The Tripartite Relationship of Psychiatry to Climate Change

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Climate Change - What Does Psychiatry Have to Do With It?
A Tripartite Model

Reckoning with Reality
...emissions of a greenhouse gas that has a long atmospheric residence time is a quasi-irreversible commitment to sustained radiative forcing over decades, centuries, or millennia, before natural processes can remove the quantities emitted.
- IPCC report, 2001
CO\textsubscript{2} during ice ages and warm periods for the past 800,000 years

- **Warm period (interglacial)**
- **Ice age (glacial)**
- **Highest previous concentration (300 ppm)**

2016 average: 402.9 ppm

Data: NCEI
10 HOTTEST YEARS GLOBALLY
TEMPERATURE ANOMALY (°F)


Source: NASA GISS & NOAA NCEI global temperature anomalies (°F) averaged and adjusted to early industrial baseline (1881–1910). Data as of 1/18/18.
Disasters

• Storms of greater intensity
• Sea level rise, Floods
• Droughts
• Heat waves
• Wildfires
• Forced migrations
• Threats to food security and clean water and economic stress
General Health Effects of Climate Change

• Injuries
• Heat stroke, dehydration, new onset renal failure
• Changing patterns of Infectious Disease – vector-borne diseases with altered transmission
• Complications of CAD, COPD, Asthma, DM
• Multiple air pollution health effects
• C.C. role in increased toxic algal blooms
• Particular vulnerabilities of psychiatric patients
Mental Health Effects of Climate Change

• Trauma Related Disorders
• Violence effects of both heat and civil unrest
• “Eco-anxieties” including
  “Solastalgia” (Albrecht)
• “Nature Deficit” “Biodiversity hypothesis”
• Enactments and “ecological debt” reported by psychoanalysts (Bodnar 2008, Randall 2013)
Controversy over whether Psychiatry should engage with a “political” issue
The politicization and obfuscation of science are nothing new.
“This world is a strange madhouse. Currently, every coachman and every waiter is debating whether relativity theory is correct. Belief in this matter depends on political party affiliation.”

- Einstein 1920 (Buchwald 2006)
According to repeated nationwide surveys,

More Doctors Smoke CAMELS than any other cigarette!

Doctors in every branch of medicine were asked, "What cigarette do you smoke?"
The brand named most was Camel!

You'll enjoy Camels for the same reasons so many doctors enjoy them. Camels have cool, cool mildness, pack after pack, and a flavor unmatched by any other cigarette.

Make this sensible test: Smoke only Camels for 30 days and see how well Camels please your taste, how well they suit your throat as your steady smoke. You'll see how enjoyable a cigarette can be.

THE DOCTORS' CHOICE IS AMERICA'S CHOICE!

MAURICE D'ARCY says, "I pick Camels. They agree with my throat and taste wonderful!"

DICK HAYNES says, "I get more pleasure from Camels than from any other brand!"

RALPH BELLOMY reports, "Camels suit my taste and throat. I've smoked 'em for years!"

For 30 days, test Camels in your "T-Zone" (T for Throat, T for Taste).
“Doubt is our product since it is the best means of competing with the ‘body of fact’ that exists in the mind of the general public. It is also a means of establishing a controversy.”

- leaked tobacco industry memo from Brown & Williamson, a then-subsidiary of British American Tobacco, 1969, original at UCSF
Psychiatry
• Concern with boundaries
• Obligations to health
• Appreciation of psychological processes
• Know complexity

Climate
• Sustains life
• Threats to health and life when destabilized
• Complexity
Complex system $\neq$ Complicated system
A Complicated System
A Complex System
Complex Systems
Characteristics of Complex Systems - Partial List (Cilliers 1998, 2007)

- System memory/history
- A diversity of behaviors
- Elements interact dynamically
- There are loops in the interconnections
- Level of interaction is fairly rich
- Interactions are nonlinear

And-
Characteristics of Complex Systems - Partial List, continued (Cilliers 1998, 2007)

• Complex systems are open systems
• Operate under conditions far from equilibrium
• Individual elements are ignorant of the behavior of the whole system within which they are embedded
• Chaos and self-organization (emergence, evolution)
Climate as a Wicked Problem
To Address “Wicked Problems” in Complex Systems:

1. interdisciplinary, transdisciplinary work
2. continual reassessment
   (e.g. Galway et al. 2016, DeFries & Nagendra 2017)
“...two traps: falsely assuming a tame solution and inaction from overwhelming complexity.”

-DeFries & Nagendra, Science, 2017
A Tripartite Model

- Reckoning with Reality
- Mitigation
Mitigation

Reducing the severity of something

*Avoiding what can be avoided*

“Reducing emissions of and stabilizing the levels of heat-trapping greenhouse gases in the atmosphere” (NASA)
A Tripartite Model

- Reckoning with Reality
- Mitigation
- Adaptation/Resilience
Adaptation

Becoming better suited to one’s environment

Adapting to the unavoidable, reducing vulnerability

“Adapting to the climate change already in the pipeline” (NASA)
Resilience

the capacity of individuals, communities and systems to survive, adapt, and grow in the face of stress and shocks, and even transform when conditions require it

(Rockefeller Foundation)
Resilience Controversy:

Can apparent resilience be maladaptive?

3 different implicit meanings:

- resisting change,
- accommodating change,
- directing change (Fisichelli et al 2015)

-How concept of “survival” is experienced
Reckoning with Reality

Mitigation

Adaptation/Resilience
Framework for Psychiatric Initiatives to Address Climate Change - Coverdale et. al. (2018)

Clinical
Administrative
Research
Education
A Tripartite Model

Reckoning with Reality

Adaptation/Resilience

Mitigation
Reckoning with Reality

CARE

Mitigation
CARE

Adaptation/Resilience
CARE

RELATIONAL CONTAINMENT
In Summary...