

THEORIES OF CHANGE

PMAP 8521: Program Evaluation for Public Service
September 16, 2019

*Fill out your reading report
on iCollege!*

PLAN FOR TODAY

More with R

Final project

Program theories

Logic models and results chains

Indicators and mechanisms

MORE WITH R

PIPES (% > %)

```
leave_house(get_dressed(get_out_of_bed(wake_up(me))))
```

```
me %>%
```

```
  wake_up() %>%
```

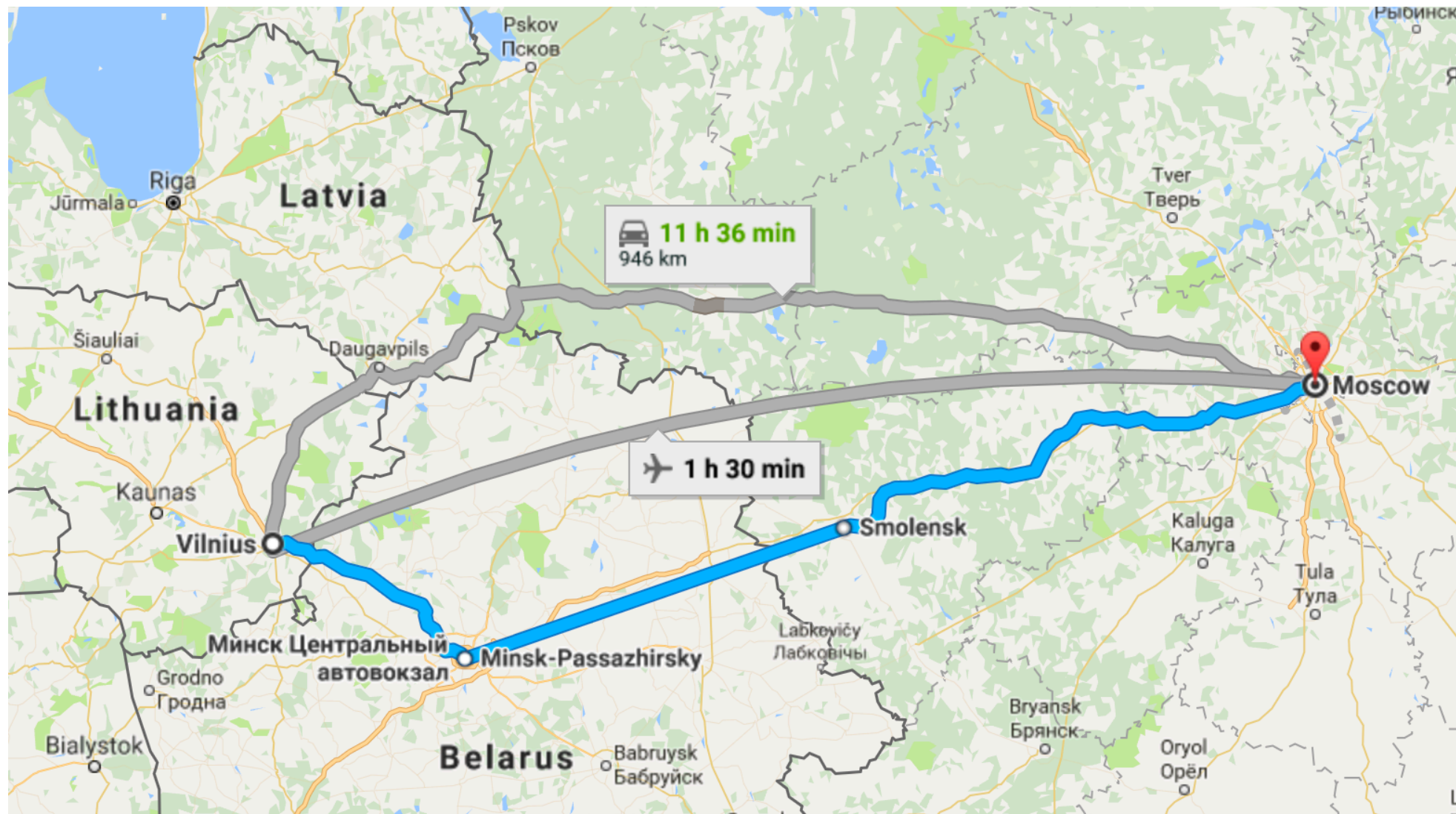
```
  get_out_of_bed() %>%
```

```
  get_dressed() %>%
```

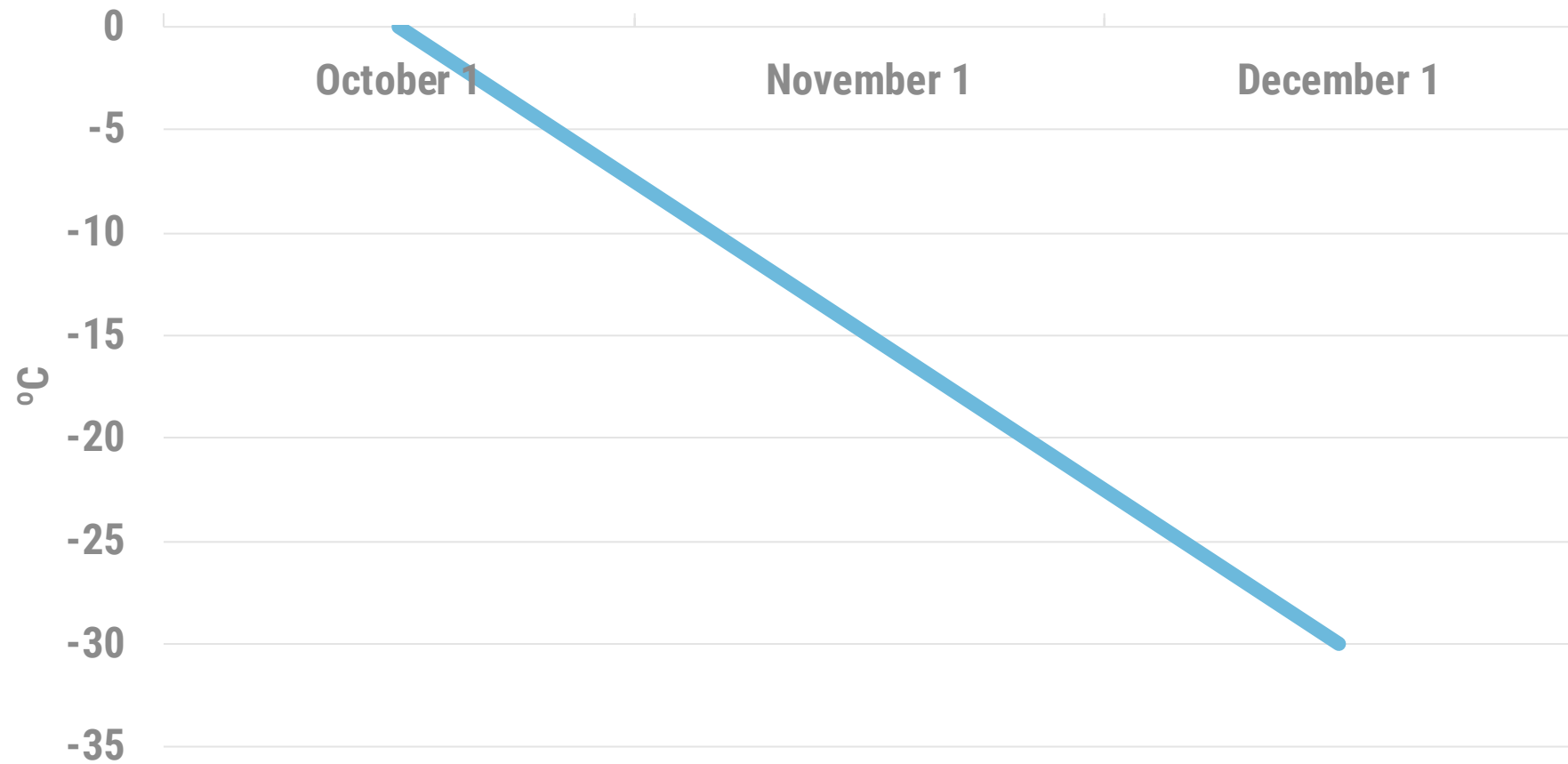
```
  leave_house()
```



THE WAR OF 1812

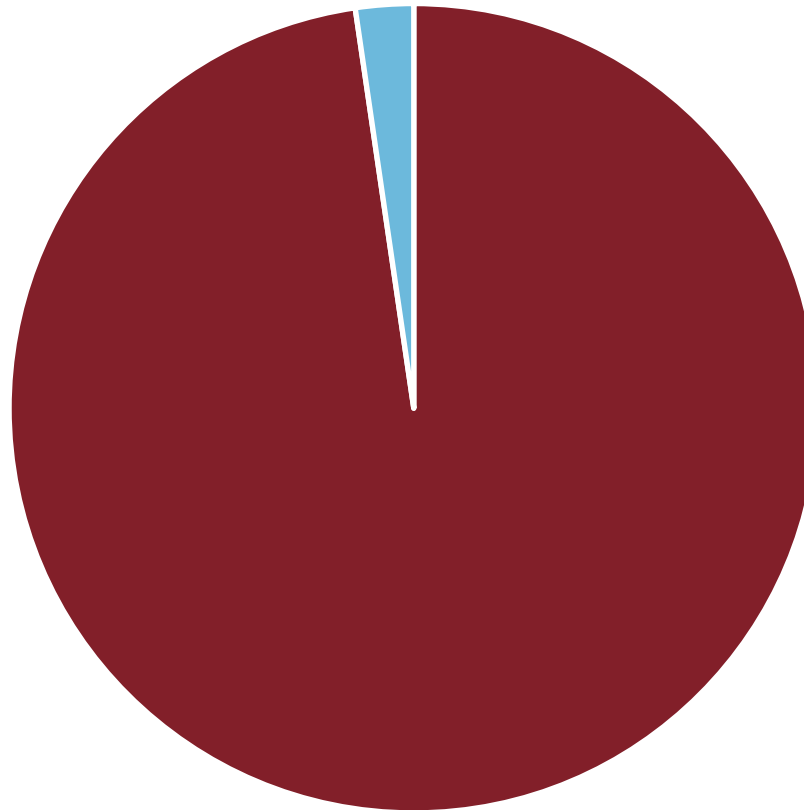


THE WAR OF 1812



THE WAR OF 1812

Napoleon's Grande Armée



■ Died ■ Survived

Carte Figurative des pertes successives en hommes de l'Armée Française dans la campagne de Russie 1812-1813.

Dressée par M. Minard, Inspecteur Général des Ponts et Chaussées en retraite. Paris, le 20 Novembre 1869.

Les nombres d'hommes présents sont représentés par les largeurs des zones colorées à raison d'un millimètre pour dix mille hommes; ils sont de plus écrits en travers des zones. Le rouge désigne les hommes qui entrent en Russie, le noir ceux qui en sortent. — Les renseignements qui ont servi à dresser la carte ont été puisés dans les ouvrages de M. M. Chiers, de Légras, de Fezensac, de Chambray et le journal inédit de Jacob, pharmacien de l'Armée depuis le 28 Octobre.

Pour mieux faire juger à l'œil la diminution de l'armée, j'ai supposé que les corps du Prince Jérôme et du Maréchal Davoust qui avaient été détachés sur Minsk et Mohilow et ont rejoint vers Orscha et Witebsk, avaient toujours marché avec l'armée.

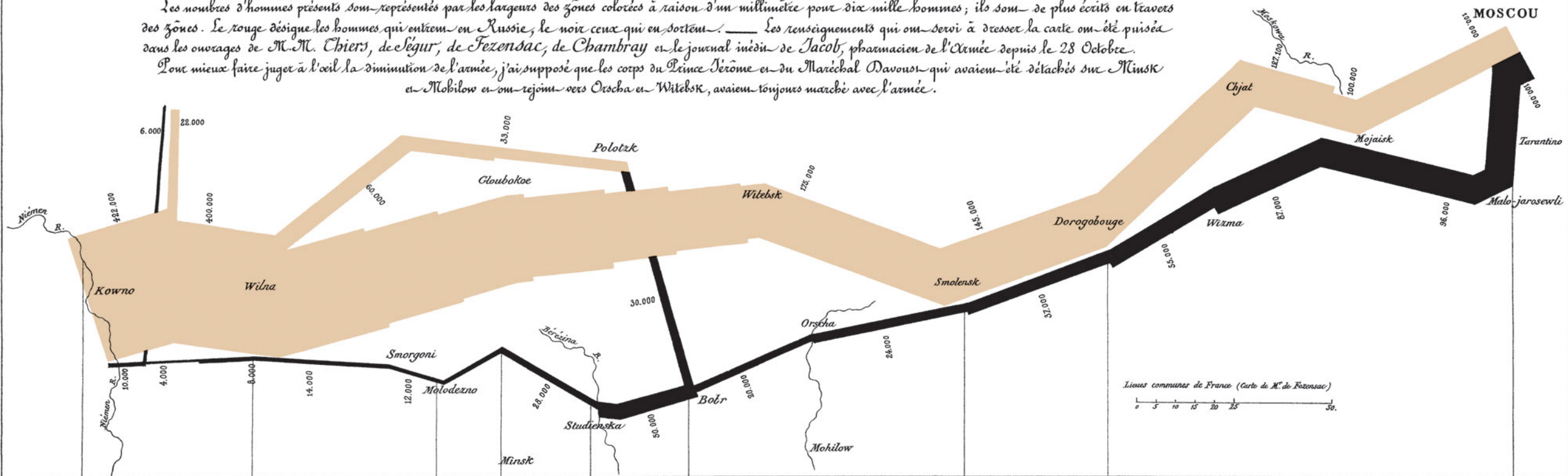
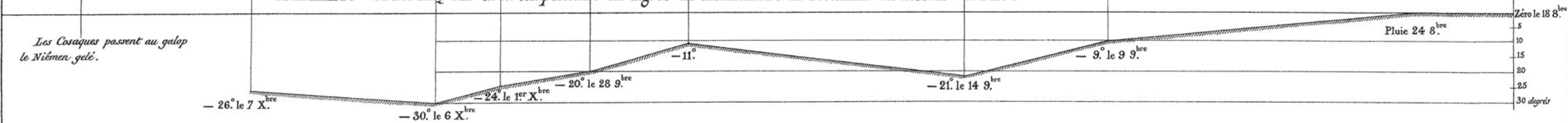


TABLEAU GRAPHIQUE de la température en degrés du thermomètre de Réaumur au dessous de zéro.



Les Cosaques passent au galop le Niemen gelé.

AESTHETICS AND DATA

Data

Longitude

Latitude

Army size

Army direction

Date

Temperature

Aesthetic

x

y

size

color

x

y

Graphic

point

point

path

path

line and text

line and text

AESTHETICS AND DATA

data

Longitude

Latitude

Army size

Army direction

Date

Temperature

aes()

x

y

size

color

x

y

geom_

point

point

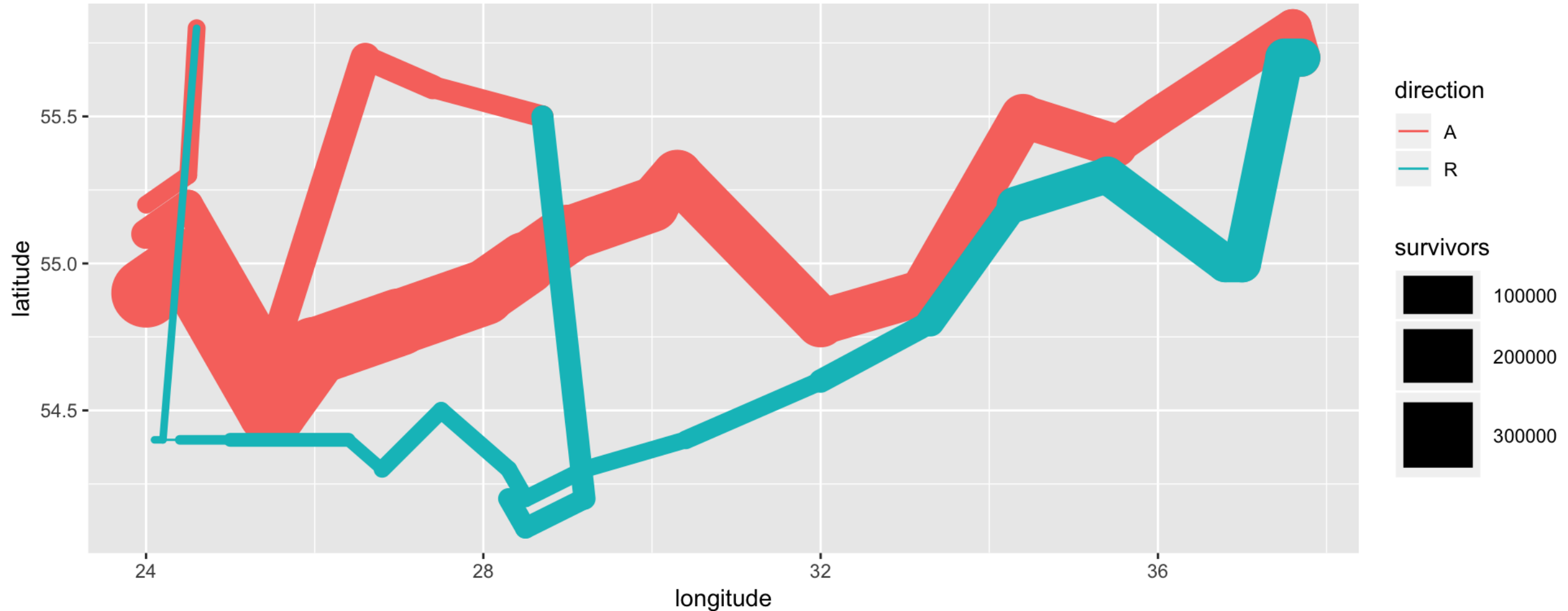
path

path

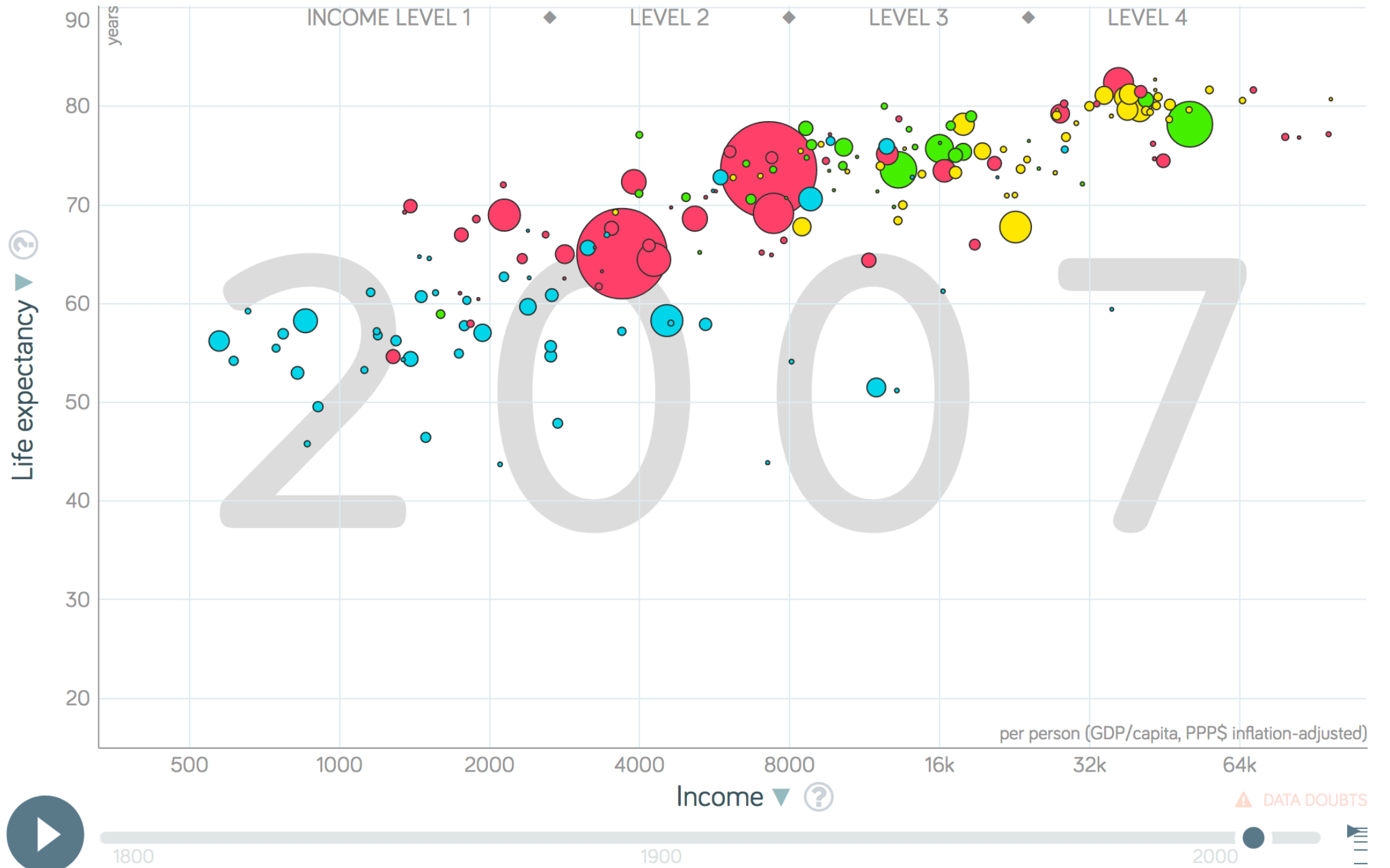
line and text

line and text

ANATOMY OF `ggplot()`







AESTHETICS AND DATA

data

Wealth (GDP/capita)

Health (Life expectancy)

Continent

Population

aes()

x

y

color

size

geom_

point

point

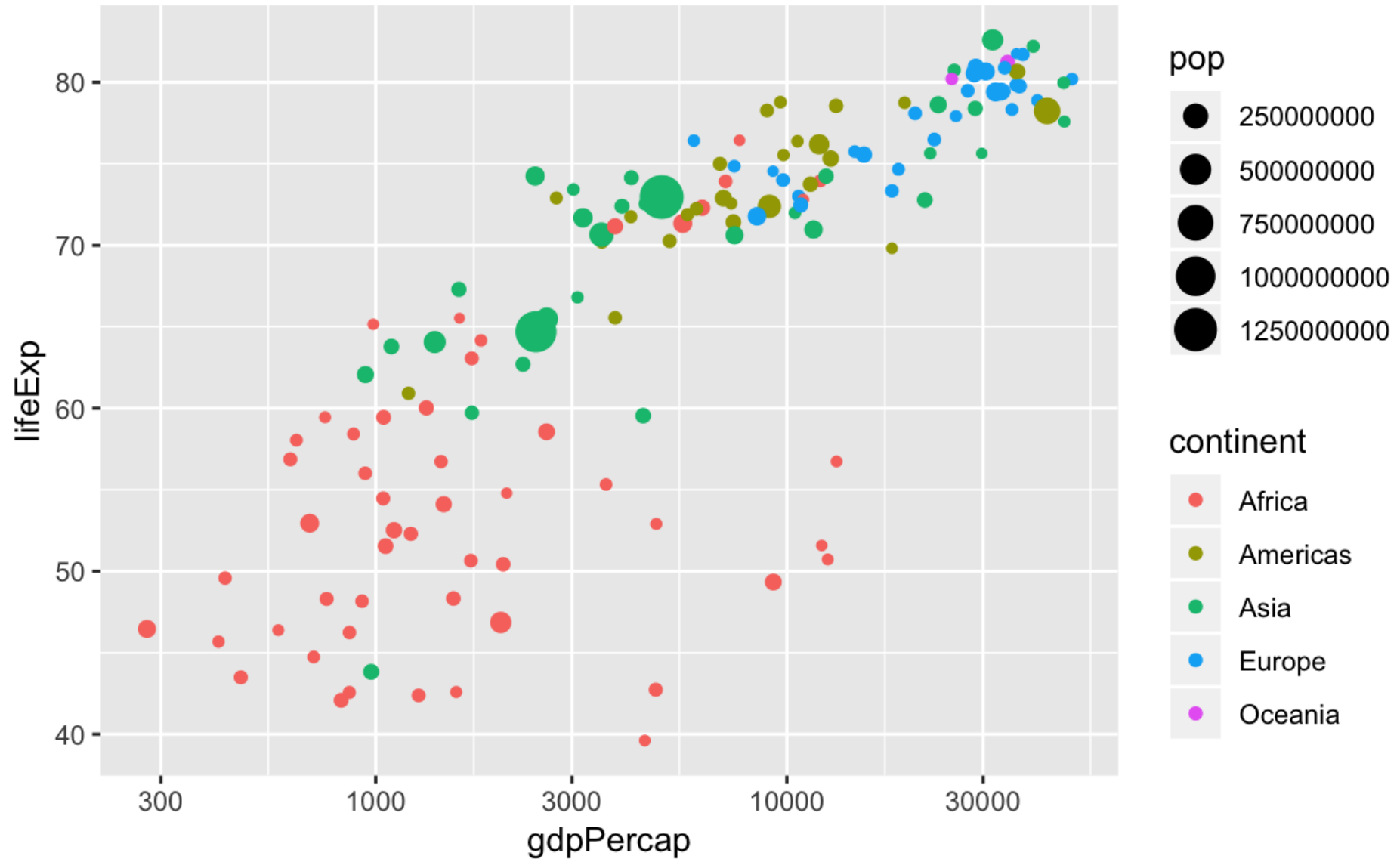
point

point

HEALTH AND WEALTH

```
ggplot(data = gapminder_2007,  
       mapping = aes(x = gdpPerCap,  
                     y = lifeExp,  
                     color = continent,  
                     size = pop)) +  
  
  geom_point() +  
  scale_x_log10()
```

HEALTH AND WEALTH



FINAL PROJECT

DETAILS

Choose a real world program

**Research theory of change
and draw detailed logic model**

Design ideal impact evaluation

**Run evaluation using
simulated data**

PROGRAM THEORIES

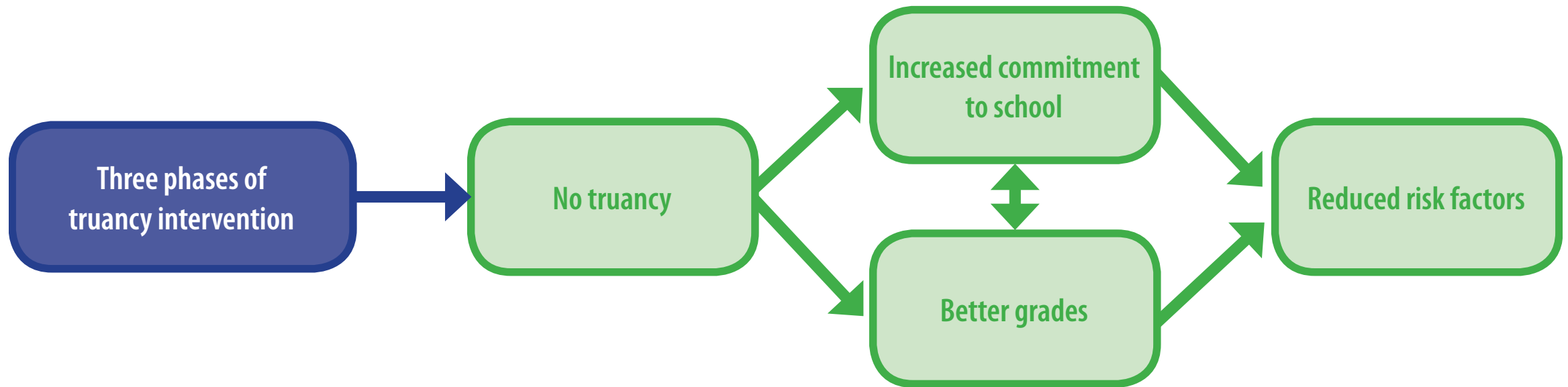
PROGRAM THEORY

**How and why an
intervention causes change**

A sequence of events that connects inputs
to activities to outputs to outcomes

IMPACT THEORY

Causes (activities) linked to effects (outcomes)



ONE LAPTOP PER CHILD (OLPC)



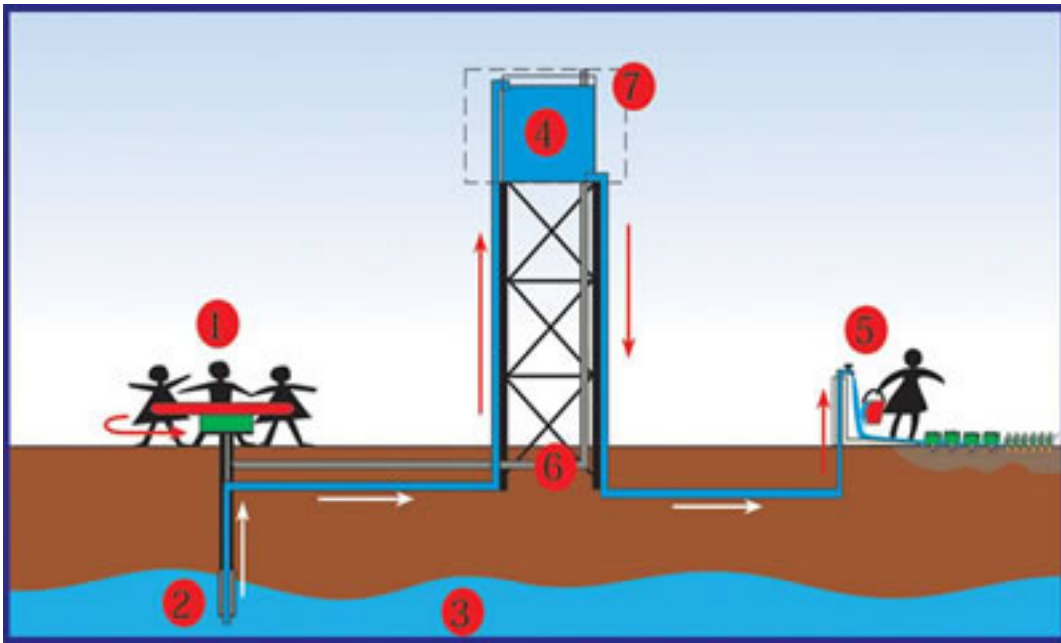
OLPC



OLPC may have undercut even the XO-1's strong points by overselling them. "The utopianism set unrealistic expectations around what the laptops should be able to accomplish," says Morgan Ames, a Berkeley researcher who's currently writing a book about OLPC. That included Negroponte's laptop-tossing demonstrations. "When you're talking about a laptop that kids are using surrounded by concrete floors and cobblestone streets — there was a ton of breakage that really blindsided projects, because they expected these laptops to be a lot more indestructible."

***"THE UTOPIANISM SET
UNREALISTIC EXPECTATIONS
AROUND WHAT THE LAPTOPS
SHOULD BE ABLE TO
ACCOMPLISH."***

PLAYPUMP



Ugandan mothers want justice for their children who died in care of an unlicensed American health worker



By [Rosebell Kagumire](#) in Kampala, Uganda • August 17, 2019



WHY THEORIZE?

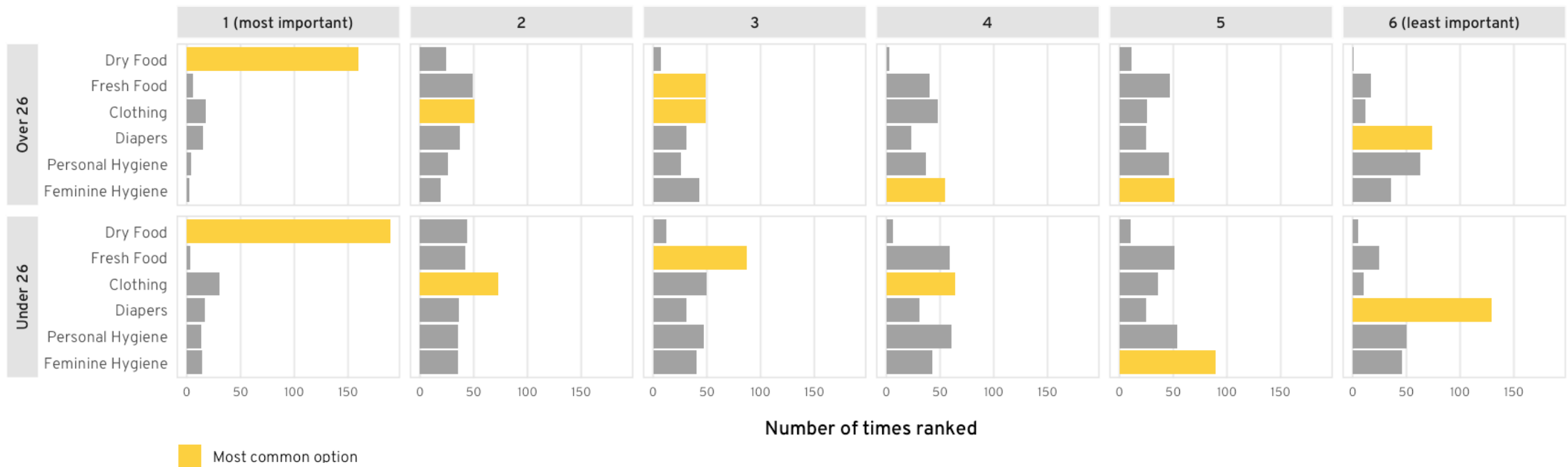
Should all social programs be rooted in explicit theory?

Articulated theory

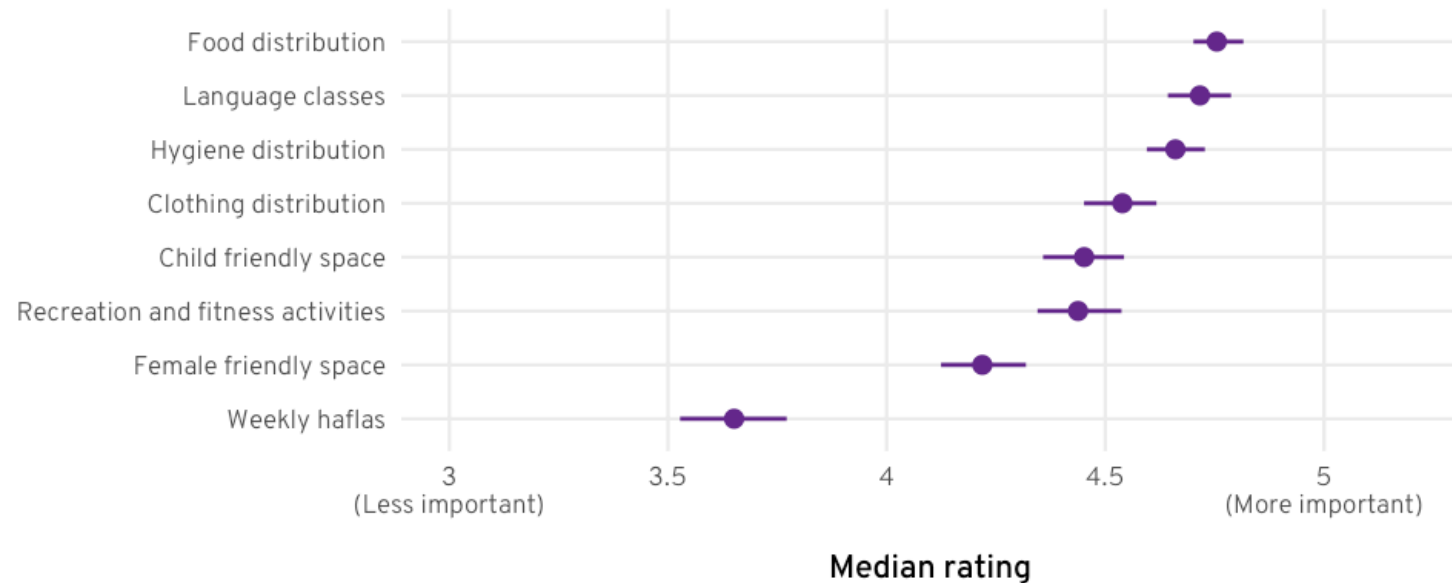
Implicit theory



Distribution preferences by age



Median program importance, overall



LOGIC MODELS & RESULTS CHAINS

PIECES OF A LOGIC MODEL

Inputs

Things that go into a project; money, people, time, etc.

Activities

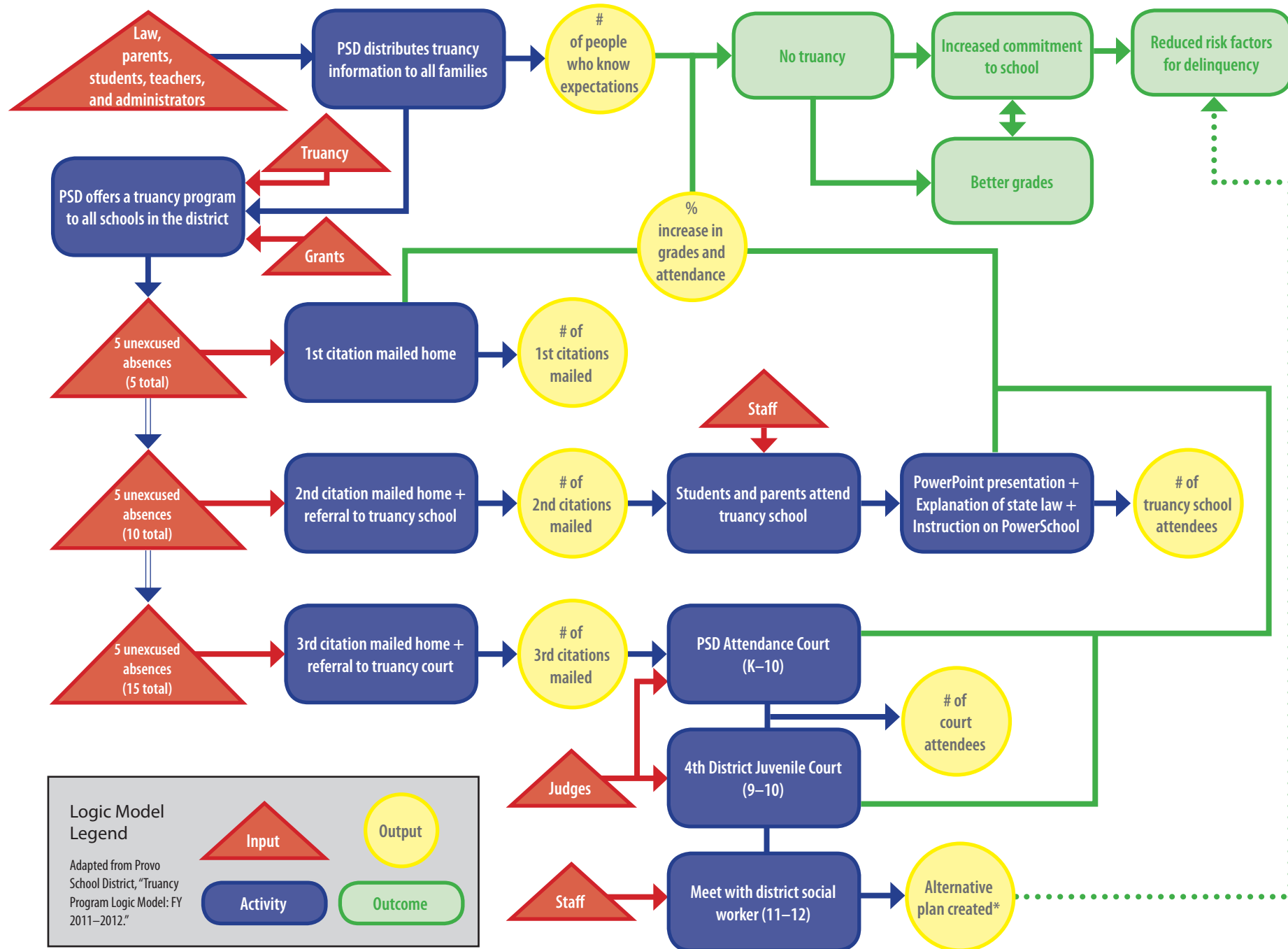
Actions that convert inputs to outputs; things that you do

Outputs

Tangible goods and services produced by activities; you have control over these

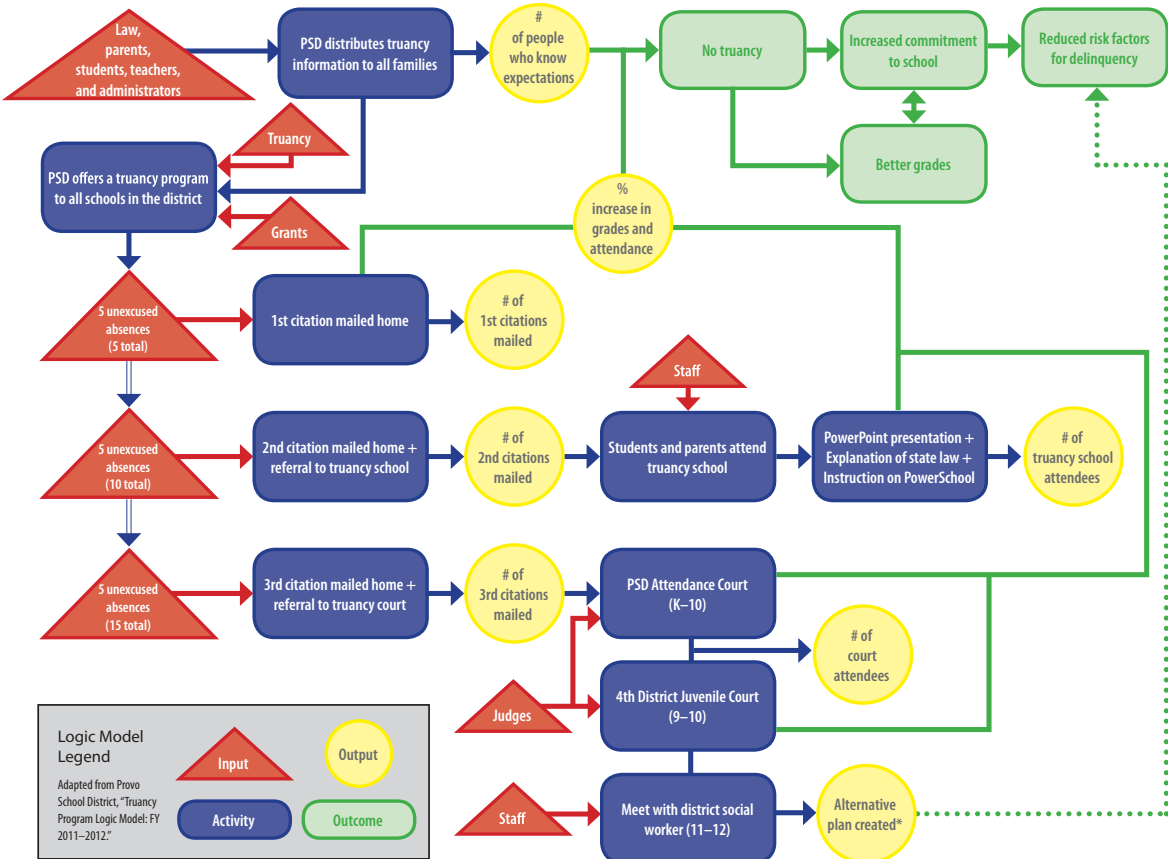
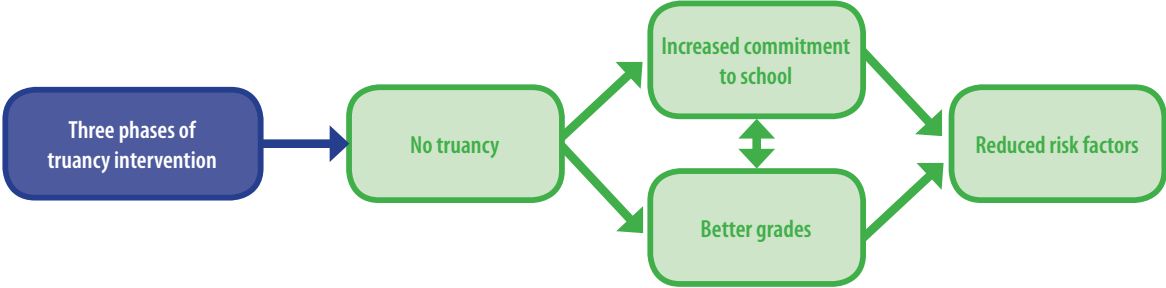
Outcomes

What happens when the target population uses the outputs; you don't have control over these



* Because 11th and 12th graders who receive 3rd citations are generally unable to graduate from high school, district social workers no longer attempt to increase their commitment to school. As such, any outcomes that occur as a result of the alternative plans made for these students (work study programs, career development assistance, etc.) are only tangentially related to the outcomes of the truancy program itself. The system for creating alternative plans is an entirely separate program with its own logic model, goals, and outcomes.

IMPACT THEORY VS. LOGIC MODEL



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MPA/MPP at GSU

Master of Public Policy

Preparing students for roles as effective citizens and workers in the public sphere.

[About](#)[Curriculum](#)[Admissions](#)[MPA vs. MPP](#)[Current Students](#)

The Master of Public Policy (MPP) is an interdisciplinary degree program designed to prepare students for work in the analysis, development, and evaluation of public policies. In all levels of government and on a global scale, public needs and limited resources require public policy choices that are at once economically efficient, socially and technically effective, and politically responsive. Such choices confront policymakers in a broad range of critical issues, including health, education, economic development, public finance, social policy, nonprofit policy, and disaster policy.

Decision-makers often lack the knowledge and skills needed to interpret the full social, political, economic, and technical dimensions of the policy issues they face. In response, state and local governments, businesses, and federal agencies have turned to trained policy analysts for assistance in assessing policy options and in evaluating public programs. The same is true for nonprofit agencies, such as hospitals, schools, emergency preparedness and relief agencies, and regional planning organizations.

Master of Public Administration

A flexible program for working professionals and full-time scholars.

The mission of the Master of Public Administration (MPA) program is to prepare students to become leaders in public service careers as executives, managers, analysts, and policy specialists in government and nonprofit organizations.

Your own logic models

INDICATORS & MECHANISMS



INDICATORS

Inputs, activities, & outputs

Generally directly
measurable

of citations mailed,
% increase in grades, etc.

Outcomes

Harder to directly
measure

Commitment to school,
reduced risk factors

GOOD INDICATORS

Specific

Measurable

Attributable

Realistic

Targeted

Construct validity

**Connected to
theory**

MEASUREMENT

Juvenile delinquency

School performance

Poverty

One of your program's outcomes

MECHANISM TESTING

Measure the relationship between two elements of the logic model (one causal pathway)

Check to make sure the pathway is valid

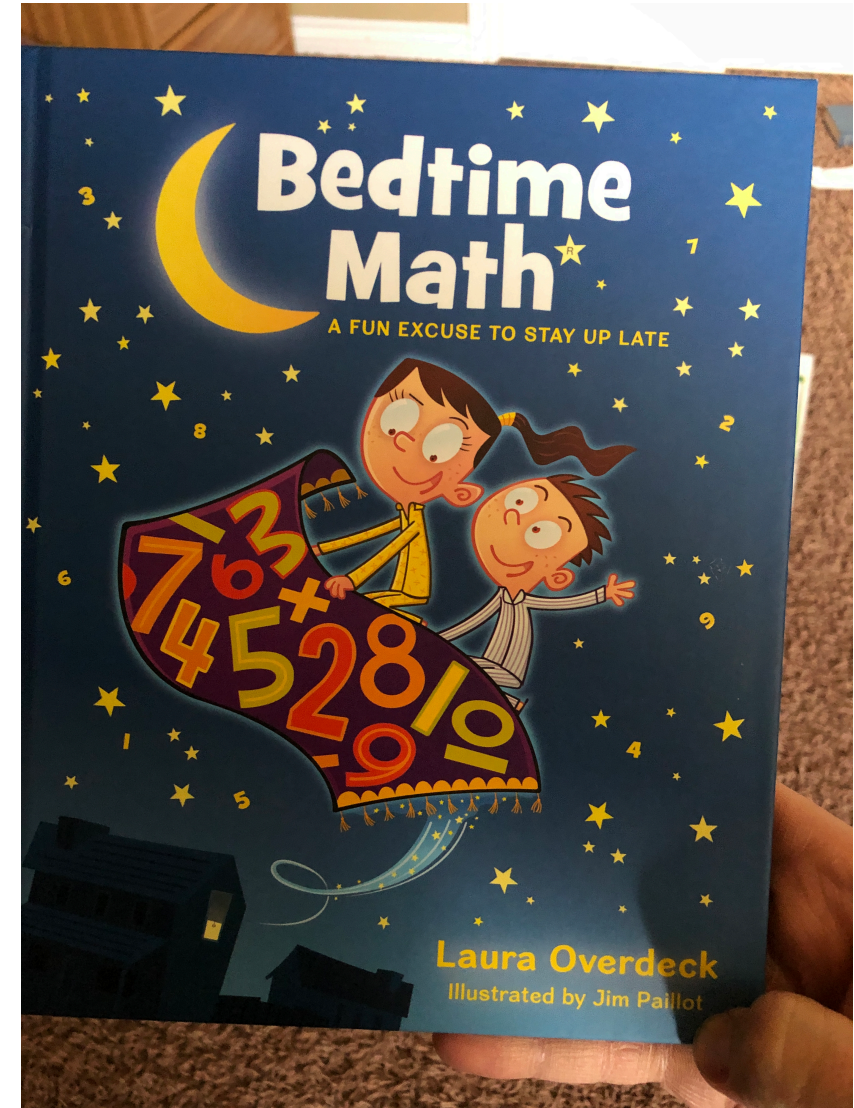
Poverty → obesity

Access to food → obesity

SMALL SCALE TESTING

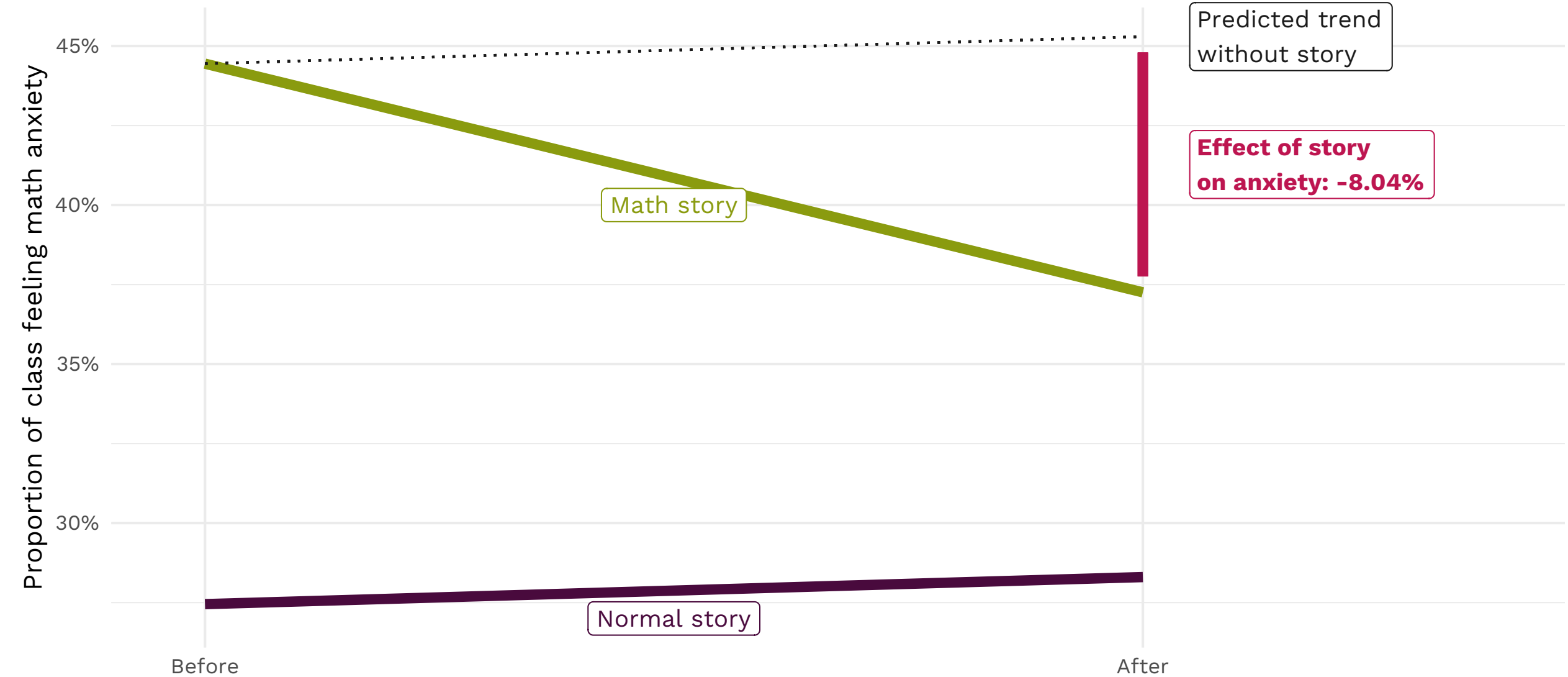
Inclusive teaching approaches → better educational attainment

Reading fun story about math → lower math anxiety → better math scores



Reading a story about math reduces math anxiety

Experiment in four 4th grade classes



MORAL OF THE STORY

**Identifying program theory
is hard, but essential**

**Mapping out complete logic
model is hard, but essential**

Measuring outcomes is hard, but essential

**Test small-scale mechanisms to
check theory and measurements**