Mass disinformation is mass psychological abuse. The source of the disinformation is the perpetrator, the disinformation is the abuse, and the recipients of the disinformation are the victims.

In the age of the Internet this abuse can propagate like an infectious disease. Some actors who understand this are applying methods of germ warfare to politics. We, on the other hand, are stymied because we haven't seen this as a public-health problem.

This paper is a call to action to develop a "vaccine" against the resulting pandemic of irrationality, apathy, and violence.

The paper applies lessons from trauma psychotherapy to this new public-health crisis; it is in four parts:

- A. Operation of the abuse,
- B.A disease model,
- C.How an immune response might work,
- D.Ethical caveat.

A. Operation of the abuse

The abuse has two distinct actions:

1.an idea is implanted in the victim through repetition, and 2.suggestibility is increased/reasoning is weakened through any of a variety of methods related to trance induction, e.g.,

(a)induced confusion, usually through cognitive dissonance, contradiction, or logical impossibility; (b)cognitive overload, e.g., by introducing ideas faster than they can be processed. (For example, using strange words blocks processing during an internal search.) [see

Milton Erickson confusion technique:

https://en.wikipedia.org/wiki/Milton_H._Erickson#Confusion_n_technique

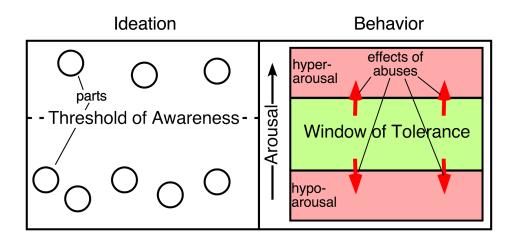
Propaganda devices:

https://blogs.psychcentral.com/narcissism-decoded/2017/0 9/12-classic-propaganda-techniques-narcissists-use-to-ma nipulate-you/,

Daniel Effron, "we give [a repeated lie] a moral pass": https://www.youtube.com/watch?v=Q70eTu-sE-w
Personal experience with @seanhannity's monologues: https://twitter.com/conways_law/status/113347645538662
8098]

B. A disease model

This graphic shows a model of the body-mind we are using here. The left, "ideation", half refers to thoughts and memories. The right, "behavior", half refers to actions.



In the presence of conflicting cognitions ideation becomes "compartmentalized" into separate parts, each coherent enough to function by itself. Inconsistent parts remain below some threshold of awareness, above which the inconsistency would impair the function of the individual.

At any moment one of these parts is given priority to represent the self to the outer world; evidence of the stickiness of this selection process is seen in the power of single-issue politics to dominate the consciousness of individuals, and in the insufficiency of logic to change minds. This is all normal.

The model of ideation as being composed of parts is used in some forms of psychotherapy; I have taken liberties with that model for use here. (All I have learned about trauma therapy I have learned from my wife, who is a practicing psychotherapist.)

[see Richard Schwartz,

"We all have parts":

https://ifs-institute.com/about-us/richard-c-schwartz-phd,
History of Internal Family Systems:
https://www.youtube.com/watch?v=PB2vDEhoTw0]

A hostile intervention such as disinformation can employ this normal behavior to create a response that is disadvantageous to the individual or society. We can use the "window of tolerance" model of response to trauma, shown on the right of the graphic, to describe this response.

[There are many other images of this model available on the Web; see, for example

https://www.debbieaugenthaler.com/window-of-tolerance/and

https://www.drmariedezelic.com/window-of-tolerance--traumaanxiety-rela

In this model the vertical scale, called "arousal", characterizes the response of the individual to the trauma; it is divided into three zones. The middle zone (usually called the window of tolerance) is where the healthy person is acting rationally even in the presence of the remembered experience of trauma.

Above the middle zone is hyperarousal; in the public-health context this is where we see violence, both collective (pogroms and riots), and individual (mass shootings and person-on-person abuse). Below the middle zone is hypoarousal; in the public-health context this is

where we see political apathy (e.g., low voting turnout) and weakened resistance to/complicity in social pathology ("just following orders").

One goal of individual trauma therapy is to maintain the individual in the window of tolerance. In contrast, a perpetrator of mass disinformation, in order to produce tactical results, uses specific techniques to drive the individual *out* of the zone of tolerance; these are the red arrows in the graphic.

For example, "dog-whistle" verbal triggers and hateful images drive arousal up, and confusion- and apathy-producing disinformation techniques drive arousal down.

Before the Internet it generally required state control of the media for this to work at scale.

[Joseph Goebbels "A lie told a thousand times becomes a truth":

https://www.azquotes.com/author/5626-Joseph Goebbels]

But the Internet, specifically applications such as social media and message boards, have enabled arousal-shifting interventions to operate at scale, selectively and in private, and sometimes without leaving a trace.

["The Great Hack" documents the use of Facebook to influence voting in the Brexit referendum:

https://en.wikipedia.org/wiki/The_Great_Hack,

Carole Cadwalladr's TED talk on Facebook's role in Brexit: https://www.ted.com/talks/carole_cadwalladr_facebook_s role in brexit and the threat to democracy]

I leave it to others to discover how Russian Intelligence and the Republican Party learned the same lessons. [Washington Post article by
@McFaul on Russion disinformation:

https://www.washingtonpost.com/opinions/2020/01/13/be-prepared-fight-dangerous-new-wave-disinformation-during-senate-trial/

Steve Bannon, former White House strategist: "The Democrats don't matter....The real opposition is the media. And the way to deal with them is to flood the zone with shit.":

https://www.vox.com/policy-and-politics/2020/1/16/209918 16/impeachment-trial-trump-bannon-misinformation Book "Mindf*ck" by Christopher Wylie:

https://smile.amazon.com/Mindf-Cambridge-Analytica-Break-America/dp/1984854631/ref=sr_1_1?crid=3C2MFTH3IHUW0&keywords=mindf+ck&qid=1579316628&s=books&sprefix=Mindf*ck%2Caps%2C185&sr=1-1

C. How an immune response might work
By "vaccination" I have in mind an at-scale intervention
whose effect would be to bring the general public
response to mass disinformation closer to public health.

This intervention doesn't exist and its nature is unknown. What I describe here is the desired effect of the intervention on the individual.

Keep in mind that psychological trauma is a universal experience; how it affects behavior is an individual response and can depend on many factors. Mass disinformation is a scaled-up form of personal trauma; my thesis is that lessons from trauma therapy might be scaled up using ideas from public health. As with individual trauma therapy, the purpose of this public-health intervention should be, not to eliminate or alter any part of the individual's experience of abuse (aside from removing, to the extent possible, continuing abuse), but to empower the individual to behave rationally within that experience.

D. Ethical caveat

In the planning of any mass intervention ethics must be at the table with a voice equal to the other voices, and with a veto.

Mass interventions that are irreversible are anthema. To believe otherwise is to believe in one's intellectual invincibility.

The scientific community has little self-awareness when it comes to seeing, or evaluating the consequences of, its own hubris. When we scientists are messing with other people's lives we must accept constraints on our actions from outside science.

The ethics of public health recognizes two (often conflicting) goals in evaluating mass interventions:

- 1.Safety
- 2.Efficicacy

With Safety uppermost. I would add a third:

3. Sustainability.

["One example of unintended consequences":

https://twitter.com/LouiseStephen9/status/1173851725729 394689]

A vaccine as I have described it here might take a very long time to develop, if one is ever developed. And along the way we might discover that such a vaccine, even if it were successfully developed, might produce a degree of rationality that would not be in the best long-term interest of our species. On the other hand, we might develop manipulation techniques with consequences even worse than Cambridge Analytica's effect on Brexit. Eternal vigilance is the price of liberty.