

A Window of Opportunity

How do we turn the COVID-19 crisis into a much-needed paradigm shift?

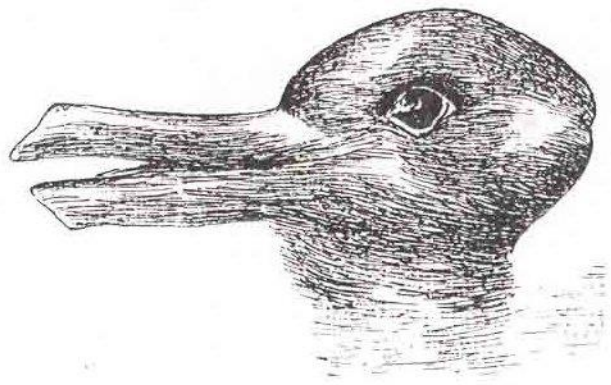


Global Health Me

Danielle M. Agnello
24 September 2020



WHAT DO YOU SEE?

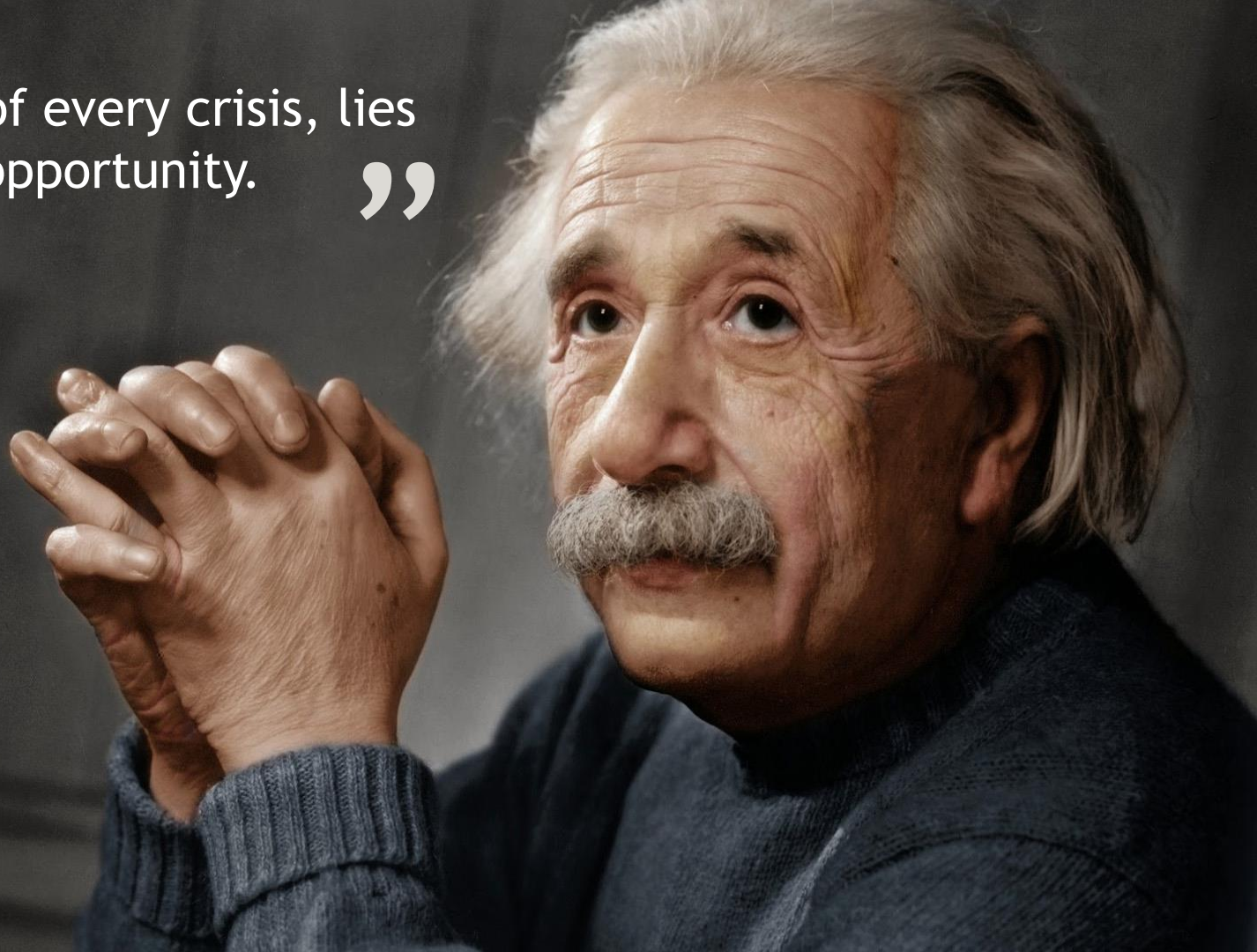


Picture 1



Picture 2

“ In the midst of every crisis, lies
great opportunity. ”



Albert Einstein

Smallpox is thought to date back to the Egyptian Empire around the 3rd century BCE (Before Common Era), based on a smallpox-like rash found on three mummies

The Royal Philanthropic Vaccine Expedition

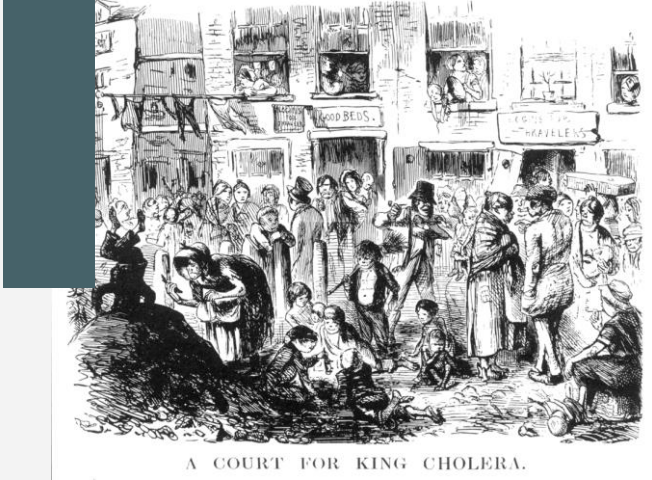
1796 Edward Jenner; 1800 1st international healthcare expedition in history, with the aim of vaccinating millions against smallpox



Smallpox taught the western world a new lesson: **Humans can prevent pandemic diseases!**

SMALLPOX

1803 - 1806



A COURT FOR KING CHOLERA.

Acrid odors of factories, pigsties, tonnage of droppings from horses & livestock, tanneries, shallow graves of the dead, and human excrement

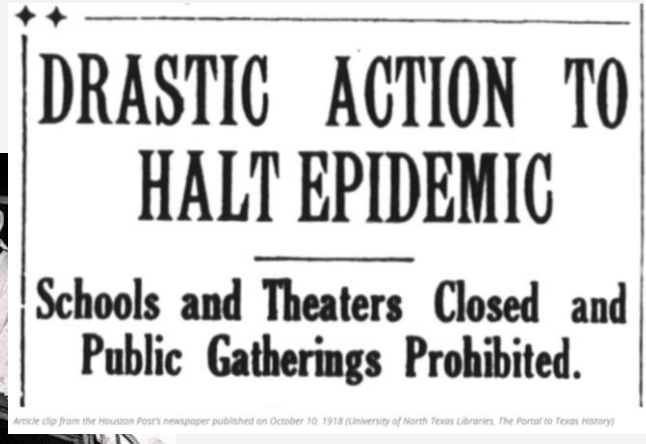
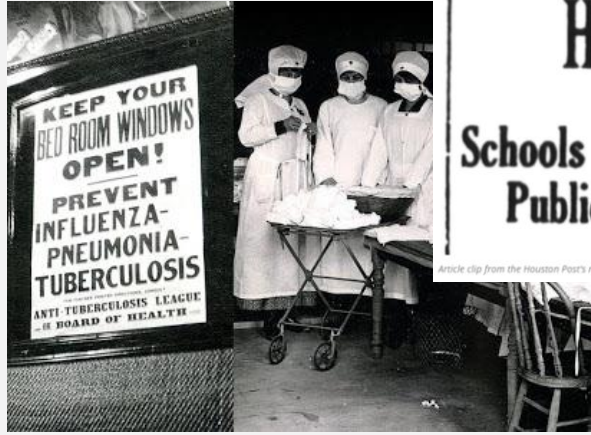


Sparked the construction of improved sanitation facilities beginning in the mid-19th century.



Challenged Miasmas theory of disease
The birth of epidemiology

CHOLERA 1817 - Today



The H1N1 pandemic created a benchmark for pandemic planning and preparedness today

How to Make Mask for Prevention of Influenza



Instruction

ANTI-MASK MEETING
TONIGHT (Saturday) JAN. 25
DREAMLAND RINK
To Protest Against the Unhealthy Mask Ordinance
 Extracts will be read from State Board of Health Bulletin showing compulsory mask wearing to be a failure.
Eugene E. Schmitz and other interesting speakers.
Admission Free.

Our challenges today are not unique – maybe it's time for new methods?



SWINE FLU PANDEMIC

What's Old Is New: 1918 Virus Matches 2009 H1N1 Strain

The "novel" H1N1 swine influenza virus that last year caused the first human pandemic in 4 decades has one feature that is hardly novel: Its surface protein, hemagglutinin (HA)—which spikes cells and starts an infection—closely matches the HA in the H1N1 virus responsible for the 1918 pandemic. Separated by 91 years, the two strains of the highly mutable virus ought to be vastly different. This newfound similarity answers many mysteries about the 2009 pandemic, including why it largely spared the elderly. The new findings from different research groups also suggest intriguing explanations for how the 1918 influenza virus has evolved since it swept across the globe in several waves, killing more than 50 million people by the winter of 1919. And the investigators are proposing provocative—some say far-fetched—vaccination strategies to preempt future pandemics.

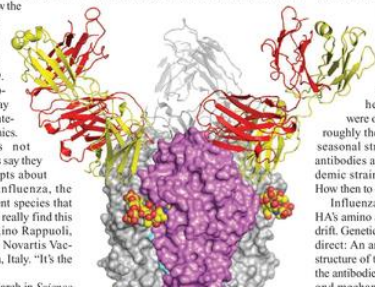
Influenza researchers not involved with the new studies say they pull together several concepts about the relationship between influenza, the immune system, and different species that have been gaining ground. "I really find this a fascinating story," says Rino Rappuoli, head of vaccine research at Novartis Vaccines & Diagnostics in Siena, Italy. "It's the lesson of evolution."

limits of extrapolating from mouse to human immune systems, Nabel says in this restricted analysis of antibodies in response to proteins, "it's a very reasonable model."

Influenza and the human body are like opposing Cold War spies, with the virus repeatedly donning new disguises and the human immune system racing to foil each incarnation. HA is the virus's main quick-change artist. Antibodies produced by the immune system, in turn, try to neutralize HAs by binding to them, blocking the virus from entering cells. As a rule, influenza

viruses change so quickly that a vaccine against a regular "seasonal" strain circulating one year may have little impact against a similar strain a few years later. Yet the HA proteins on the 1918 and 2009 pandemic viruses look remarkably similar in close analyses done in both Nabel's study and a separate one published online this week by *Science* that includes x-ray crystallographic data (www.sciencemag.org/cgi/content/abstract/science.1186430). These two reports also clarify the evolution of seasonal strains in the decades between the two pandemics.


The two studies focus on the top part, or the head, of the HA, which is the business end



he were of roughly the seasonal str antibodies ag demic strain How then to Influenza HA's amino s drift. Genetic direct: An amino acid change can alter the structure of the protein so that the "arms" of the antibodies can't get a good grip. The second mechanism involves a more specific

The Virus can stay in circulation and come back to haunt us!

One study published 34 March in *Science*



So what does this mean for COVID-19 and the health workforce?

Clearly COVID-19 is calling for a paradigm shift in health,
and sectors beyond health.

What does covid-19 mean for us and our professional future?
How do we as professionals respond?



Think beyond
health



Expand your
Knowledge



Participatory
Community
Engagement



Build
Bridges



Digitalization
is here!



Fight for
Failure



Be a Climate
Activist

THE OPPORTUNITIES FOR THE GLOBAL HEALTH & PUBLIC HEALTH WORKFORCE



Think beyond
health

We need a **MEANINGFUL** multistakeholder and multisectoral **action** – COVID-19 emphasizes the important of engaging all levels of society (e.g. *media and culture, tourism, forestry, infrastructure, food retail, etc.*)

No more talk-shops!

Solution-oriented, collaborative, co-owned actions.

Don't reinvent the wheel - build on current successes in a coordinated way & COMPETE LESS.

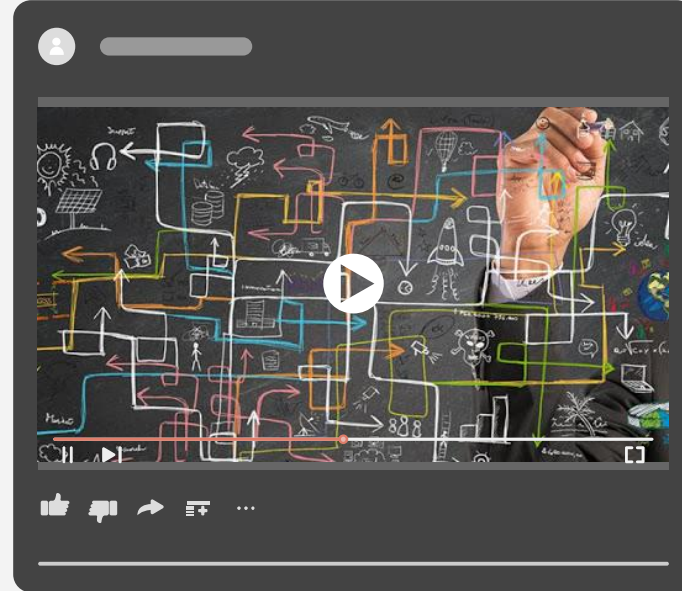
The most important lesson from the COVID-19 pandemic is the importance of working together on problems that affect the entire human race. **We are much stronger united than divided.**



Expand your
Knowledge

"Individuals who breakthrough by inventing a new paradigm are almost always...either very young or very new to the field whose paradigm they change....These are those who, being little committed by prior practice to the traditional rules of normal science, are particularly likely to see that those rules no longer define a playable game and to conceive another set that can replace them."

- Thomas S. Kuhn



- Yes, it's important to specialize, but you also need to understand the world of other fields/sectors.
- Learn to facilitate
- Practice & strengthen your management skills
- Never stop learning!



Participatory Community Engagement



Trust is the backbone of social and economic recovery. In order to go back to “normal life” - people must feel physically safe and trust that you’re are looking after their safety, too



Quickly and effectively mobilize and empower communities to engage, reverse and mitigate the impact of COVID-19 through non-pharmaceutical public health measures.



Protect the community from misinformation **#mythbusting**
#healthliteracy **#targeted**



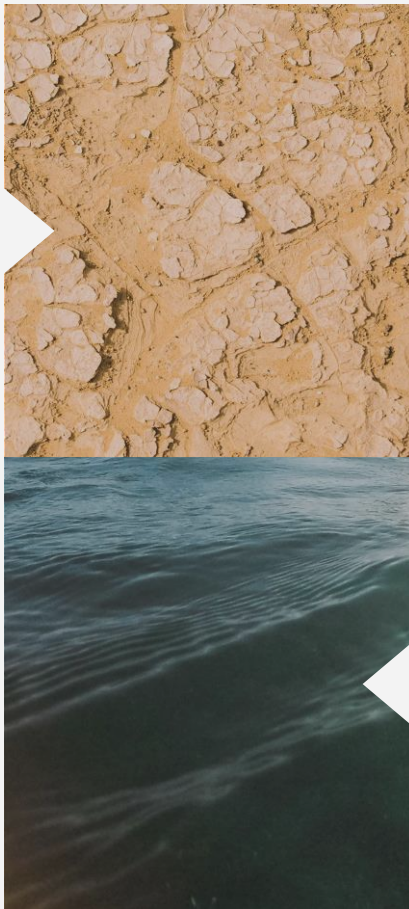
Learn to communicate complex problems to a friend or family member – have those conversations.



Build
Bridges

PROBLEM

Identified and studied by
Academia



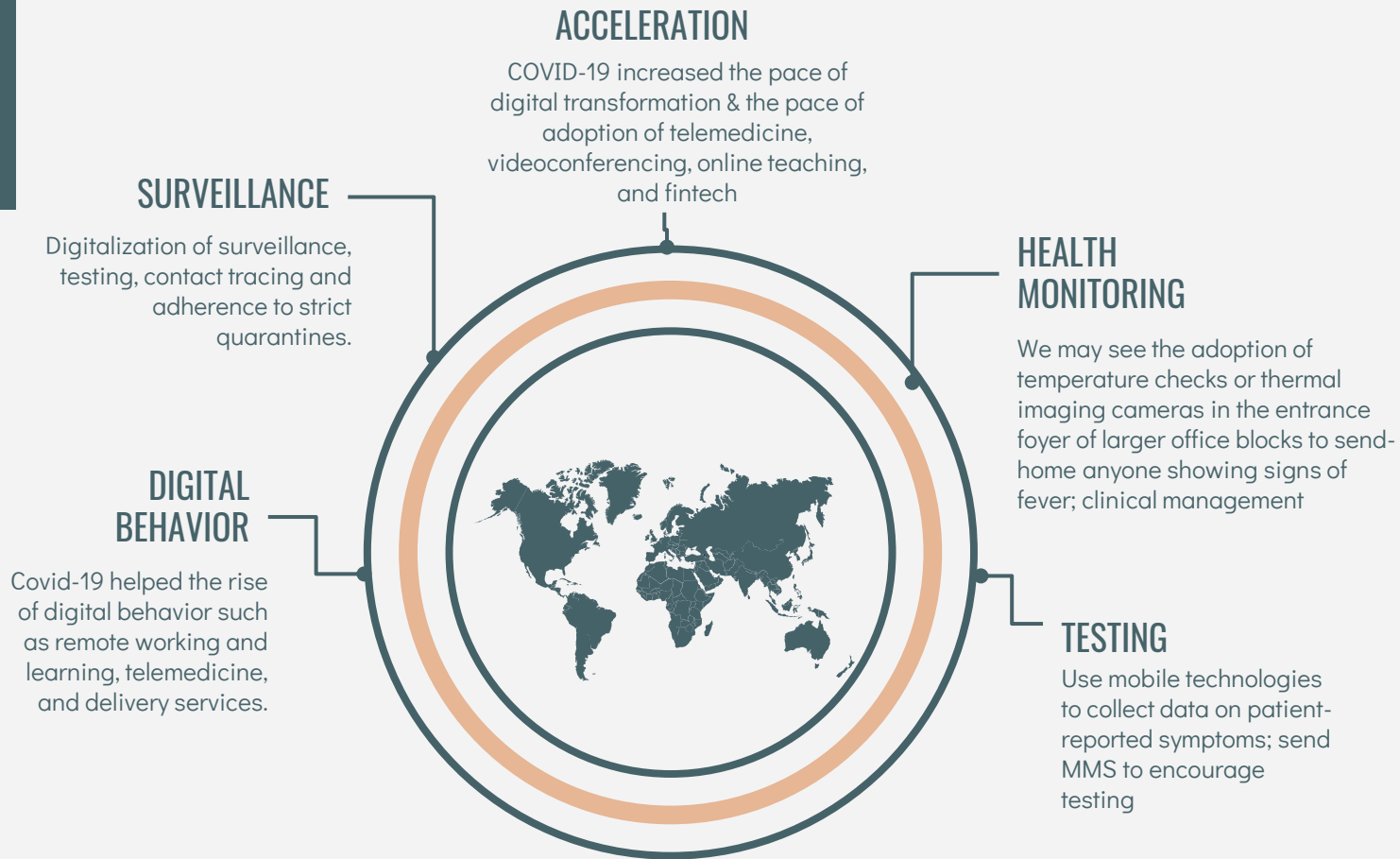
SOLUTION

Designed and
implemented at the
national level

BRIDGING THE KNOWLEDGE TO ACTION GAP



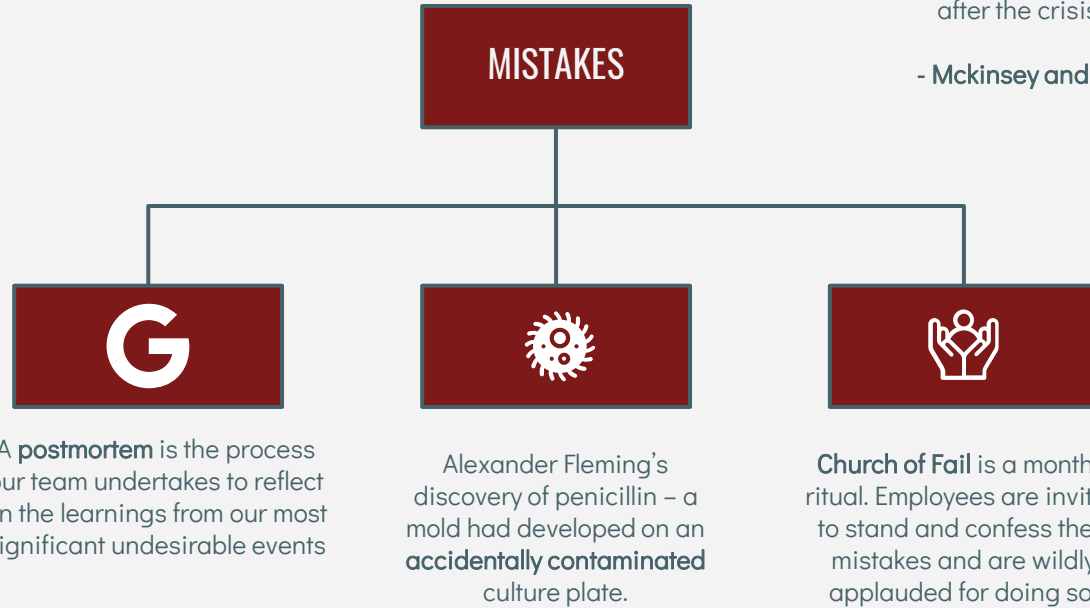
Digitalization
is here!



Get comfortable with these digital tools & increase your understanding of how they should be used



Fight for
Failure



Many businesses simply cannot operate as they have in the past. What made a company successful historically may no longer be possible during or after the crisis.

- McKinsey and Co

Fight to create a space in our organizations to allow failure

We need to innovate, that means trying things first



Be a Climate
Activist

Do we as health professionals need to also be
climate change activists? I say **YES.**

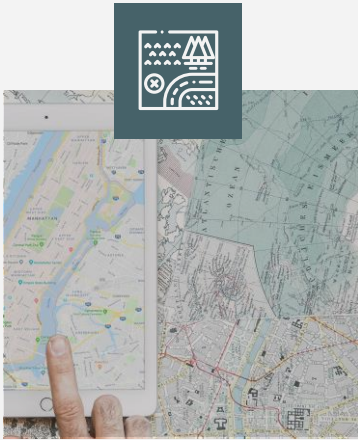
COVID-19 - **human-animal interactions** – more to come!
NCDs and Air Quality, Food Security, Access to water, emergent
tropical illnesses, and more!

CLIMATE AND HEALTH

EXAMPLE: In response to COVID19, several cities have imposed
schemes to encourage people to instead walk or cycle to work,
and road space is already being reassigned – at least temporarily
– to additional bike lanes and widening pavements.

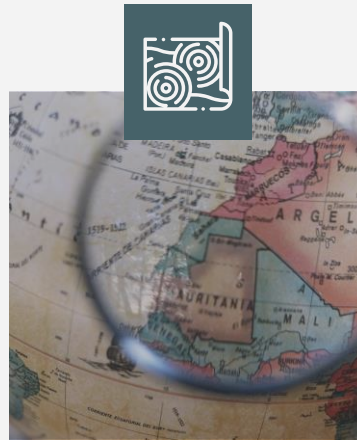
BEHAVIOR

“A revolution doesn’t happen when society adopts new tools. It happens when society adopts new behaviours” - *Clay Shirky, American writer*



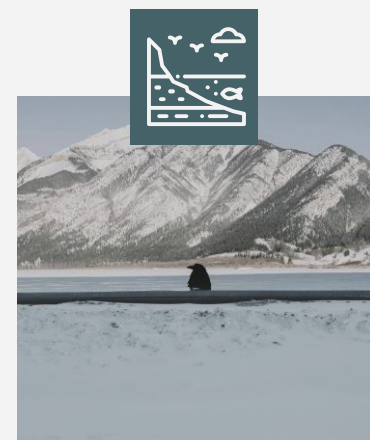
CHANGE

We have a choice – we can fall into chaos and lose progress, or we can build a more humane system that leaves us more resilient.



PERSPECTIVE

A crisis highlights the fact that the old paradigm can no longer account for enough of the existing evidence to be believed by a majority of people.

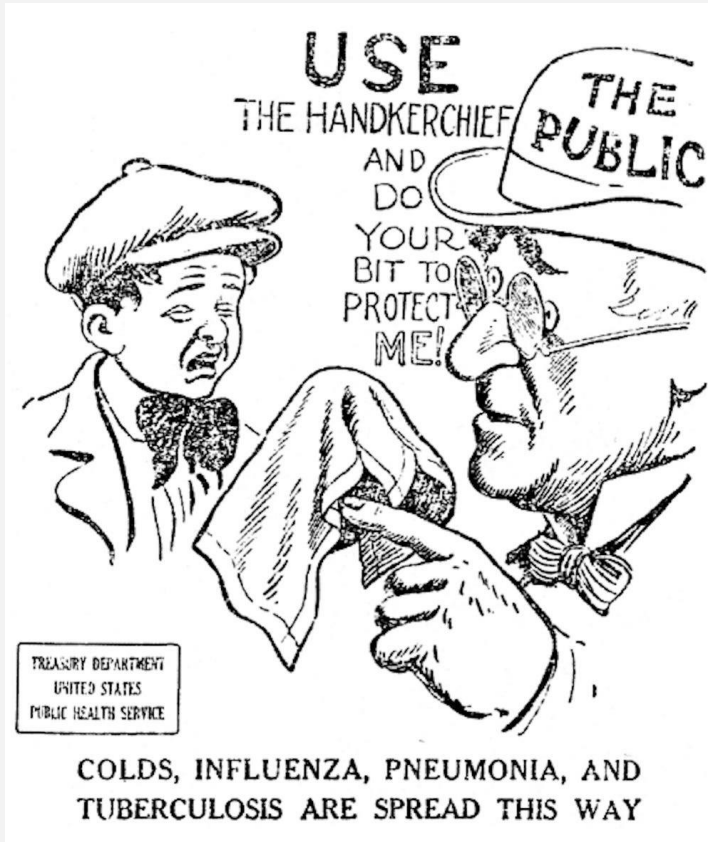




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THANK YOU!

Does anyone have any questions or want to talk more?

Join me in my 'Speaker Corner' after this session!
<https://globalhealth.ie/speakerscorner/>

Connect with me on Twitter!
 @DannyAgnello_GH



CREDITS

- ◀ Presentation template by [Slidesgo](#)
- ◀ Various reference for the text and data – happy to share!