



Oded Rechavi 🦉 @OdedRechavi · Apr 30



Correlation Vs. Causation



💬 274

↻ 7.2K

❤️ 49.7K



Every disease has two causes, the first is pathophysiological and the second is political. Black communities today are impoverished, segregated and defunded by design - a public health and economic crisis created by government and state policies that chose winners and losers. Black people are being turned away from hospitals, our young and elderly alike are perishing from being denied a COVID-19 test. These are stark revelations of the ongoing conditions that have denied our humanity and made it too costly, too impossible to survive.

D4BL

[Tweet](#)

Data and Health Inequities

1. Foundations of Data and Measurement
2. Embodiment of Inequalities
3. Data and Discrimination
4. Data, Discrimination, and COVID-19
5. Solutions and Radical Change

Inequities in Health and
Health Research

Data and Health Inequalities

- 1. Foundations of Data and Measurement**
2. Embodiment of Inequalities
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“Statistics present us with a series of techniques that transform raw data into a form that is easier to understand and to communicate or, to put it differently, that make it easy for the data to tell their story.”

Jan de Leeuw and Richard Berk (2004)

Introduction to the Series

Advanced Quantitative Techniques in the Social Sciences



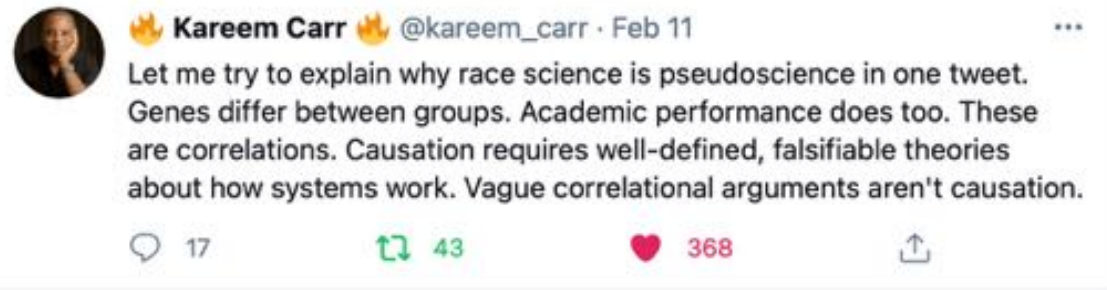
Foundations of Statistics

Major statistical concepts (regression, correlation, etc.) invented by Francis Galton (b. 1822; d. 1911)

- English Victorian statistician, progressive, polymath, sociologist, psychologist, anthropologist, tropical explorer, geographer, inventor, meteorologist, proto-geneticist, and psychometrician.

Foundations of Statistics

- The first to apply statistical methods to the study of human differences and inheritance of intelligence
- Introduced the use surveys and questionnaires for collecting data on human communities
- Was a pioneer in eugenics, coining the term itself and the phrase "nature versus nurture"
- Founded psychometrics (the science of measuring mental faculties) and differential psychology



Foundations of Statistics


Much of early statistics was developed to under eugenics and a *war against "inferior races"* as a logical part of evolution

- For instance, Karl Pearson alleged that Jewish immigrants "will develop into a parasitic race. [...] Taken *on the average*, and regarding both sexes, this alien Jewish population is somewhat inferior physically and mentally to the native population"



 **Kareem Carr** 
@kareem_carr



Hot Takes 

1. Just because some folks use statistics to do racist things doesn't make statistics itself racist
2. We don't need to celebrate dead racists just because they were good at math
3. Using statistics invented by a racist isn't a celebration of the racist

11:22 AM · May 8, 2021 · TweetDeck

60 Retweets **11** Quote Tweets **713** Likes



 **Kareem Carr** 
@kareem_carr



NO SERIOUSLY. Science is SOCIALLY CONSTRUCTED!

10:07 AM · Sep 24, 2020 · Twitter Web App

 **Kareem Carr** 🏆 @kareem_carr · Sep 24, 2020 ...

Replying to @kareem_carr

Imagine a group of people discussing whether there's a lion in the bush. In reality, there is or there isn't a lion in the bush.

5 7 89

 **Kareem Carr** 🏆 @kareem_carr · Sep 24, 2020 ...

Their discussion may or may not conclude with an agreement that there's a lion in the bush. Whatever they decide, the discussion is not reality but it would be nice if it could correspond to the reality.

1 2 93

 **Kareem Carr** 🏆 @kareem_carr · Sep 24, 2020 ...

Science is a very human attempt to have the kind of discussion that concludes that there is a lion in the bush when there is and there isn't a lion in the bush when there isn't.

3 4 126

 **Kareem Carr** 🏆 @kareem_carr · Sep 24, 2020 ...

Imagine how this discussion might go. One person claims to have the best hearing and reports having heard a lion. Another person claims a good sense of smell and claims to have smelled a lion. Another person who is highly skilled at tracking reports seeing lion tracks.

1 64

 **Kareem Carr** 🏆 @kareem_carr · Sep 24, 2020 ...

There is a version of this conversation where they put everything together, pool their impressions, and weigh each other's abilities fairly in order to decide if there's a lion in the bush.

1 67

 **Kareem Carr** 🏆 @kareem_carr · Sep 24, 2020 ...

There's another version of this conversation where they dispute whether the person who says they heard a lion really has good hearing, and whether the one who smelled a lion really has a good sense of smell and so on.

3 72

 **Kareem Carr** 🏆 @kareem_carr · Sep 24, 2020 ...

You could imagine that if the person with the good hearing is unpopular or their good hearing caused a lot of envy that people wouldn't want to agree with that person's assessment. They might fear that the person with good hearing was gaining too much influence in the group.

2 77



🔥 Kareem Carr 🔥 @kareem_carr · Sep 24, 2020 ...

The focus on data and experiments as the defining characteristic of scientific knowledge creation can be distracting because it leads us to think that that's where all the knowledge is being created. It's not.

💬 3 ↻ 4 ❤️ 102 📤



🔥 Kareem Carr 🔥 @kareem_carr · Sep 24, 2020 ...

Mathematicians, for instance, create knowledge by constructing arguments that don't make use of data or experiments. Yet arguably, math is actually MORE reliable than experimental science.

💬 8 ↻ 1 ❤️ 107 📤



🔥 Kareem Carr 🔥 @kareem_carr · Sep 24, 2020 ...

So in conclusion:

1. If we structure discussions correctly, they can produce knowledge but they have to have the right structure.
2. Scientific discourse is one such structure.
3. The knowledge science produces is socially constructed!

💬 34 ↻ 20 ❤️ 184 📤



🔥 Kareem Carr 🔥 @kareem_carr · Sep 24, 2020 ...

The point I want to make here is whatever comes out of the discussion is a product of the social interactions themselves. It is SOCIALLY CONSTRUCTED through the dialog within the group. This is how I see science. Scientific knowledge is socially constructed.

💬 5 ↻ 9 ❤️ 159 📤



🔥 Kareem Carr 🔥 @kareem_carr · Sep 24, 2020 ...

When people object to me saying science is socially constructed, I think what they mean is the lion's location is not a social construct. My point is the DISCUSSION is socially constructed and if we're lucky then the discussion corresponds to the actual state of the world.

💬 16 ↻ 10 ❤️ 234 📤



🔥 Kareem Carr 🔥 @kareem_carr · Sep 24, 2020 ...

If we knew the location of the lion, we wouldn't be having the conversation! We don't have the lion in front of us. We only have the discussion.

💬 1 ↻ 2 ❤️ 108 📤



🔥 Kareem Carr 🔥 @kareem_carr · Sep 24, 2020 ...

Assuming everybody in the discussion cares a lot whether there's actually a lion in the bush, the outcome of such a discussion is not arbitrary at all. It's the collective intelligence of everybody in the group.

💬 2 ↻ 2 ❤️ 76 📤



Foundations



🔥 **Kareem Carr** 🔥 @kareem_carr · Aug 1, 2020

...

EVERYTHING YOU NEED TO KNOW ABOUT "2+2=5". As a former mathematician, I have things to say. 1/📖

💬 327

↻ 2K

❤️ 4.6K



🔥 **Kareem Carr** 🔥 @kareem_carr · Aug 1, 2020

...

Statements like "2+2 = 4" are abstractions. What that means is they're generalizations of "something". You should always think of these statements as associated with an underlying reality. As a data analyst, I love numbers but it's my job to connect them to reality. 2/

💬 28

↻ 62

❤️ 615



🔥 **Kareem Carr** 🔥 @kareem_carr · Aug 1, 2020

...

Literal-minded people might sometimes say things like I put a rooster and hen together and I came back a year later and there were three of them (1+1=3) or they might say I left a fox and a hen together and later I came back and there was only one (1+1=1). 3/

💬 86

↻ 78

❤️ 544





🔥 **Kareem Carr** 🔥 @kareem_carr · Aug 1, 2020



People like this sound stupid but they are making a tremendously deep point. Our numbers, our quantitative measures, are abstractions of real underlying things in the universe and it's important to keep track of this when we use numbers to model the real world. 4/



18



98



998



🔥 **Kareem Carr** 🔥 @kareem_carr · Aug 1, 2020



This is a great lesson for a junior data scientist to remember. Whenever you create a numerical construct like IQ or an aggression score or a sentiment score, it's important to remember that properties of this score might not mirror the real things being measured. 5/



16



188



1.4K



🔥 **Kareem Carr** 🔥 @kareem_carr · Aug 1, 2020



The very act of turning something into a number is an assumption. 6/



10



306



1.6K





🔥 Kareem Carr 🔥 @kareem_carr · Aug 1, 2020

...

Replying to @kareem_carr

You can think of an arithmetic as coming from entities living in an underlying space. For instance, $2+2$ could mean 2 oranges plus 2 oranges. In which case, " $2+2 = 4$ " means 4 oranges is the same amount of oranges. 7/



8



15



429



🔥 Kareem Carr 🔥 @kareem_carr · Aug 1, 2020

...

You can think of an arithmetic as a system of rules like a board game and not think about the underlying space at all. Mathematicians call such systems "formal" which means "I don't care if this stuff really works out, I will apply these rules blindly and hope it makes sense." 8/



7



27



578



🔥 Kareem Carr 🔥 @kareem_carr · Aug 1, 2020

...

The reason numbers feel so right is mathematicians have done all the hard work of figuring out how to make calculations track with reality. They kept modifying and refining the number system until everything worked out. It took centuries of brilliant minds to do this! 9/



8



53



718





🔥 Kareem Carr 🔥 @kareem_carr · Aug 1, 2020

...

At this point, you're probably like "Kareem, are you for real?" You probably think you've never encountered a calculation that felt weird or unnatural. You have! I'll prove it. 10/

💬 4

↻ 13

❤️ 422



🔥 Kareem Carr 🔥 @kareem_carr · Aug 1, 2020

...

One place mathematicians haven't quite figured out how to make things feel as natural is operations around infinity. What is infinity times zero? They just tell you not to do that, right? The reason is because it depends! There is no single answer. 11/

💬 19

↻ 31

❤️ 530



🔥 Kareem Carr 🔥 @kareem_carr · Aug 1, 2020

...

If you take "infinity" to mean a process that's growing very large and "zero" as a process that's shrinking, sometimes the shrinking process overtakes the growing one so $0 \cdot \infty = 0$. Sometimes it's the other way around $0 \cdot \infty = \infty$. Sometimes they balance out and $0 \cdot \infty = 12$.

💬 35

↻ 48

❤️ 629



🔥 Kareem Carr 🔥 @kareem_carr · Aug 1, 2020

...

Because there's no one thing that always happens, we mostly avoid doing arithmetic with infinity. Doesn't that feel like a bit of a con? They don't have a nice set of rules for it, so they tell you not to do it? That's how it is folks. Math isn't as clean as you think it is. 13/

💬 11

↻ 39

❤️ 709





Kareem Carr 🔥 @kareem_carr · Aug 1, 2020 ...

The sense that it all works out nicely is a bit of illusion based on thousands of highly intelligent minds working hard to make sure you know where to step without blowing yourself up. Math is logical but it's not always neat and nice. 14/

4 35 622



Kareem Carr 🔥 @kareem_carr · Aug 1, 2020 ...

My situation is I analyze data all day. I turn reality into numbers. I'm not a mathematician. I don't get to ignore reality. I'm not a layman that can mostly live without playing with math too much. I have to sit on the border between math and reality and make them line up. 15/

14 32 670



Kareem Carr 🔥 @kareem_carr · Aug 1, 2020 ...

So when somebody tells me "2+2=5", I WILL ALWAYS ask them for more details rather than just dismissing them as an idiot because maybe they're talking about chickens and turns out that's how chickens work! 🐔 /

210 153 1.6K

Data and Health Inequalities

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2. **Embodiment of Inequalities**
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Kareem Carr 🍌
@kareem_carr



This thread walks you through a concrete example of how an algorithm can learn racism. It uses some math but only the minimum amount of math possible and has lots of pictures. It is *very* accessible. If that sounds like your thing read on. 📖💡

9:25 PM · Apr 4, 2021 · Twitter Web App

1,924 Retweets 183 Quote Tweets 5,598 Likes



Kareem Carr 🍌
@kareem_carr



Replying to @kareem_carr

Let's start by learning about statistical bias. Statistical bias is a measure of how well a guessing algorithm is at guessing. It's very straightforward. The bias is the average difference between what an algorithm guesses a value is and what that value actually is. 2/11

Understanding the formula for Statistical Bias

Bias is a measure of how well our algorithm does at guessing a number that we care about. We could call that number anything. In this example, let's call it θ .

The Formula for Statistical Bias

	AVERAGE GUESS	TRUE VALUE	
Bias	$= E[\hat{\theta}]$	$- \theta$	

**Our attempted guess
of θ**

$$\hat{\theta}$$

**The average over all our
guesses across all
possible datasets**

$$E[\hat{\theta}]$$

@kareem_carr

9:25 PM · Apr 4, 2021 · Twitter Web App

 **Kareem Carr** 🧡 @kareem_carr · Apr 4 ...
The example I'm going to talk about is an algorithm that learns how to measure feelings based on text. We call this measurement a "sentiment score". 3/11

 **Kareem Carr** 🧡 @kareem_carr · Apr 4 ...
A sentiment score of zero is neutral. A positive score means positive feelings and a negative score means negative feelings. The more positive the sentiment score, the more positive the feelings. The more negative the sentiment score, the more negative the feelings. 4/11

 **Kareem Carr** 🧡 @kareem_carr ...
Replying to @kareem_carr

In this example, an amazing thing happens. Our algorithm learns racism! It learns that in general people have negative feelings about certain minorities. Many people will claim the algorithm is malfunctioning but it's not. It's seems to be learning people's actual feelings. 5/11

What happens when you don't understand what your algorithm is learning?

We want these sentences to all give the same score but they don't.

```
text_to_sentiment("Let's go get Italian food")
2.0429166109
text_to_sentiment("Let's go get Chinese food")
1.4094033658
text_to_sentiment("Let's go get Mexican food")
0.3880198556
```

The algorithm is probably accurately learning real feelings of people based on the data but it's not learning what we intended it to learn.

We never told the algorithm that we didn't want to learn racism!

"My name is _____" is a neutral statement so the score should be about 0.

```
text_to_sentiment("My name is Emily")
2.2286179365
text_to_sentiment("My name is Heather")
1.3976291151
text_to_sentiment("My name is Yvette")
0.9846388213
text_to_sentiment("My name is Shaniqua")
-0.4704813178
```

We wanted to learn the sentiment score of the sentence "My name is _____" which should be independent of the particular name used Emily, Shaniqua, etc

*partially based on analysis by Robyn Speer and images by Mark Wang



 **Kareem Carr** 🧡 @kareem_carr · Apr 4 ...
If we think about the definition of statistical bias at the beginning of the thread, it gives us a hint about what our mistake is. 6/11

The Formula for Statistical Bias

$$\text{Bias} = E[\hat{\theta}] - \theta$$

AVERAGE GUESS TRUE VALUE

2 16 303

 **Kareem Carr** 🧡 @kareem_carr · Apr 4 ...
What's happening is when we learned feelings from the data, we implicitly defined the "true value" as people's actual feelings. If we don't care about racism then we should have defined it as people's actual feelings excluding racism. 7/11

When it comes to data: Ignorance is not bliss


If our algorithm assumes this

text → sentiment

But the relationship in our data looks like this



Then our estimate of sentiment will be confounded by race.

 @kareem_carr

6 40 428

 **Kareem Carr** 🧡 @kareem_carr · Apr 4 ...
This issue is called confounding. Confounding happens whenever we compare two things and neglect a third variable that could be driving the difference. 8/11

2 30 484



🔥 Kareem Carr 🔥 @kareem_carr · Apr 4

...

For instance, we might find that Apple users are more happy than Windows users and conclude that this is because of their computer choices but Apple products cost more. So the real reason Apple users are happier might be because Apple users have more money. 9/11

💬 3

↻ 37

❤️ 598



🔥 Kareem Carr 🔥 @kareem_carr · Apr 4

...

When people collect data and blindly learn whatever relationships are in the data, they can never be sure that what they're learning is what they intend to learn. They're implicitly making potentially false assumptions about the causal relationships in the data. 10/11

Learning from data is never truly assumption free.



I know this wasn't what you wanted to hear.

At minimum, we must make some assumptions about causation.

🐦 @kareem_carr

💬 2

↻ 56

❤️ 547





🔥 **Kareem Carr** 🔥 @kareem_carr · Apr 4



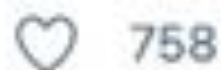
This is why it's extremely important to understand the relationships in the data and why "learning from the data" or being "data-driven" isn't enough when your data doesn't come from real experiments that were designed to generate the right kind of information. 11/11



5



81



758



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DATA 4 BLACK LIVES

-MCTP - November 17, 2017 - @DABL

OPENING REMARKS - UMBERT MILNER

Bringing scientists + activists together



Worked with data as a youth organizer

*Come back - "telling it like it is" -> using data to tell story of the school to prison pipeline

EDUCATIONAL SYSTEM PUNISHES DISCIPLINES - doesn't support students at the expense of black students

DABL born from a desire to transform the role technology plays in the lives of black people

KEYNOTE - KHA BENAMIN

Participate - talk back, hover, INTERRUPT.

Interpretation is required to understand data



We don't FIND data, we PRODUCE it.

TROUBLE THE IDEA OF ASOCIAL, AHISTORICAL DATA!

techno-logical determinism

What does it mean to partner with our data?

human beings are partnering with our algorithms

So much of this starts with the criminalization of children

← IT'S A CONTINUUM →

what we're talking about is LOW-KEY VIOLENCE before the spectacles

Black deaths: black debt

part of this is ^{all} ECONOMIC TERRORISM

What are liberating technologies?

What does it mean to talk about data for black life?

YOU CAN'T FIX
WHAT YOU CAN'T
MEASURE

violence
does not
exist in a
vacuum

public safety is on a
sliding scale
OR IF WE ARE PUTTING
NON-VIOLENCE the meaning people in
Now, we're giving people
a false sense of security

DATA ON VIOLENCE
ONLY BEGINS
3 YRS

ADVOCATES
NEED TO
BRING
NUMBERS
TO THE
FIGHT

In the absence
of data,
there are
ASSUMPTIONS
those #s
assumptions
are based
on **LIES**

narratives of
denial responsibility
used to combat
data

Lawmakers cannot
absolve themselves
of responsibility for
community devastation

NEXT YEAR
THERE ARE
1000 DA
ELECTIONS

every
industry
needs more
TECH LITERACY

What happens
when you are
worn out from
fighting with
numbers?

THOSE
NUMBERS
ARE
LIVES
there's a group of
people getting under
FORESIGHT (white
people)

MAKE YOUR DATA
accessible

YOU NEED TO HAVE A
GOOD QUESTION
before
YOU COLLECT DATA!

bad data management puts activists
at RISK

TECHNICALLY
ACCURATE WORK
CAN STILL BE
HARMFUL

We need to build
TRUST
and reframe
narratives
Your audience
may not be
data literate

November 19, 2017
BREAKOUT SESSION: BLACK WORK,
BLACK WEALTH,
BLACK FUTURES
TOTAL BILLIONAIRES FORUM, BLACK EXITS, DATA
PARTICIPATION, OTHER MILLIONAIRE, GAYMON COX

THE COLOR OF
WEALTH REPORT
→ BOSTON

→ Boston has the biggest
wealth gap in Massachusetts

ECONOMIC JUSTICE: → difference from
economic equity

It means the world.
It's about freedom. It's
about who makes
decisions.

Making sure
people know
what options
are available
to them

creating a
future where
growing is the
priority
-tech

Community self-
determination
making the present
sustainable

November 18, 2017 ^{Panel for Black Lives}

OPENING PANEL-DATA FOR BLACK LIVES

Mathematics have been **RECOGNIZED**

Whoever's in power gets to choose what's relevant data & gets to define success.

people deciding what success is often do not share in the experience of failure

THE RAIL SYSTEM IS TERRIBLE, BUT RISK ASSESSMENT IS TERRIBLE TOO.

RISK ASSESSMENT QUESTIONS = PROXIES FOR RACE & CLASS



CRIME DATA ≠ ARREST DATA

White crime data is MISSING

PREDICTING CRIME ≠ PREDICTING POLICE

we need a **DATA BILL OF RIGHTS**

TECH IS a new ecosystem of **CIRCLE OF POWER** ^{violence + subordination} ^{tools for naming violence + advocating for rights}

document the abuse human rights law mantra **USE SOCIAL MEDIA TO BEAR WITNESS** ^{BE PROXIMATE} ^{silence happens in the context of isolation} ^{WALLS}

MOST OPPORTUNITIES COME DISGUISED AS HARD WORK

RACISM: historically rooted system of dehumanizing power structures & behaviors → embedded in policy structure **EVERYONE** ← U.S.

we often miss the complexity, & THAT'S DISRESPECTFUL.

data ≠ information

POWER

- who controls resources? time?
- who defines norms?
- who creates the NARRATIVE?

RELATIONSHIP POWER ^{everything we do is based on relationships}

APRIL 15, 2020

DATA FOR BLACK LIVES MOVEMENT ROUNDTABLE: COMMUNITY RESPONSES TO COVID-19

WELCOME +
PULSE CHECK
- yeshi milner

LOSS OF LIFE HAS BECOME
NORMALIZED IN Black
COMMUNITIES:

OUR FUTURE SURVIVAL
DEPENDS ON OUR
ABILITY TO MAKE
BOLD DEMANDS

RACE ON ITS OWN
IS NOT A RISK FACTOR.
RACISM IS.

making this moment
about more than
temporary aid

RACISM = a technology
in deciding who
LIVES OR DIES

Flies who passed away from COVID-19
are in the realm of ancestors now

their deaths will not be in vain

PHOTO: L. SUTHERLAND @L.SUTTO

a timeline of

Structural racism
+ precarity - Zinzi Bailey



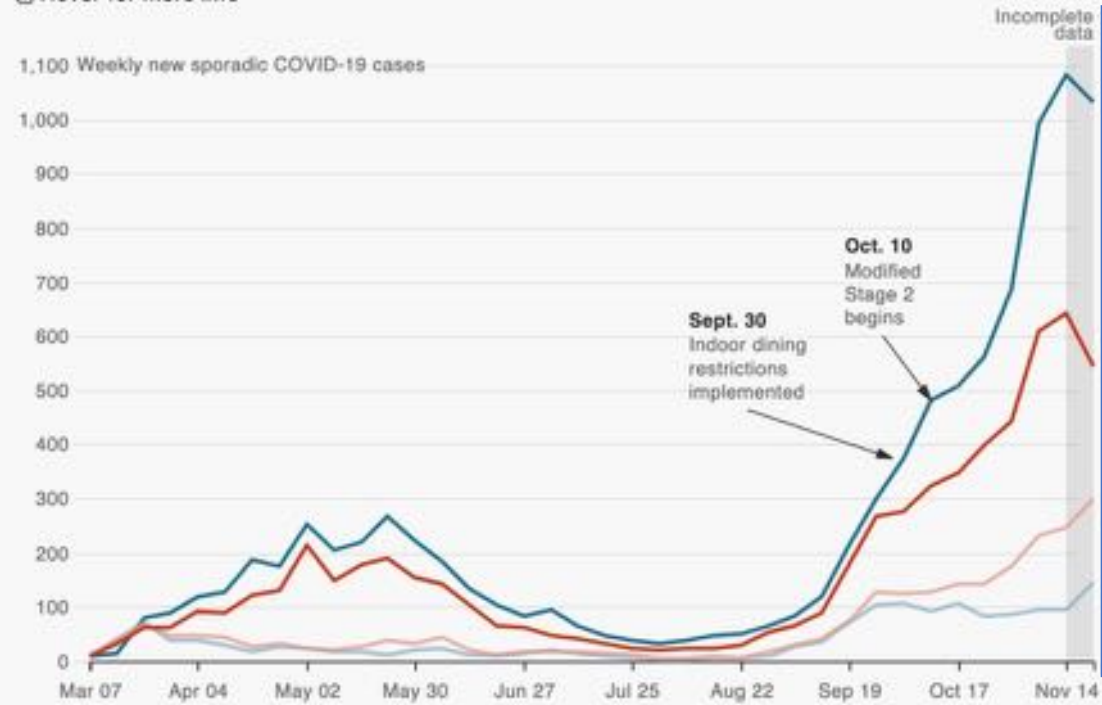
more at [IHPR.ORG](#)

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- 20 neighbourhoods with **highest** % visible minority
- 20 neighbourhoods with **lowest** % visible minority
- 20 **highest**-income neighbourhoods*
- 20 **lowest**-income neighbourhoods*

Hover for more info



*The 20 neighbourhoods with the highest and lowest percentage of residents in low-income households, using census LIM-AT measure.

SOURCE: TORONTO PUBLIC HEALTH OPEN DATA PORTAL COVID-19 DATASET

STAR GRAPHIC



Jennifer Yang @jyangstar · Dec 4, 2020

This graphic shows that in the 1st wave, Toronto's poorest & most racialized areas contracted COVID-19 at much higher rates than the city's whitest & most affluent.

It also shows: the same thing is happening again

[thestar.com/news/gta/2020/...](https://thestar.com/news/gta/2020/)

Early signs suggest race matters when it comes to COVID-19. So why isn't Canada collecting race-based data?



Canada has 'no plans' to collect race-based data amid COVID-19 despite signs of disparities in U.S.

Shanifa Nasser - CBC News - Posted: Apr 17, 2020 6:26 PM ET | Last Updated: April 18



In Chicago, black residents are 30 per cent of the population, but make up more than 70 per cent of COVID-19-related deaths. Canada doesn't track racial data, something many advocates would like to see change. (CBC/Radio-Canada)

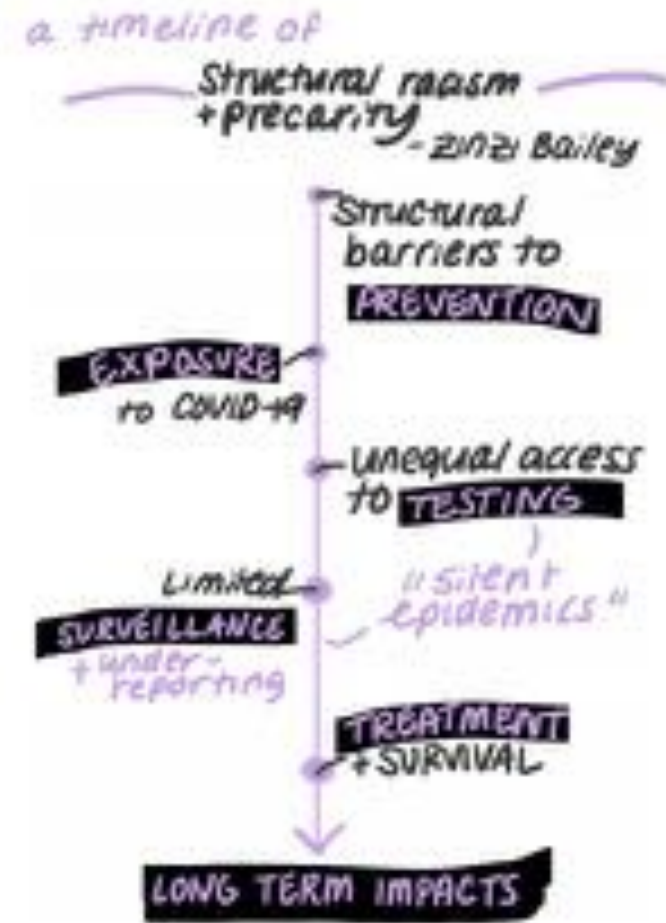
“Regardless of race, ethnic or other backgrounds. They're all equally important to us.”

- Dr. David Williams

But as to whether Canada intends to collect that sort of data, a spokesperson for chief public health officer Dr. Theresa Tam told CBC News this week, “There are currently no plans to add more social determinants of health (such as education or income) as risk factors to the case reporting form used for the collection of COVID-19 data.”

YOU CAN'T FIX
WHAT YOU CAN'T
MEASURE

In the absence of data, there are ASSUMPTIONS } those \$8 assumptions are based on LIES.



THIS FORM MUST BE FILED FORTYWITH WITH THE DIVISION REGISTRAR OF THE DIVISION IN WHICH THE DEATH OCCURRED BEFORE A BURIAL PERMIT CAN BE ISSUED.

Write form if placed in an envelope, marked "Resurrection Information - Free, postage for recipient not included," and properly addressed will pass through the Mail - FREE.

FORM 8
PROVINCE OF ONTARIO
CERTIFICATE OF REGISTRATION OF DEATH 374
023798

1. PLACE OF DEATH: County of Middlesex Township of London Street St George Street No. 64

2. NAME OF DECEASED: Laughton John Hugh
 Residence 54 St George St.

3. Sex m 4. Marital status widower

5. BIRTHPLACE Hamilton Ont

6. DATE OF BIRTH July 1 1939

7. AGE OF DECEASED: 74 4 21 yrs or mos

8. OCCUPATION OF DECEASED: Retired
Commercial Traveler

9. LENGTH OF RESIDENCE: (a) At place of death 19 yrs (b) In previous lifetime (c) In Canada (if an immigrant)

10. Place of father John Laughton
 Birthplace of father Scotland

11. Maiden name of mother Myrtle
 Birthplace of mother Ireland

12. Name of informant Fred Laughton
 Address Parkhill Ont.

13. Place of burial St. Joseph's Chh. Date of burial Nov 24 1983

14. Name of Undertaker Geo E Logan Address London

15. Burial permit issued by J Baker Date Nov 29 83

MEDICAL CERTIFICATE OF DEATH

16. DATE OF DEATH November 22 1983

17. I HEREBY CERTIFY that I attended deceased from and last saw him live on November 22 83

18. The CAUSE OF DEATH was as follows:
Terminoin Anaemia

19. CONTRIBUTORY CAUSE: Spinal Cord Involvement
low white cells

20. Where was disease contracted if not at place of death?
at home

21. Did an operative procedure death? No Date of Reason for operation

22. Who gave an autopsy? No
 (Signed) Dr. B. Busby
 Address 556 Wellington St. E.
 Date Nov 24 1983

23. State the disease causing death or its death (if known) (Specify cause, name) (Use code and figures of ICD-9 for classification) (Use code of ICD-9 for classification)

Ontario Ministry of Government Services Office of the Registrar General **Medical Certificate of Death - Form 16**

You must use the Stillbirth Registration Form B when registering stillbirths. This form must be completed by the attending physician, coroner, or designated person before a burial permit can be issued. Please PRINT clearly in blue or black ink as it is a permanent legal record.

Hospital code number

INFORMATION ABOUT THE DECEASED

1. Name of deceased (last, first, middle) 2. Date of death (month - by name, day, year (in full))

3. Sex (M or F) 4. Age 5. If under 1 yr. Months Day 6. If under 1 day Hour Minute 7. Gestation age 8. Birth weight

9. Place of death (name of facility or location) hospital nursing home residence other (specify)

10. City, town, village or township Regional municipality, county or district

CAUSE OF DEATH

11. Part I

Immediate cause of death (a) due to, or as a consequence of

Antecedent cause, if any, giving rise to the immediate cause (a) above, stating the underlying cause last (b) due to, or as a consequence of (c) due to, or as a consequence of

Part II

Other significant conditions contributing to the death but not causally related to the immediate cause (a) above

12. If deceased was a female, did the death occur during pregnancy (including abortion and ectopic pregnancy) within 42 days thereafter between 43 days and 1 year thereafter

13. Was the deceased dead on arrival at the hospital? Yes No 14. Was there a surgical procedure within 28 days of death? Yes No 15. Date of surgery (mm/dd/yyyy)

16. Reason for surgery and operative findings

Autopsy particulars 17. Autopsy being held? Yes No 18. Does the cause of death stated above take account of autopsy findings? Yes No 19. May further information relating to the cause of death be available later? Yes No

Accidental or violent death 20. If accident, suicide, homicide or undetermined (specify) 21. Place of injury (e.g. home, farm, highway, etc.) 22. Date of injury (mm/dd/yyyy)

23. How did injury occur? (describe circumstances) (if applicable)



Home » Racism and racial discrimination: Data collection (fact sheet)

Racism and racial discrimination: Data collection (fact sheet)

+ show tags

The Ontario Human Rights Code (the "Code") permits the collection and analysis of data based on race and other grounds, provided that the data is collected for purposes consistent with the Code, such as to monitor discrimination, identify and remove systemic barriers, address historical disadvantage and promote substantive equality.

In the context of racial discrimination, data collection and analysis can be a necessary or even an essential tool for assessing whether rights under the Code are being or may be infringed and for taking corrective action. Therefore, it is the Commission's position that there are situations that call for the collection and analysis of data about race and related grounds. Data collection and analysis should be undertaken where an organization has or ought to have reason to believe that discrimination, systemic barriers or the perpetuation of historical disadvantage may potentially exist. This must be assessed on an objective and subjective basis. The organization's actual knowledge of a problem will be considered as will whether, from the point of view of a reasonable third party, the organization should have been aware of the problem.

Some situations which may warrant data collection and analysis might include:

- Persistent allegations or complaints of discrimination or systemic barriers;
 - A widespread public perception of discrimination or systemic barriers;
 - Data or research studies demonstrating discrimination or systemic barriers;
 - Observed inequality in the distribution or treatment of racialized persons within an organization; or
 - Evidence from other organizations or jurisdictions that a similar policy, program or practice has had a disproportionate effect on racialized persons.
- Data collection should be conducted in good faith with the goal of producing good-quality, accurate and meaningful data, rather than achieving a particular outcome. Accepted data collection techniques and proper research and design methodologies should be used.

It will often be appropriate for an organization to seek out the expertise of someone who is familiar with good data collection and analysis techniques. In other situations, it may be possible to rely on existing resources such as employment equity tools. Staff collecting the data should be given appropriate training. The Commission recognizes that how data collection is done depends on the context, including the issue that needs to be monitored, and the nature and size of the organization.

An organization that chooses not to collect data in situations where data collection is warranted may not be able to make a credible defence that it did not discriminate.

Data and Health Inequalities

1. Foundations of Data and Measurement
2. Embodiment of Inequalities
3. Data and Discrimination
4. Data, Discrimination, and COVID-19
5. **Solutions and Radical Change**



🔥 **Kareem Carr** 🔥 @kareem_carr · Oct 30, 2020



The solution to racism in data analysis isn't less statistics. It's more and better statistics. We need more of the kind of statistics that is precise in its assumptions and transparent about its goals.



9



47



464





Kareem Carr 🔥

@kareem_carr



Sciences can have goals! Some folks think social sciences aren't legit sciences because they are explicit about their goals yet health sciences have the explicit goal of preserving human health and we don't doubt they're sciences.

11:30 AM · Dec 1, 2020 · Twitter for iPhone

21 Retweets 4 Quote Tweets 132 Likes



Kareem Carr 🔥 @kareem_carr · Dec 1, 2020



Replying to @kareem_carr

The cold unfeeling objective universe doesn't care about human health. That's an agenda humans bring to health sciences because good health is something WE want. Similarly it's not illegitimate to scientifically study humans in order to create a more just and equal society!

2

8

60





 **Kareem Carr** 
@kareem_carr



There's a controversy brewing between philosophy twitter and epidemiology twitter about how to do good science. The question boils down to this:

Is it a good idea for scientists to show bias in how they ask scientific questions?

It's an fun debate so lets dig in...

3:19 PM · Dec 22, 2020 · Twitter Web App

42 Retweets **12** Quote Tweets **272** Likes



Kareem Carr 🙌 @kareem_carr · Dec 22, 2020

Replying to @kareem_carr

What I think @EpiEllie means is you should construct experiments and collect data in ways that make it possible to falsify your hypothesis. Otherwise, you can become trapped in prison of your own beliefs.



Dr Ellie Murray @EpiEllie · Dec 21, 2020

The past 12 months, I've heard a disturbingly large number of people, even respected senior scientists, ask the question: "how do I design a study to prove this fact I already believe is true?"

Um, you shouldn't?!

Ask instead: "how do I design a study to learn *if* it's true?"

[Show this thread](#)



1



7



79



Kareem Carr 🙌 @kareem_carr · Dec 22, 2020

I think @KevinZollman has a different concern. There might be situations where all your data so far says A is true but in fact B is true. He thinks the only way out of this situation is to allow people to test irrational ideas just in case they are right.



Kevin J.S. Zollman @KevinZollman · Dec 22, 2020

While this statement will strike many as obviously true, it's worth interrogating.

Here's the question: does science do best when it's practitioners take a neutral position regarding the truth of a proposition?

A thread with some reasons to think "no." [twitter.com/EpiEllie/statu...](https://twitter.com/EpiEllie/status...)

[Show this thread](#)



2



2



36





🔥 Kareem Carr 🔥 @kareem_carr · Dec 22, 2020

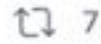
...

So to summarize:

1. Don't let your data limit your hypothesizing (@KevinZollman)
2. Don't let your hypothesis completely define your data collection and analysis (@EpiEllie)



1



7



70



🔥 Kareem Carr 🔥 @kareem_carr · Dec 22, 2020

...

I think principle 1 needs a caveat. First. The hypothesis should probably come from some reasonable place like human intuition.



3



1



32



🔥 Kareem Carr 🔥 @kareem_carr · Dec 22, 2020

...

I think principle 2 should have the caveat that sometimes you're collecting data in order to measure something (i.e. fit a parameter in a model). It's not always about refuting the hypothesis.



2



2



38



🔥 Kareem Carr 🔥 @kareem_carr · Dec 22, 2020

...

In conclusion, I think both principles are true and don't conflict with each other. They are both important ideas that scientists need to keep in mind.



2



32





Annual Review of Public Health

Measures of Racism, Sexism,
Heterosexism, and Gender
Binarism for Health Equity
Research: From Structural
Injustice to Embodied
Harm—An Ecosocial Analysis

Nancy Krieger

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Annu. Rev. Public Health 2020. 41:37–62

First published as a Review in Advance on
November 25, 2019

Keywords

gender identity, health equity, heterosexism, racism, sexism, structural
injustice

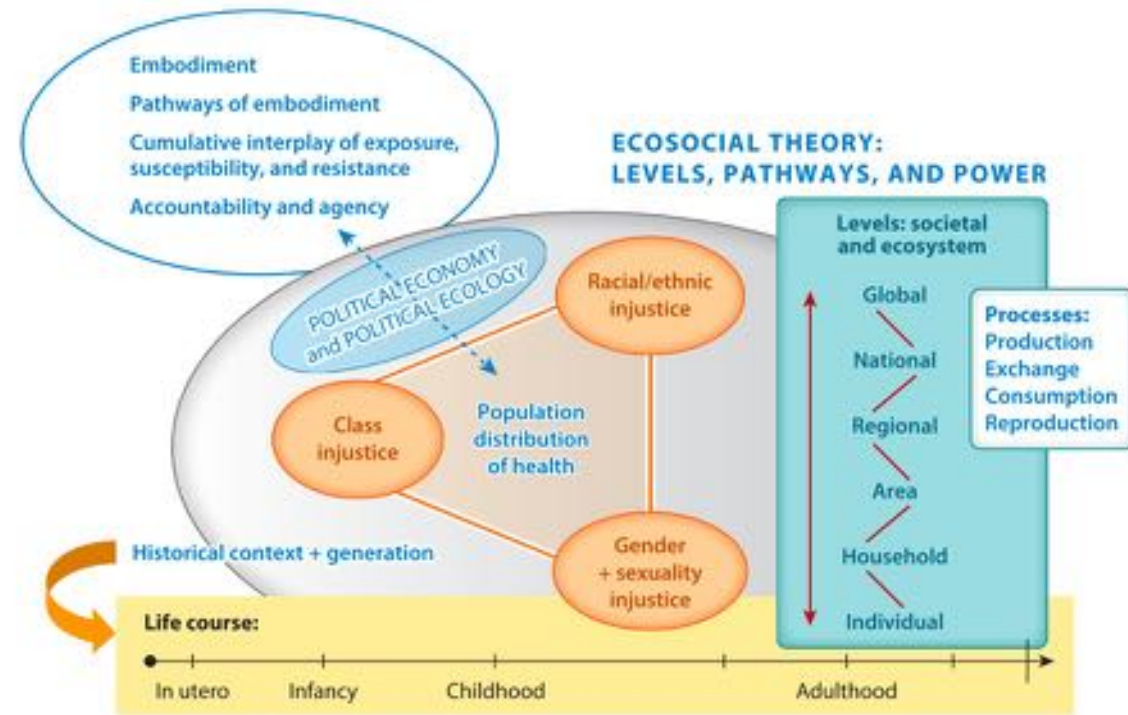


Figure 1

This figure schematically presents how the ecosocial theory of disease distribution conceptualizes the relationship between population distributions of health, levels, pathways, and power to clarify how health inequities constitute biological expressions of injustice. The ecosocial theory of disease distribution posits four conjoined core constructs (*white oval with blue outline*) (91–98): (i) embodiment; (ii) pathways of embodiment; (iii) cumulative interplay of exposure, susceptibility, and resistance; and (iv) accountability and agency. These constructs are fundamental to causal explication of population distributions of health. All of these constructs operate (v) across the life course, contextualized in relation to historical generation (i.e., birth cohort) (*yellow rectangle*) and (vi) across levels (*turquoise rectangle*), as mediated by (vii) the society’s political economy and political ecology (*light blue oval*). For further explication of these concepts, please see the sidebar titled Core Constructs of Ecosocial Theory as well as the sidebar titled Pathways of Embodiment.

ON THE GROUND: ATL DABL hub leaders

Lisa Clinton, Michelle Wilson, Courtney Andrews, Nchedo Ezeokoli

COMMUNITY IS SO IMPORTANT right now.

act from a place of **Abundance** —not scarcity—

FORMERLY INCARCERATED PEOPLE NEED:

- A SEAT at the table
- Support in leadership
- trauma-informed attention

PEOPLE POWER must come from COMPASSION + HUMANITY at the intersections.



LISTEN with mind + heart

meet people where they are at

MUTUAL AID IS BEAUTIFUL

practice COMPASSION = not just transactions

building relationships + trust

IF YOU HAVE **POWER**, get out of the way

Mutual aid networks are a form of public health infrastructure

Redistribute wealth

\$\$\$

need for sustainable, ongoing funding

AMPLIFY ongoing work + don't reinvent the wheel

build bridges

NEXT STEPS + calls to action

Focus on the people directly impacted + uplift their voices

Push for accurate reporting + recording that doesn't weaponize data

Challenge the power dynamics of funding

this is just the beginning.

Thank You

Dr. Paul Peters

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[@unitepangaea](#)

