Community Behavioral Health: The Missing Quadrant
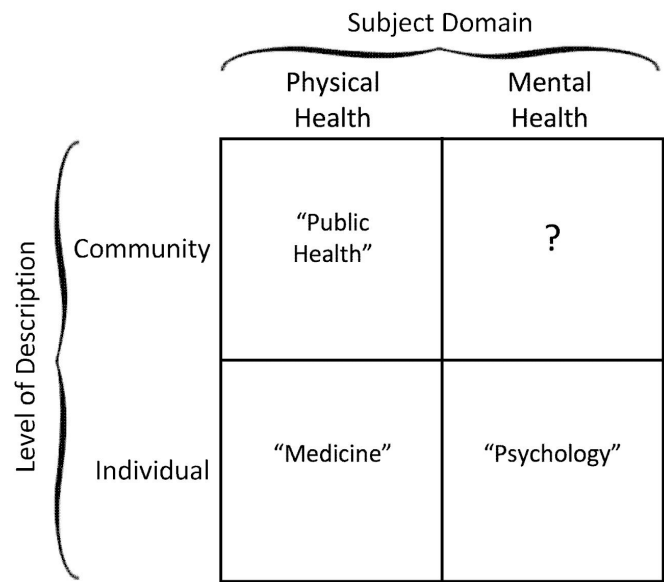

Fig. 1. Existing Names of the Categories of Health Care

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This essay proposes a systems model of, and a research activity into, mass social phenomena, such as protests, cults, even racism, as emergent phenomena arising from systems of interacting agents subject to external stimuli.

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MOTIVE

The motive for this work is to develop model-based interventions against concerted social disruptions such as mass disinformation. Below you will see an approach to an example I see in US politics: Omertà in the National Republican Party.

https://www.urbandictionary.com/define.php?term=Omert%C3%A0

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Here are the sections of this essay:

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This approach to development of social interventions is analogous to modern pharmaceutical research, which finds relevant biological *pathways* in a target disease process and develops interventions that either block or enhance them.

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Behind this work is the premise that
1. analogous information (and other types of) pathways exist in social systems,
2. their containing system can be analyzed, and
3. they can be understood in greater detail using model-based simulations.

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By analogy to microorganism-based epidemics in the upper-left quadrant, I regard hostile social disruptions as epidemics in the upper-right quadrant, and I refer to them as "EPsA" (Emergent Psychological Abuse).

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I have already written about a large aspect of EPsA: mass disinformation.
http://melconway.com/Home/pdf/vaccine.pdf

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Notes on Fig 1:
1. The "?" is in the missing quadrant, where the social phenomena we want to understand occur. The focus of this essay will be the right column of this 2x2.
2. The "level of description" distinction is the basis of the unusual definition of emergence I use below.

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First we'll create a naming scheme for this set of topics. The purpose is to show the symmetries in two different distinctions that the 2x2 of Fig. 1 presents to classify approaches to health:

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1. The two rows: individual and community levels of description.

2. The two columns: physical health and behavioral health.
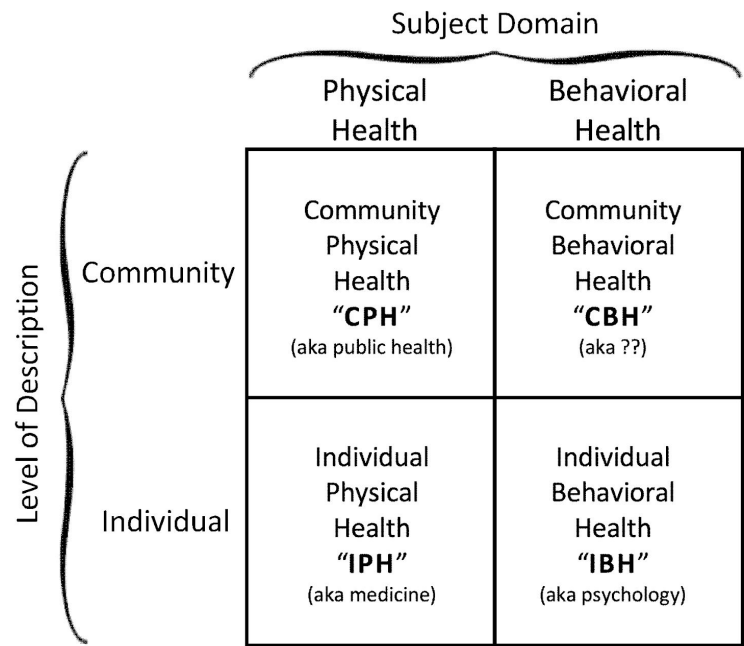
Fig. 2 shows the naming scheme.

Fig. 2. Proposed Naming Scheme

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SOCIAL PANDEMICS

In this time of the COVID-19 pandemic we are being made aware of the worldviews and strategies that distinguish Individual Physical Health (aka "medicine") from Community Physical Health (aka "public health") in the left column.

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COVID-19, in the upper-left quadrant (CPH), has dominated our attention. Yet for a long time we have not attended sufficiently to an elephant in the room: a major pandemic in the upper-right quadrant (CBH).

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We're not well equipped to think clearly about Community Behavioral Health in general because:

1 of 3. In popular thinking, behavioral health is a backward cousin of physical health; until perhaps a century ago it was a source of shame.

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2 of 3. Hostile weaponization of Community Behavioral Health tools using the combined reach, intrusiveness, and speed of the Internet (e.g., in Brexit and the US 2016 election) is recent, and our institutions are unprepared for it.

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3 of 3. This pandemic is indeed world-wide.

One catastrophic outbreak has caused a genocide in Myanmar that is stressing Bangladesh, even more so now in combination with the COVID-19 pandemic.
https://www.bbc.com/news/world-asia-41566561

https://www.npr.org/sections/coronavirus-live-updates/2020/05/15/856584129/covid-19-has-arrived-in-rohingya-refugee-camps-and-aid-workers-fear-the-worst

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DEFINITION OF EMERGENCE

An emergent phenomenon is a phenomenon at the community level of description that arises from specific combinations of behaviors, interactions, and interventions at the individual level of description.

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In physics, phase transitions such as the liquid-solid transitions at the water-ice boundary in Fig. 3, are emergent phenomena. Fig. 3 shows a community-level description of this example. The individual-level description considers the water molecules and their interactions.

Fig. 3. Phase Transition at the Liquid-Solid Boundary

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Murmurations of starlings are emergent phenomena. See Fig. 4.

(The named vertical arrows beginning in Fig. 4 refer to the processes in all the individuals that can collectively create the emergent phenomenon.)

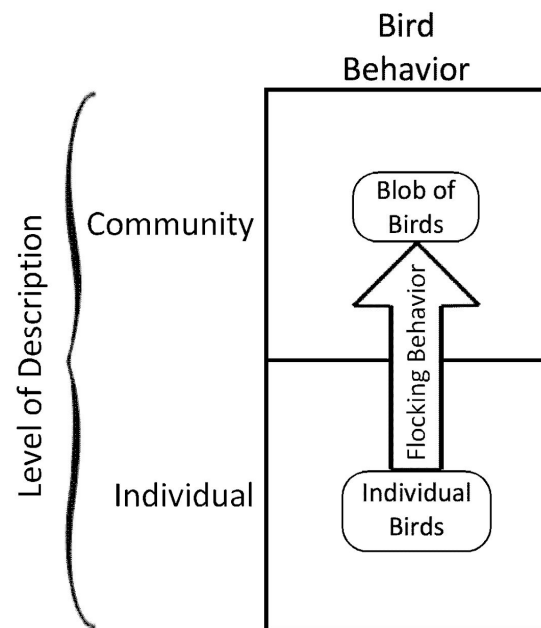https://www.npr.org/sections/13.7/2017/01/04/506400719/video-swooping-starlings-in-murmuration

Fig. 4. Flocking is an Emergent Phenomenon

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An infectious epidemic is an emergent phenomenon, seen at the Community Physical Health level, that arises from contagion among individuals at the Individual Physical Health level. See Fig. 5.
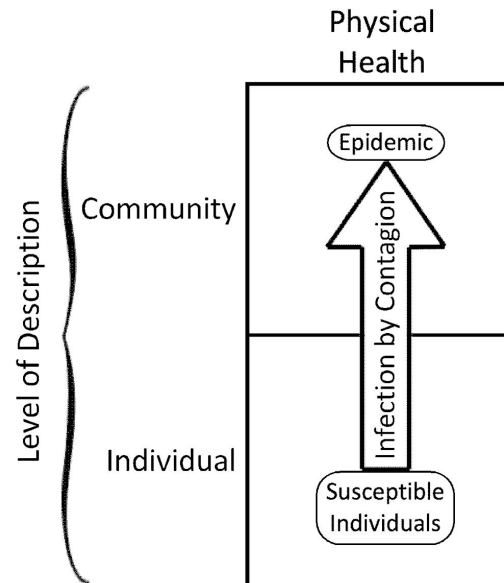

Fig. 5. An Epidemic is an Emergent Phenomenon

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In preparation for moving to social emergents (I'm using the word as a noun here) we're going to add to the model the external stimulus or global variable that is often a prerequisite to emergent phenomena.

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In the case of the COVID-19 pandemic it's the SARS-CoV-2 virus. Fig 6 shows the addition of this stimulus to Fig. 5. In other cases it can be a global variable, such as temperature in the phase transition in Fig. 3.
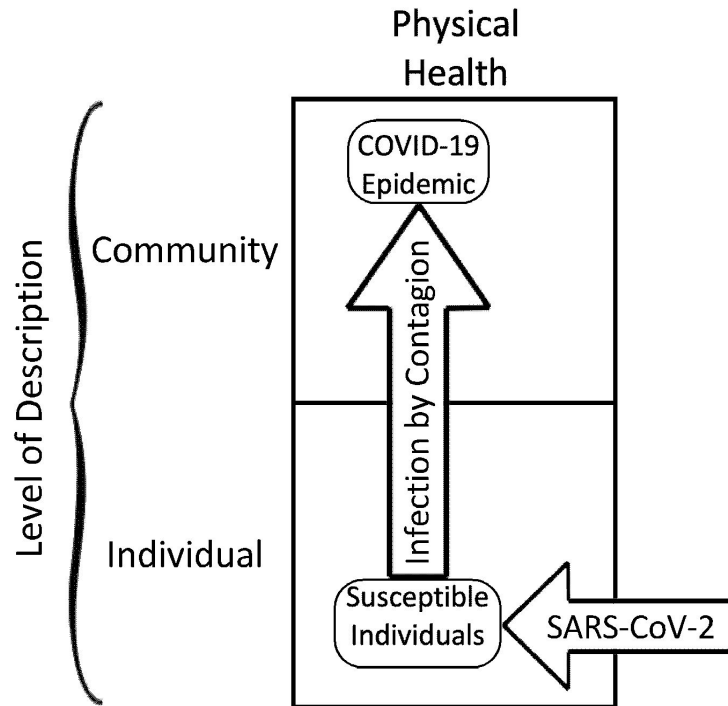

Fig. 6. Epidemic with External Agent

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SOCIAL EMERGENTS

Now that we have a model for emergence we'll move to the Behavioral Health column and discuss emergent Community Behavioral Health phenomena. Fig. 7 shows a generic pattern.
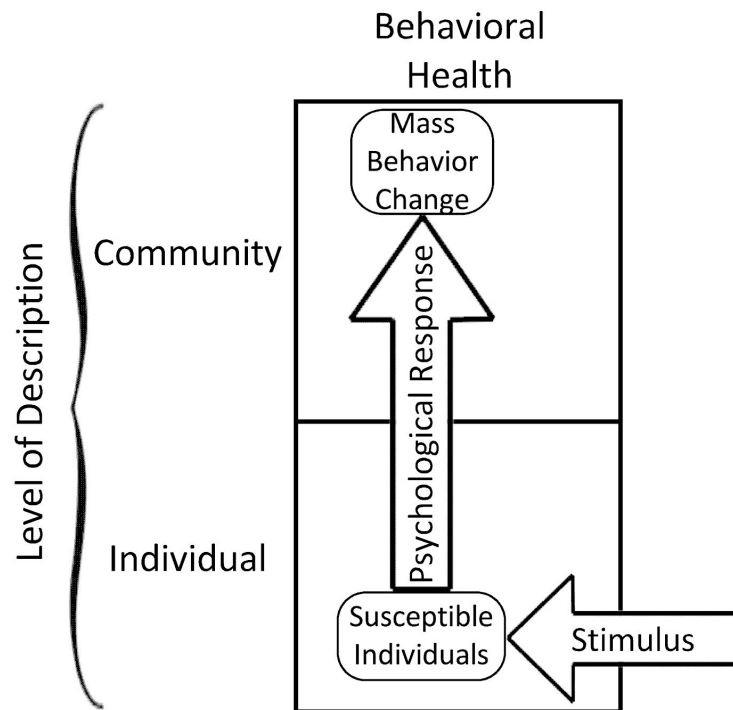

Fig. 7. CBH Emergence Pattern

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Finding a Mass Behavior Change depends on one's perception; it is not always obvious. It might be a result of hidden targeting by Facebook ads, as described by @chrisinsilico in "Mindf*ck", that inject a bias and predispose a small group of subjects to subsequent stimuli.

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We have arrived at a waystation in the process of developing specific models for specific CBH emergent phenomena.

The ultimate goal of this process is the development of models specific enough that they can lead to creation of effective interventions.

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I discuss this approach in the following essay from December 2019, where you can see the two-level model in an earlier stage of development.
https://twitter.com/conways_law/status/1208468897176924163

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The CBH emergence pattern of Fig. 7 can be applied widely.

I use the term "social clumping" to suggest an analogy to the curdling of milk, which occurs in response to a change of a global variable, pH, ...

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… altering the balance of intermolecular attractive and repulsive forces, similarly to what the global variable temperature does with water.
https://en.wikipedia.org/wiki/Curdling

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In the past I have also used "phase transition" in this context.
https://twitter.com/conways_law/status/1175047106484158465

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CLASSIFICATION OF SOCIAL EMERGENTS

We can broadly group CBH patterns as follows. I believe they all merit examination, which means, in my view, development and test of system models.

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1. Patterns of social *cohesion*
   a. Societal consensus
   b. Racism
   c. Protest
   d. Cults
   e. Mafia code of silence (Omertà)
   f. Fashion
   g. Fads
   h. The Collaboration Response (see:
https://smile.amazon.com/Collaboration-Response-Collaborative-Organization-Community/dp/1539633632/ref=sr_1_3?dchild=1&keywords=the+collaboration+response&qid=1590704119&s=books&sr=1-3)

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2. Patterns of social *disruption*

   a. Injection of arousal bias (see "window of tolerance" in
http://melconway.com/Home/pdf/vaccine.pdf)
   (1) Hyperarousal (e.g., anger, see "Mindf*ck" p. 76)
   (2) Hypoarousal (e.g., detachment, confusion, see
    https://www.vox.com/policy-and-politics/2020/1/16/20991816/impeachment-trial-trump-bannon-misinformation)

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   b. Provocation of violence (see
https://en.wikipedia.org/wiki/Unite_the_Right_rally)
   c. Distortion of elections and referenda (see
https://en.wikipedia.org/wiki/Internet_Research_Agency,
"Mindf*ck",
@thegreathackdoc,
https://www.ted.com/talks/carole_cadwalladr_facebook_s_role_in_brexit_and_the_threat_to_democracy)

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   d. Promotion of conspiracy theories (see
https://www.rollingstone.com/politics/politics-news/anatomy-of-a-fake-news-scandal-125877/,

https://www.cnet.com/news/over-40-of-republicans-wrongly-believe-bill-gates-will-use-covid-19-vaccines-to-implant-microchips-in-them/)

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RESEARCH NEEDED NOW

One topic is particularly relevant in the US now: Omertà in the National Republican Party. Many observers are mystified by the frozen behavior of the Senate Republican caucus in the recent impeachment trial.

I see this as an instance of social clumping.

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Model development can benefit from the data already produced by researchers, for example,

"Shadow Network" by @anelsona,

"Hiding in Plain Sight" by @sarahkendzior,

"The Cult of Trump" by @CultExpert,

"House of Trump, House of Putin" by @craigunger.

"Authoritarian Nightmare" by @JohnWDean and Bob Altemeyer

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See also:

https://www.propagandamachine.tech/ by @EmmaLBriant,

https://twitter.com/JYSexton/status/1241725545341235202 by @JYSexton.

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What these and other researchers have given us can be fit into the pattern of Fig. 7 to give us testable models that will then suggest interventions that can possibly be improved by simulation.

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RESEARCH OUTLINE

What would such an effort look like? I see the following four stages shown in Fig. 8. We are stuck at stage 1 partly, I believe, because of academic stovepiping.

This must be a broadly multidisciplinary effort.
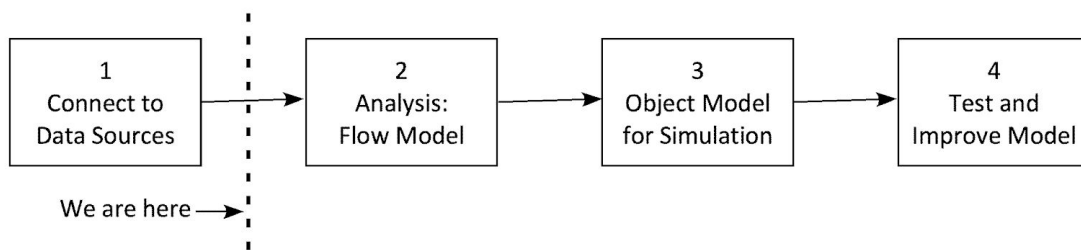https://www.worldpoliticsreview.com/articles/8518/academic-stovepipes-undermine-u-s-security

Fig. 8. Stages of Research

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1 of 4. Connection to data sources. This includes enlisting the participation of the authors cited above and others.

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2 of 4. Analysis. Build a flow model. I expect this to cover all major players identified by the research, and I expect it to look a lot messier than Fig. 9, taken from @greg_travis's analysis of the Boeing 737 MAX design failure in http://www.gregorytravis.com/Aviation/.
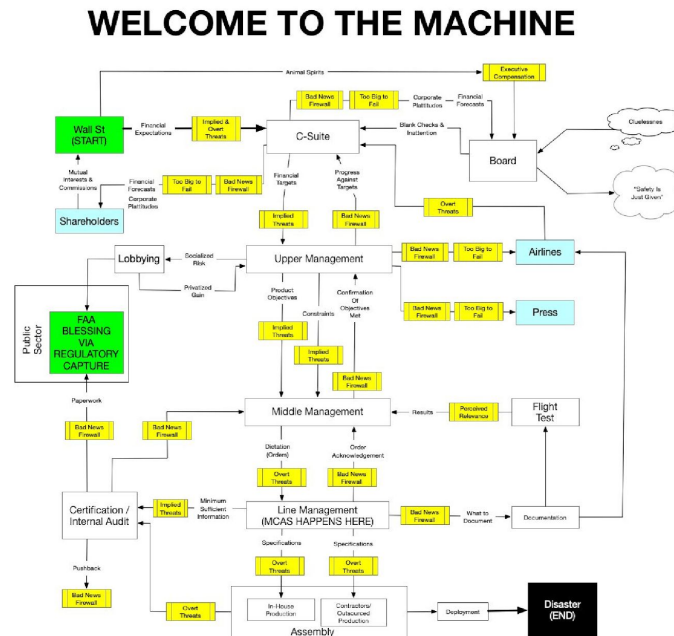

Fig. 9. Part of Greg Travis's Analysis of How the Boelng 737 MAX Design Reached the Public

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I expect intervention proposals to appear beginning at stage 2.

3 of 4. Develop object models suitable for simulation similar to Fig. 10. This is where it gets hard because the narrative models of social scientists must be turned into running software.
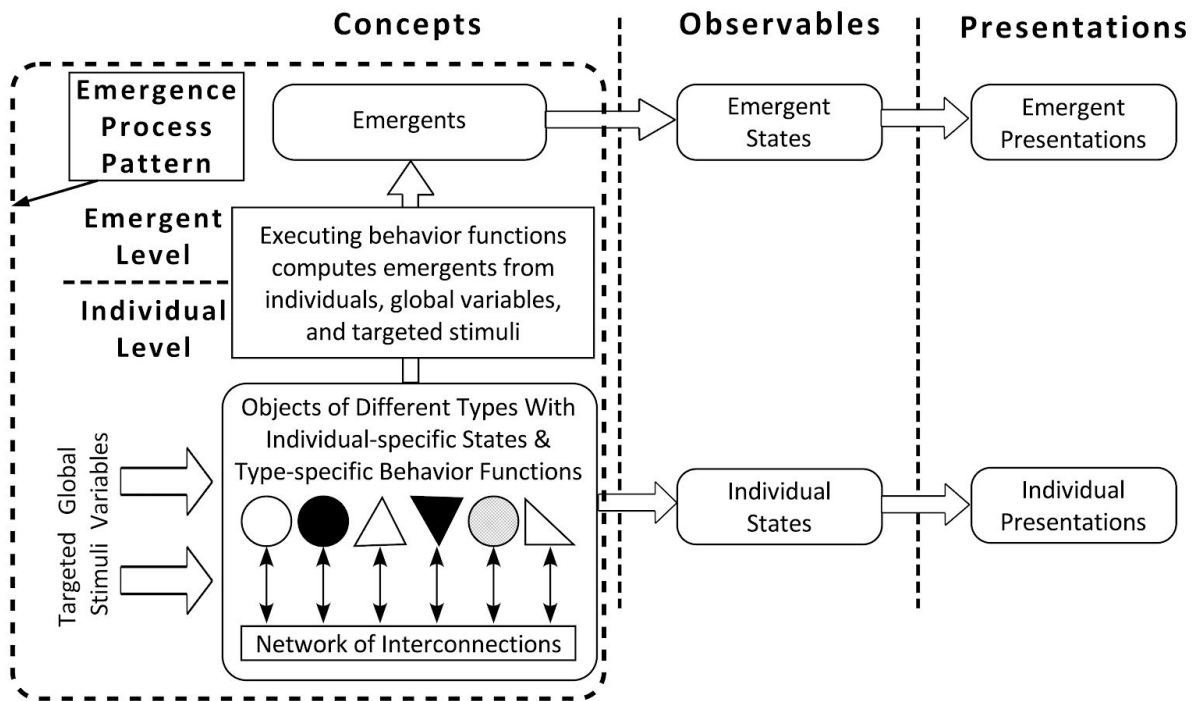

Fig. 10. General Simulation Object Model

https://en.wikipedia.org/wiki/Agent-based_social_simulation

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4 of 4. Use the simulation model in a self-improvement program resembling the scientific method.
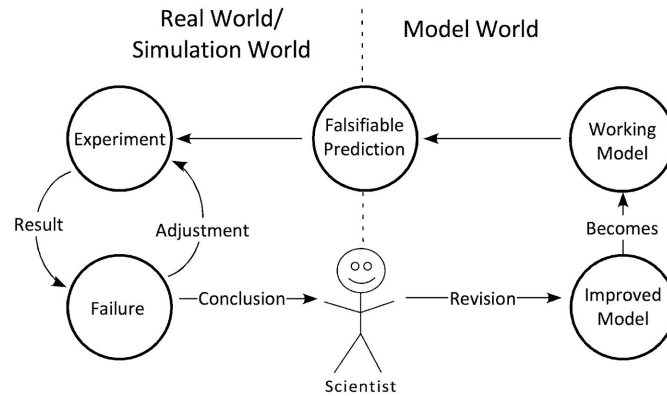

Fig. 11. The Process of Progressing from a Working Model to an Improved Working Model Involves Prediction Followed by Failure

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This will be a difficult project. In my view it is urgent.

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