Treadmills
Fractals
Apples and Oranges

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Treadmills

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- ▶ The science of media exposure is more of a treadmill or a Stairmaster®

Brief History of Measurement

- Binary
    - The simplest and earliest measures of media exposure were binary

- Ordinal
    - . . . rankings of sources/outlets
    - . . . self-reported degree of attentiveness

- Interval
    - Time-based, frequency-based, and passive measures

Solutions?

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- More specific measures

History and Measures

Program	Years Measured by Pew BMCS
"Evening News"	1996–2012
"Local TV"	1996–2012
"Local cable"	2000
MTV	1996–1998
Limbaugh	1996–98, 2002–2012
A Current Affair	1996–1998, 2008
Daytime talk shows	1996–2002, 2012
Court TV	1998–2000
Today Show	1998–2004, 2008–2012
Keith Olbermann	2008–2010
Daily Show	2002–2012
Glenn Beck	2010
. . .	

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Measures and our ability to validate them are time and context dependent!

Fractals

How long is the coastline of Britain?

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It depends on the length of your ruler.

How much media exposure has a given person experienced?

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It depends on the precision and form of your measure.

The treadmill reveals fractals

- Source-based measures reveal the landscape is infinitely diverse
  - We are far removed from the 1950s (US) or dominant public broadcaster (Europe) media landscape
  - What is the population of media content?

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- ▸ Source-based measures reveal the landscape is infinitely diverse
  - ▸ We are far removed from the 1950s (US) or dominant public broadcaster (Europe) media landscape
  - ▸ What is the population of media content?

- ▸ Our measures are never fully informative

  - ▸ Hours in a day
 - ▸ Stories in a week
  - ▸ . . .

Source–Frequency Nexus

If the number of sources is infinite and the right metric of media time-use is possibly and meaningfully infinitely small, we cannot conceptualize the totality of an individual's exposure to media let alone measure it using any self-report or passive device.

And that doesn't even begin to address:

- ▶ Secondhand exposure
- ▶ News links or content on social media
- ▶ Dual screening
- ▶ Active/passive distinctions
- ▶ Exposure/attention/reception

Apples and Oranges
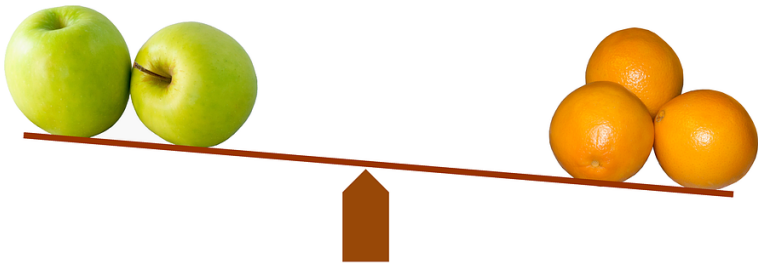
Apples and Oranges

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- ▶ Is a minute of 1960s CBS equivalent to a minute of Twitter?

Apples and Oranges

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- ► Is the effect of the New York Times the same for everyone and at all times?
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Apples and Oranges

- ▶ Is the effect of the New York Times the same for everyone and at all times?
- ▶ Is the effect of television the same for everyone and at all times?
- ▶ Is the effect of Facebook the same for everyone and at all times?

Apples and Oranges

If we can't even compare 'like with like'

- ▶ New York Times and Wall Street Journal
- ▶ CNN in 1998 and CNN in 2017
- ▶ Facebook for you and Facebook for me

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how can we meaningfully study the effects of exposure across media, across time, across geography, and across people?

Content, topics, & events

If time-use and source-based metrics are fundamentally flawed, what can we do instead?

One answer is to focus on **content**.

Content, topics, & events

But what are relevant aspects of content?

- ▸ Broad topic
- ▸ Specific facts
- ▸ Tone
- ▸ Frame
- ▸ Ideology
- ▸ . . .

So what?

Three huge problems

1. Treadmills

2. Fractals

3. Apples and oranges

Three huge problems

1. You can't reach the end of the treadmill, even if you run really fast!

2. Are **time-use** and **source** even the right ways to be theorizing media?

3. Media and exposure experiences are not comparable, we just pretend they are.

We need to get off the treadmill.

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2. Forward causal inference

3. Effect heterogeneity

4. Research design

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But that's an unobtainable ideal, so we should do the best we can.