



THE SOCIOLOGY OF NETWORKS AND ONLINE INFLUENCE: AN ANTI-FLUORIDATION CASE STUDY

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When advocacy obscures accuracy online



<https://www.youtube.com/watch?v=blv9wDF2jsw>

Video abstract: Seymour B, Getman, R. Zhang, L. Saraf, A. Kalendarian E. When advocacy obscures accuracy online: unpacking "digital pandemics" of public health misinformation through an anti-fluoride case study. *Am J Public Health*. 2015 Mar;105(3):517-23.

Today's Internet Practices:





Today's Internet Practices:

“The Four C’s”

Today's Internet Practices:

Consumption

“The Four C’s”

Today's Internet Practices:

Consumption

Creation

“The Four C's”

Today's Internet Practices:

Consumption

Creation

Curation

“The Four C's”

Today's Internet Practices:

Cconsumption

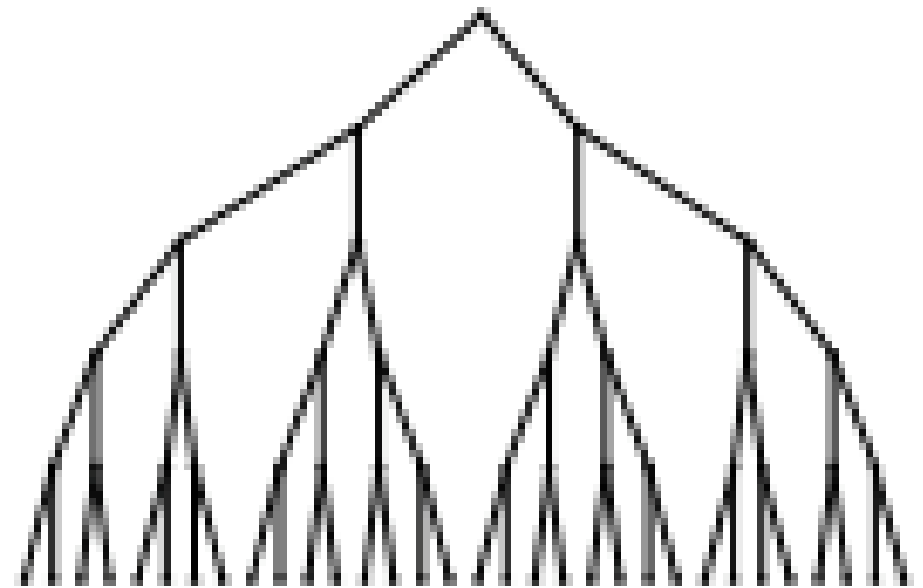
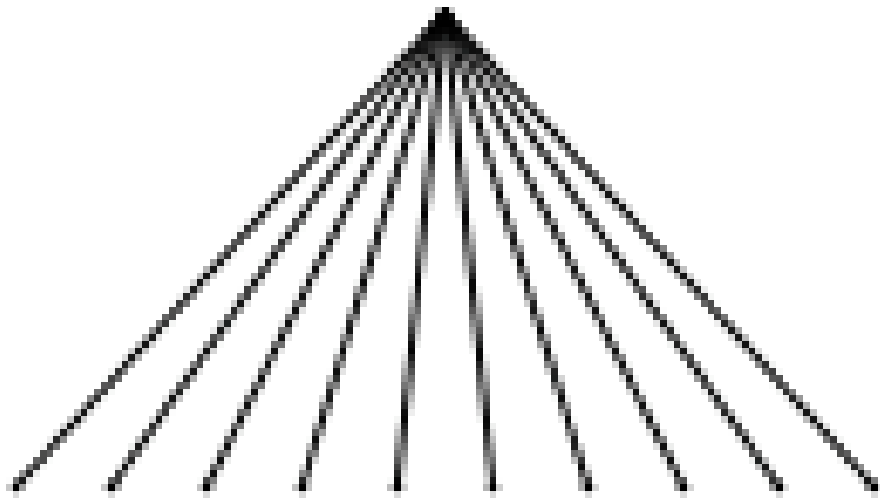
Ccreation

Curation

Cconversation

“The Four C's”

Broadcast vs. Social Diffusion:




“The Four C’s”

Image source: Goel, et al. The structural virality of online diffusion. 2013

It's messy out there

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The Lancet Neurology, [Volume 13, Issue 3](#), Pages 330 - 338, March 2014
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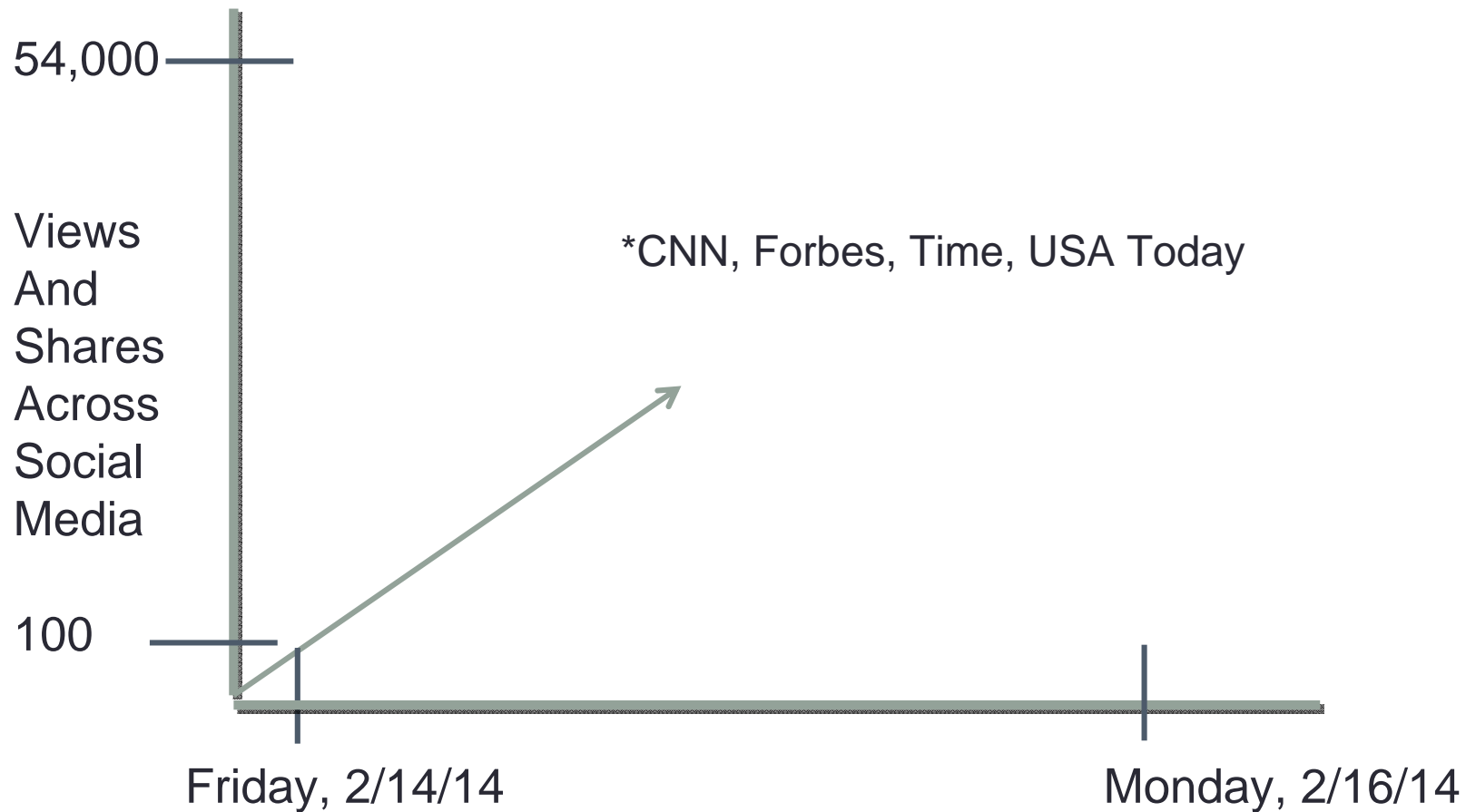
Neurobehavioural effects of developmental toxicity

Dr [Philippe Grandjean](#) MD [a](#) [b](#)  , [Philip J Landrigan](#) MD [c](#)

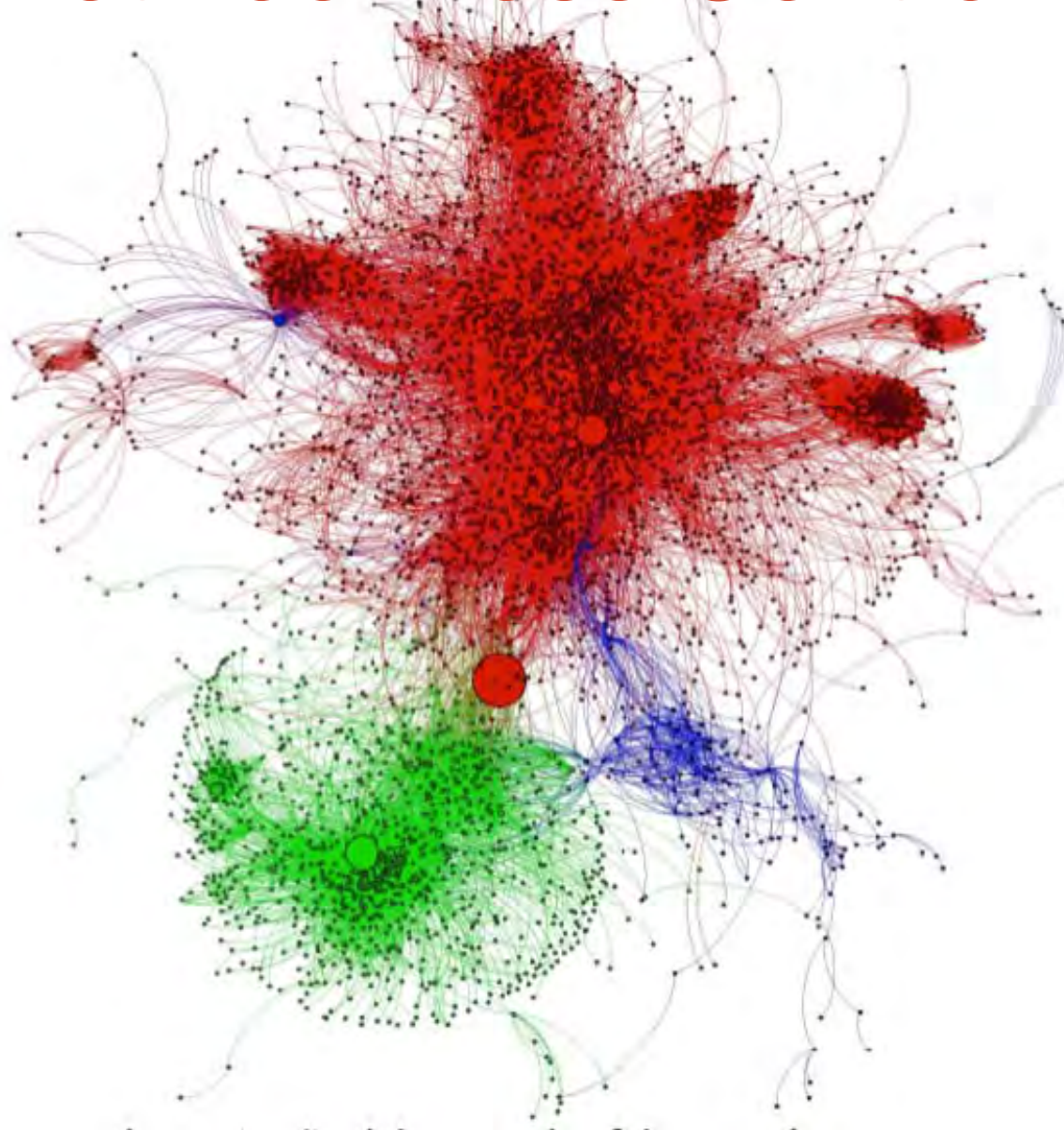
Summary

Neurodevelopmental disabilities, including autism, attention-deficit hyperactivity disorder, dyslexia, and other cognitive impairments, affect millions of children worldwide, and some diagnoses seem to be increasing in frequency. Industrial chemicals that injure the developing brain are among the known causes for this rise in prevalence. In 2006, we did a systematic review and identified five industrial chemicals as developmental neurotoxicants: lead, methylmercury, polychlorinated biphenyls, arsenic, and toluene. Since 2006, epidemiological studies have documented six additional developmental neurotoxicants—manganese, fluoride, chlorpyrifos, dichlorodiphenyltrichloroethane, tetrachloroethylene, and the polybrominated diphenyl ethers. We postulate that even more neurotoxicants remain undiscovered. To control the pandemic of developmental neurotoxicity, we propose a global

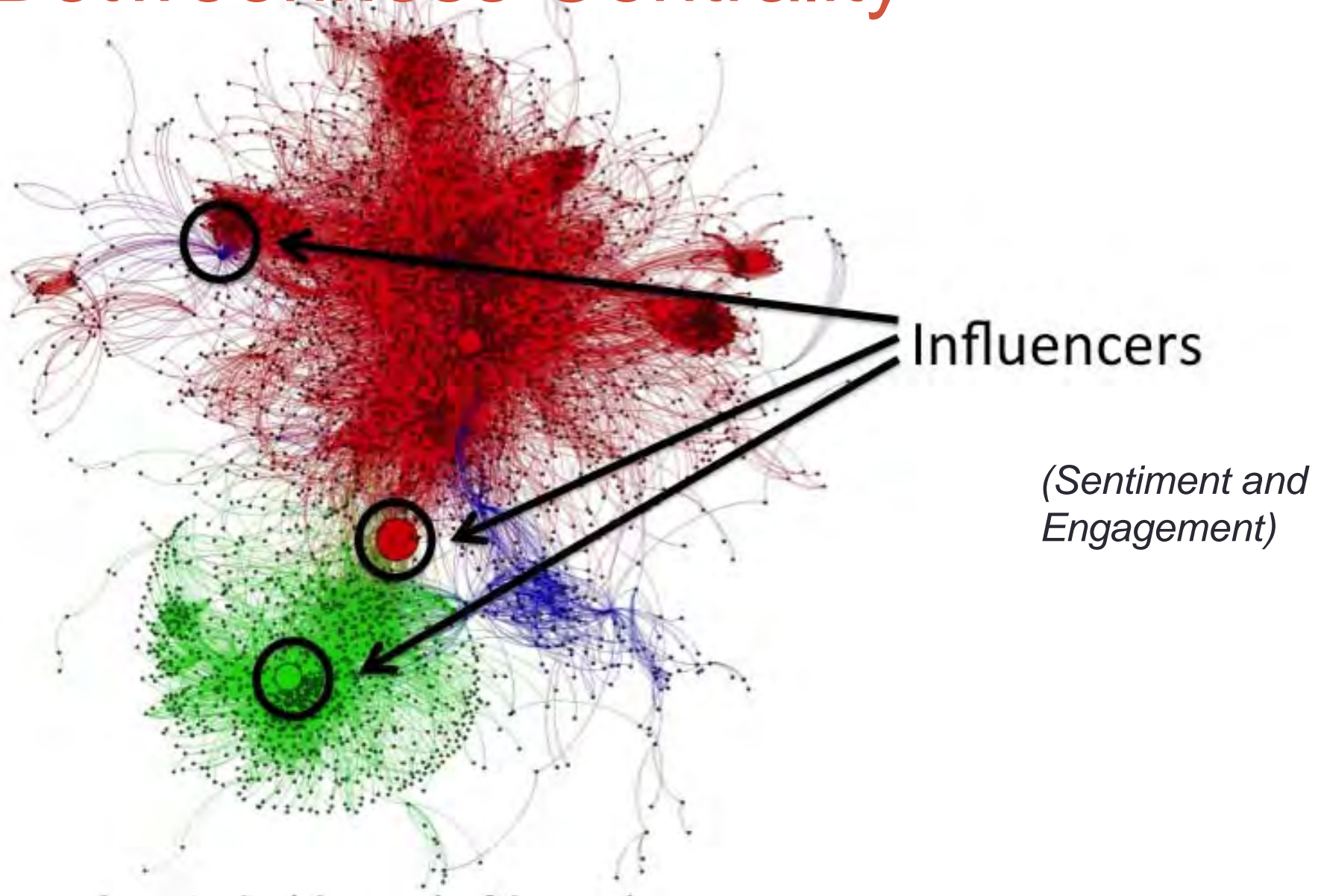
A “digital pandemic”



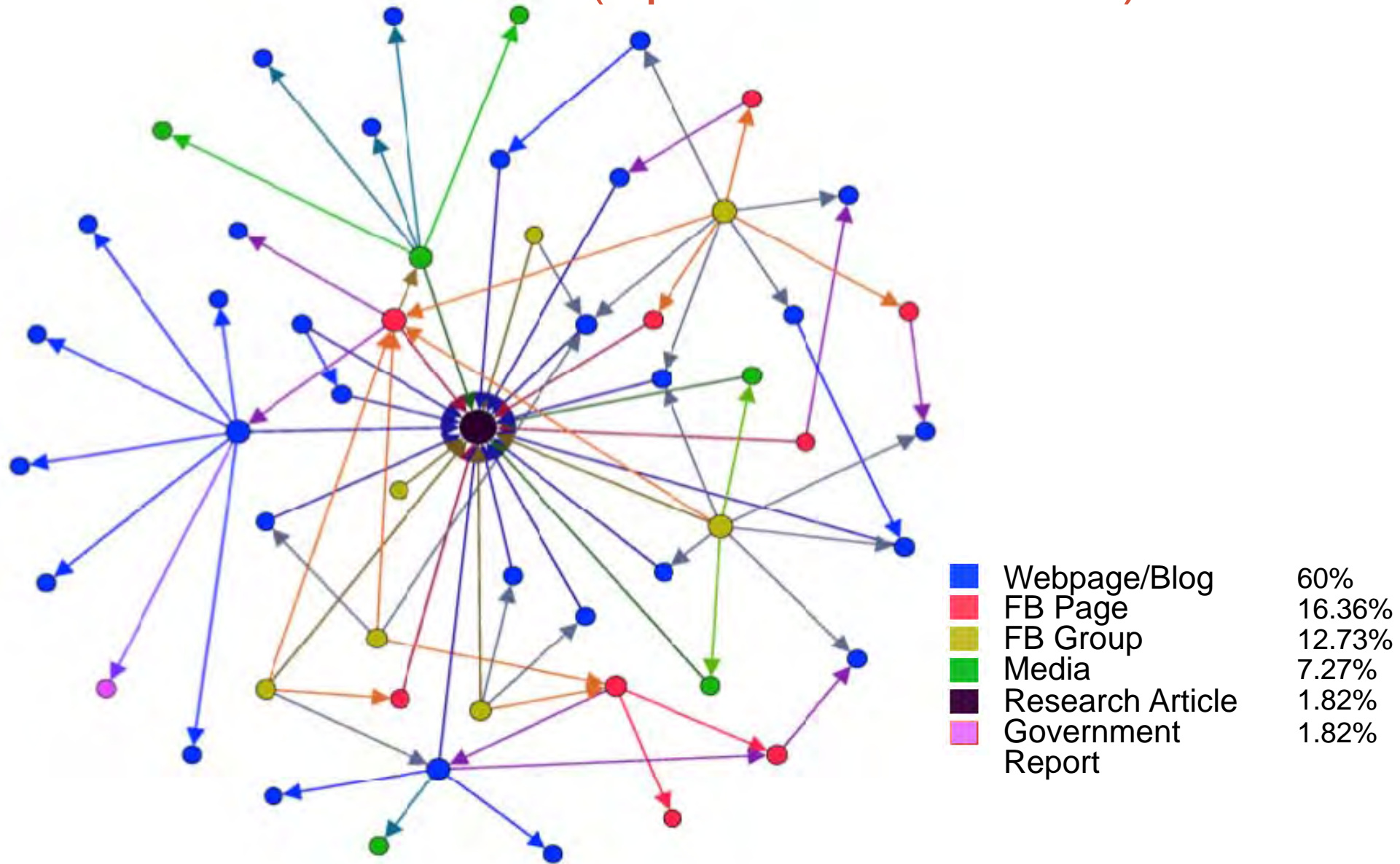
Betweenness Centrality



Betweenness Centrality



Social Diffusion (Spread and Source)



Social Communication

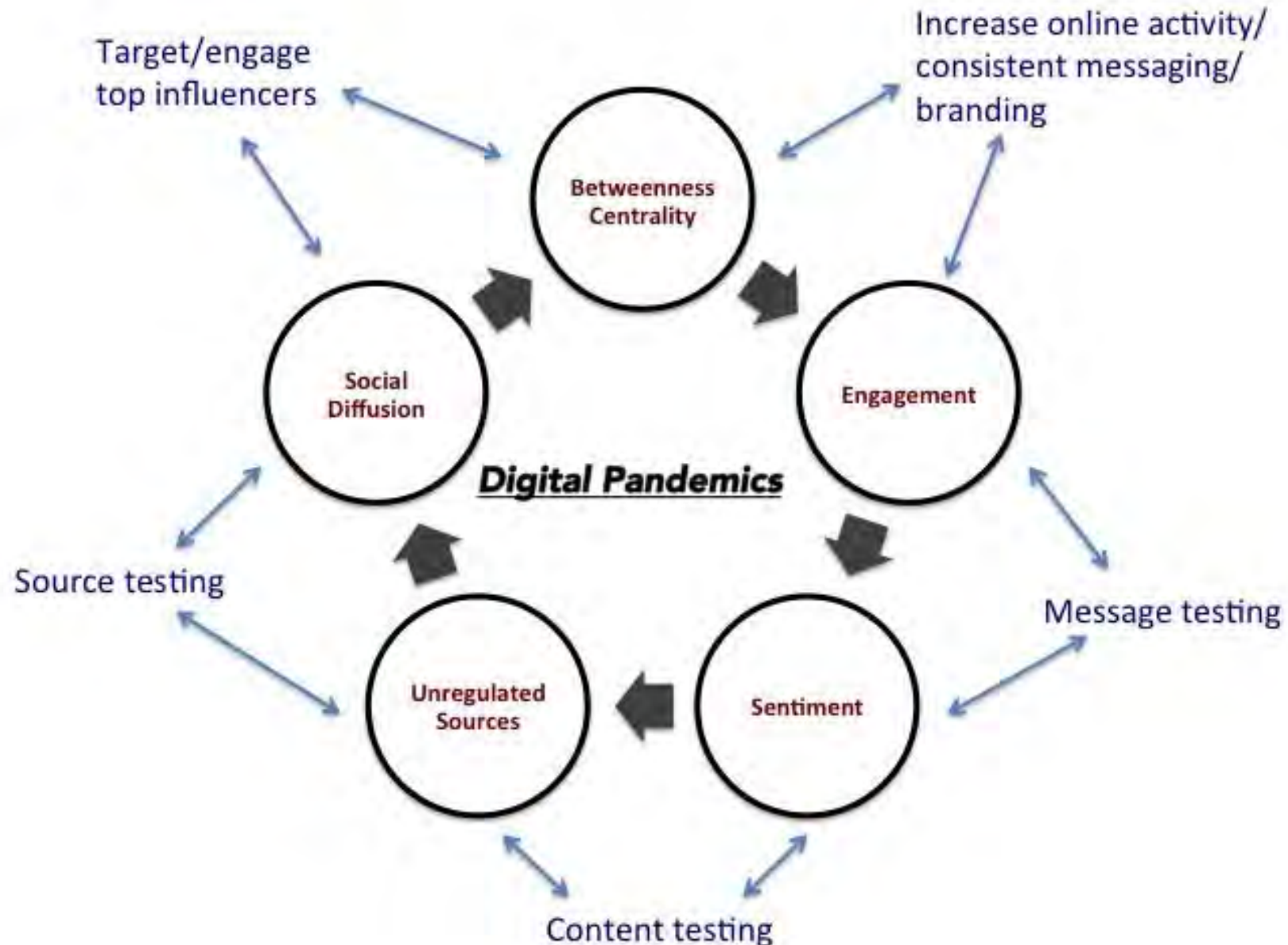


Take Home Messages:

Highly connected social networks and the influencers within them, not science or evidence, are driving digital pandemics

- Peers over authority/expert
- Content creation, curation, and conversation versus consumption only (4 C's)
- Social first, information second
- Advocacy versus accuracy

Social Communication Strategy





THANK YOU!

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