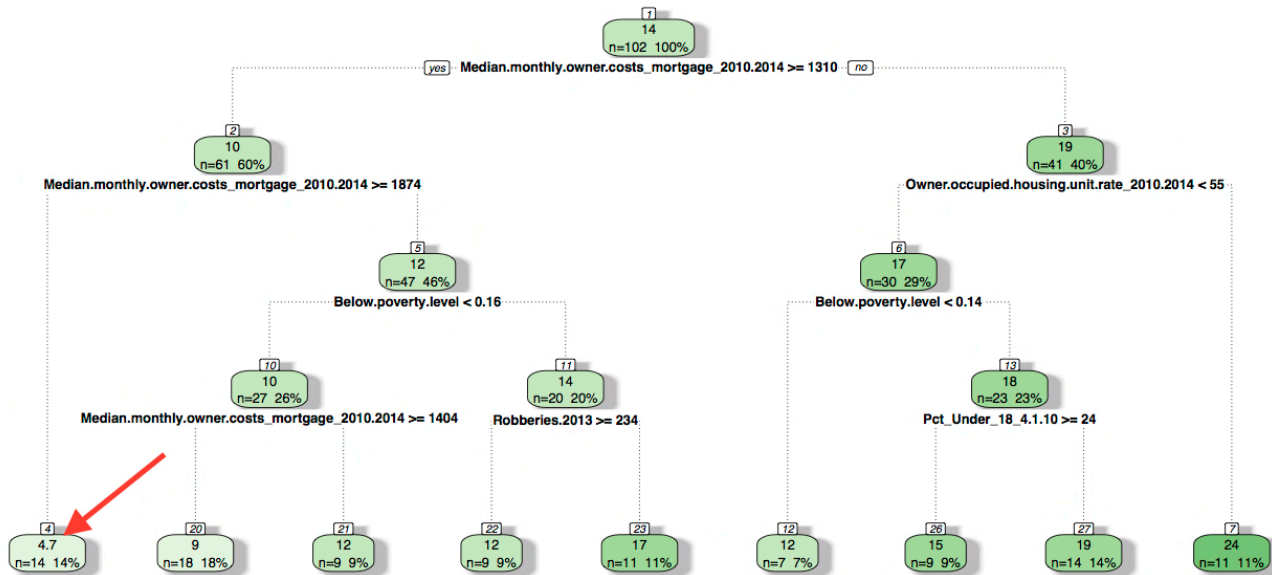
Boston   Bridgeport, CT   Chicago   Honolulu   Los Angeles   New Haven, CT
New York, NY   Oxnard, CA   Poughkeepsie, NY   San Diego   San Francisco
San Jose   Seattle   Washington

Similarities to Seattle in Percent Black Alone in 2010

Similarities to Seattle based on Pct_Black_alone_4.1.10
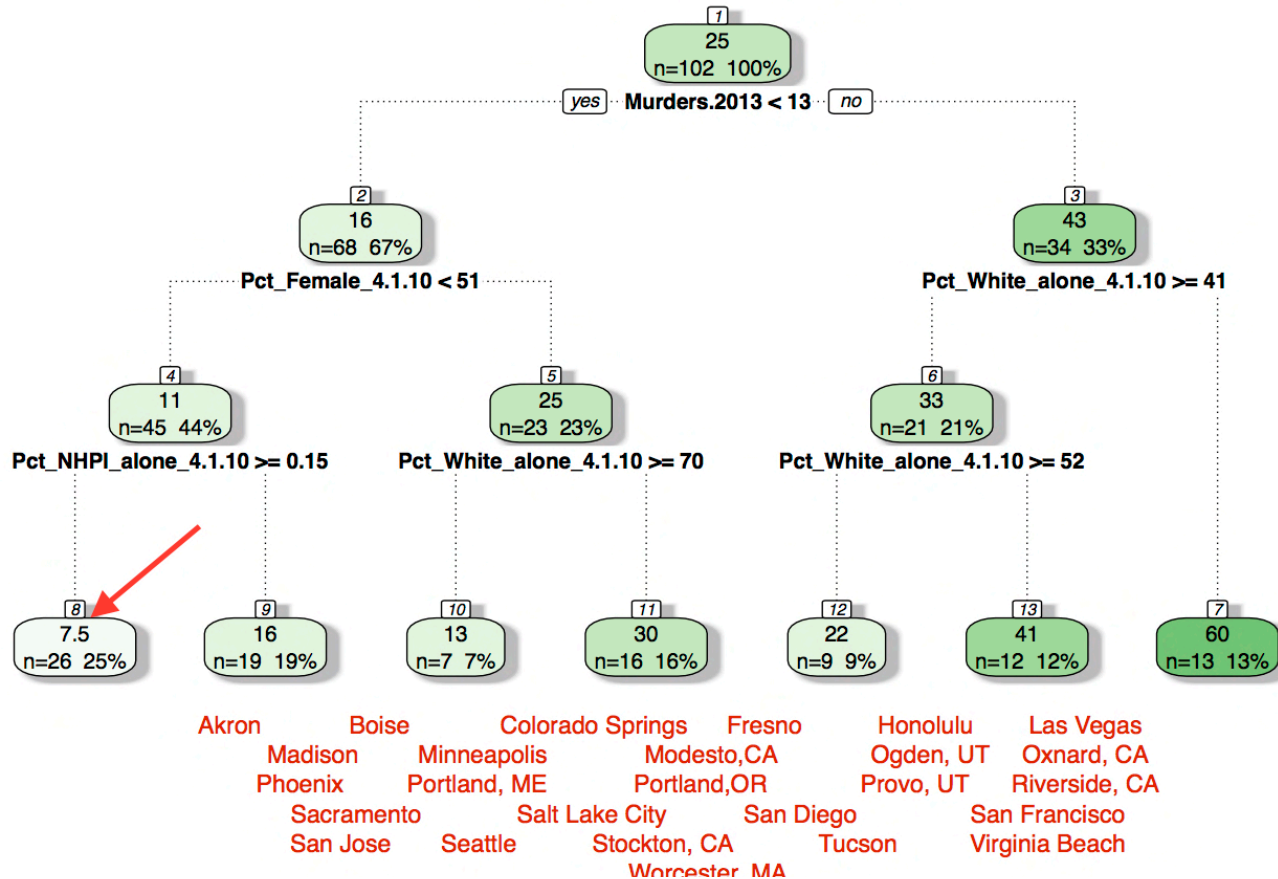
Similarities to Seattle in Assaults
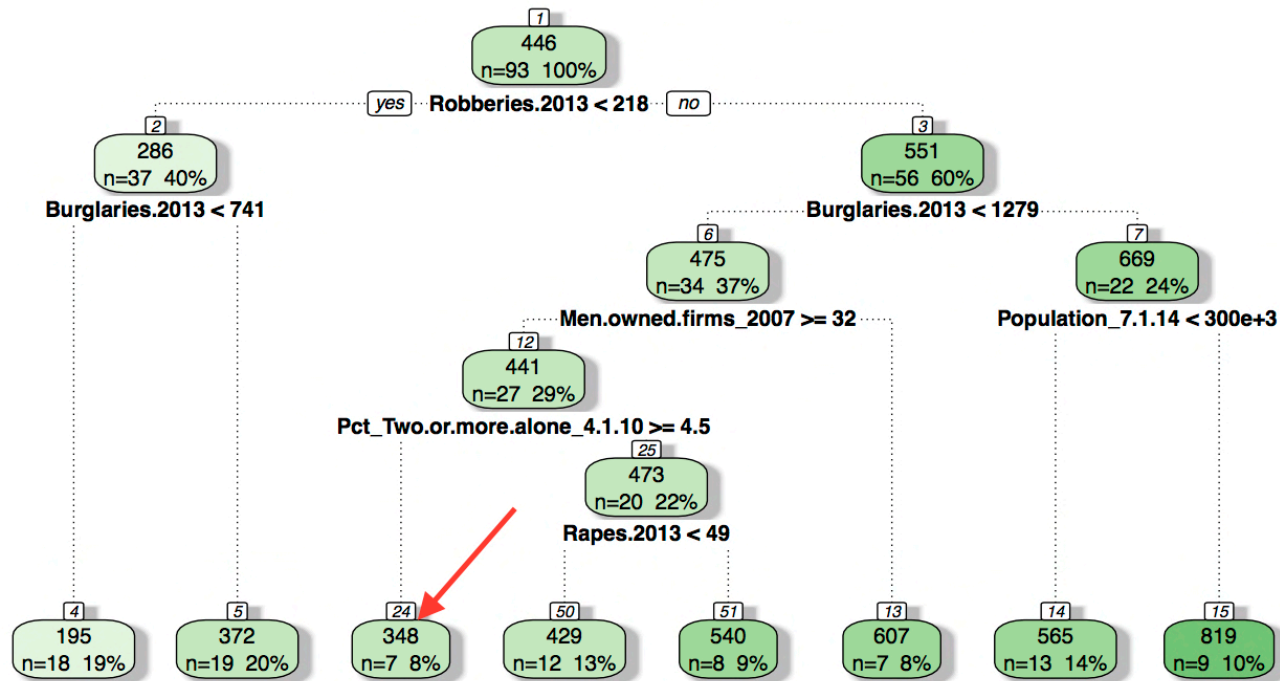
Final similarity tallies

Matrix of Variable Cluster Coincidence with Seattle for all Analysis Cities
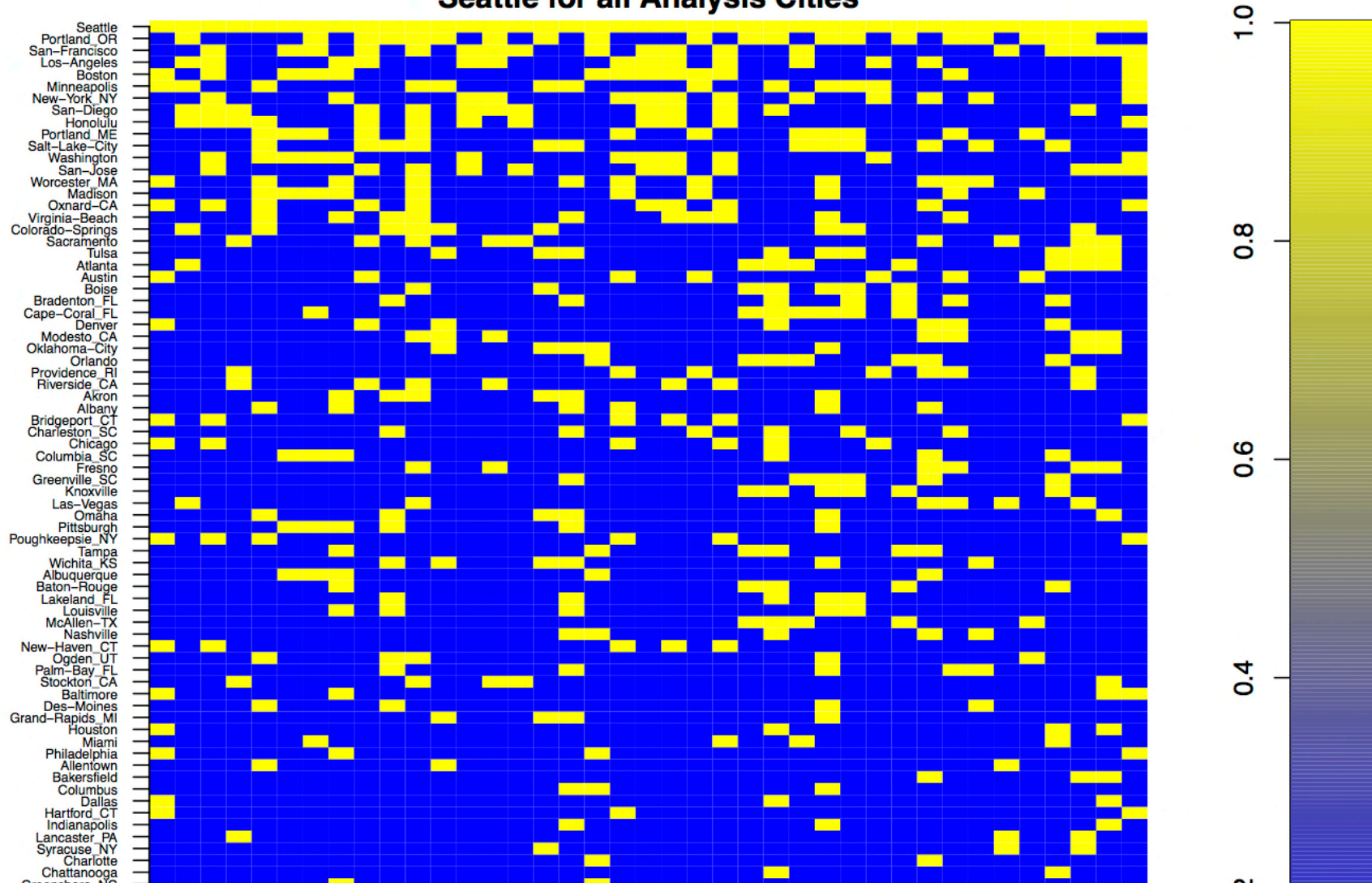
Inset view

Matrix of Variable Cluster Coincidence Seattle for all Analysis Cities
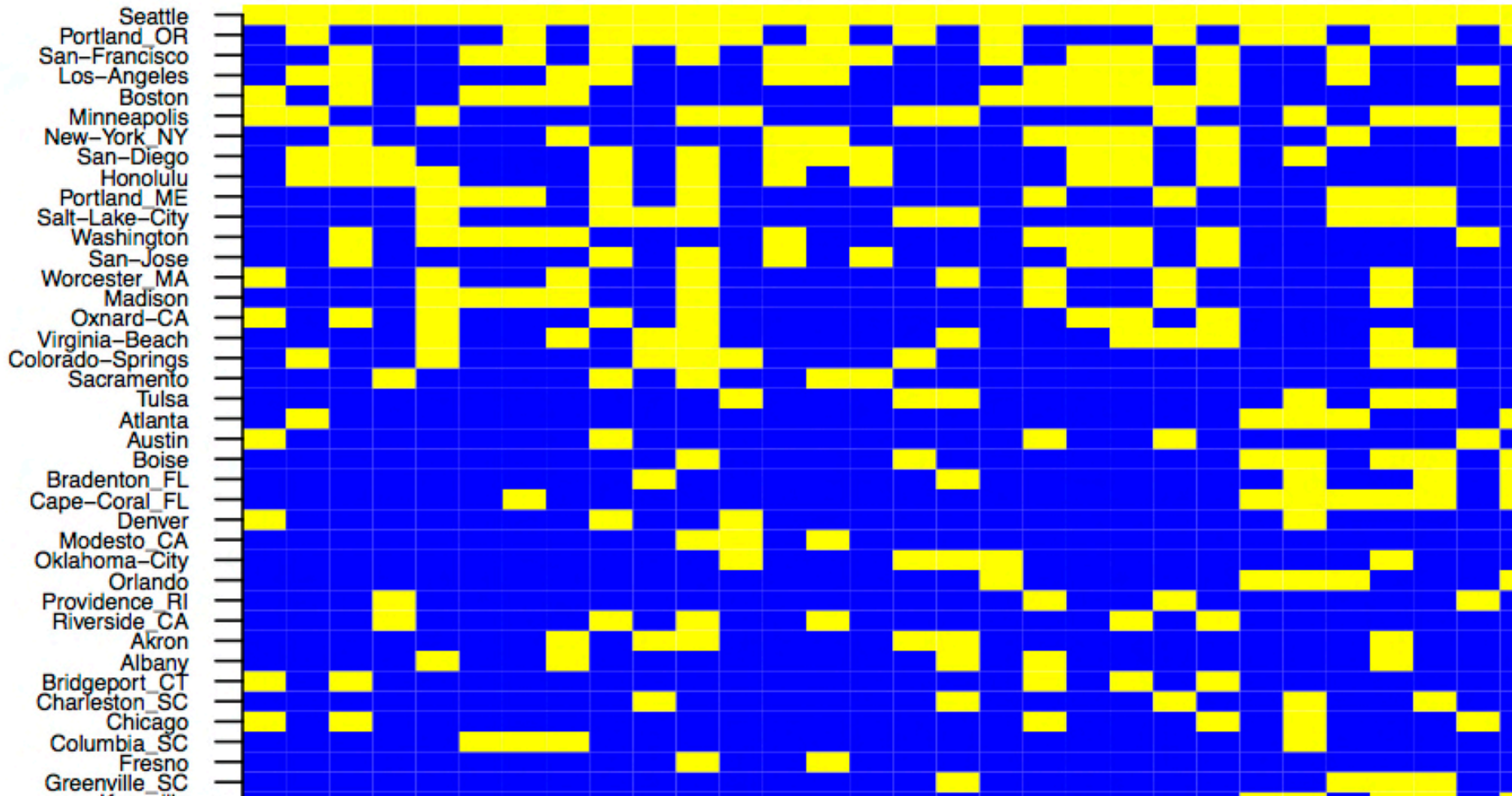
Selecting programs

- Similarities in matrix led to more research into specific cities' experience
- We performed a literature review to look at evidence based practices for violence prevention
- Expanded the search beyond violence prevention into mentoring and job preparation and exposure due to community feedback

Research:

There are two types of violence prevention strategies: strategies prevent violence from happening in the first place and intervention strategies that keep violence from happening again. The research on youth violence has focused on eliminating the risk factors associated with delinquency and youth violence and strengthening the protective factors associated with positive youth outcomes.

	Individual	Family	Peer & Social	Community
Risk Factors	• History of violent victimization • Attention deficits, hyperactivity or learning disorders • History of early aggressive behavior • Substance abuse • Low IQ • Poor behavioral control • Deficits in social cognitive or information-processing abilities • High emotional distress • History of emotional problems • Antisocial beliefs and attitudes • Exposure to violence and conflict in the family	• Authoritarian childrearing attitudes • Harsh, lax or inconsistent disciplinary practices • Low parental involvement • Low emotional attachment to parents or caregivers • Low parental education and income • Parental substance abuse or criminality • Poor family functioning • Poor supervision of children	• Association with delinquent peers • Involvement in gangs • Social rejection by peers • Lack of involvement in conventional activities • Poor academic performance • Low commitment to school and school failure	• Diminished economic opportunities • High concentrations of poverty • High level of transiency • Low level of family disruption • Low levels of community participation • Socially disorganized neighborhoods
Protective Factors	• Intolerant attitude toward deviance • High IQ • High grade point average (as an indicator of high academic achievement • Positive social orientation • Highly developed social skills/ competencies • Highly developed skills for realistic planning • Religiosity	• Connectedness to family/adults outside the family • Ability to discuss problems with parents • Perceived parental expectations about school performance are high • Frequent shared activities with parents • Consistent presence of parent at some point during the day • Involvement in social activities • Parental/family use of constructive strategies for coping with problems (models of constructive coping)	• Possession positive relationships with those that are strong, close, and pro-socially oriented • Commitment to school • Close relationships with non-deviant peers • Involvement in prosocial activities • Exposure to school climates that are characterized by intensive supervision, clear behavior rules, engagement of parents and teachers	

Effective Strategies & Interventions:

- Operation Ceasefire brings together the Police, Probation and Parole departments; the U.S. and District Attorney's Office; ATF; Juvenile Corrections; gang outreach workers; black clergy; DEA, and the State Attorney General in an collaborative effort to tackle youth homicide in Boston. The main element of the program focused on aggressive law enforcement and prosecution of illegal firearms. The second element focused on a group violence intervention. Under this strategy, law enforcement officials and community groups bring together a small number of gang-involved youth and present them with a two-part message – (a) violence will not be tolerated, and (b) community resources and support systems are available should they choose to change their ways.

- Project Safe Neighborhoods (PSN) is a program created to reduce gun violence. Similar to the Ceasefire model, PSN employs the pulling levers strategy and relies on collaboration between law enforcement officials and community-based organizations. PSN has three overarching goals: reduce demand for illegal guns, reduce supply of illegal guns, and prevent gun violence from occurring. The program utilizes the following four strategies to achieve these goals: (1) increased federal prosecutions, (2) lengthy federal sentences, (3) increased rate of gun seizures, and (4) group violence intervention.

- Youth Advocates Program (YAP): Unlike Ceasefire and PSN, which treat violence as a public health issue, YAP adheres to the principles of individualized, wraparound care, positive youth development, and community advocacy supports. YAP provides community-based alternatives to out-of-home care. Each youth is assigned an Advocate, a community youth engagement specialist, who is recruited from the same neighborhood where the youth live. Advocates work with youth and families up to 30 hours per week and undergo extensive training. This evidence informed model has been proven to reduce arrests and recidivism for the nation's highest risk youth and young adults. YAP runs truancy, gang intervention, and 'meaningful employment' programs. Its evidence-based model have been proven to reduce arrests and recidivism for the nation's highest risk youth and young adults.

- Diversion Protocols: While there are a number of risk factors associated with youth violence, there are structural and systemic issues that increase the likelihood a youth will become justice involved. Many youth are arrested for low-level or status level offenses such as truancy, disorderly conduct, or underage drinking. Research has shown arrest and incarceration can push youth deeper into the justice system. To improve outcomes, police departments across the country have developed new protocols and created diversion programs that leverage existing community resources. For instance, Nashville police transport truant students to the Metro Student Attendance Center (M-SAC) instead of taking them to the precinct or detention intake center. And the Lake Charles police in Louisiana transport youth accused of misdemeanor crimes to the Multi-Agency Resource Center (MARC), a facility that provides evidence-based wrap-around services to youth and their families including comprehensive assessments and screenings, case management, information services, and crisis intervention instead of taking them to the precinct or detention intake center.

Resulting programs

- **Step Up Expansion** – A pre-arrest diversion program aimed to prevent domestic violence with outreach in South Seattle neighborhoods identified by analysis

- **Comprehensive Gang Model**- A carrot and stick model that provides intensive programs for youth who seek help and intensified police and prosecutor attention

- **Youth Wellbeing Index** – A platform for better data collection and for engaging youth in programs to increase opportunity

Additional questions?