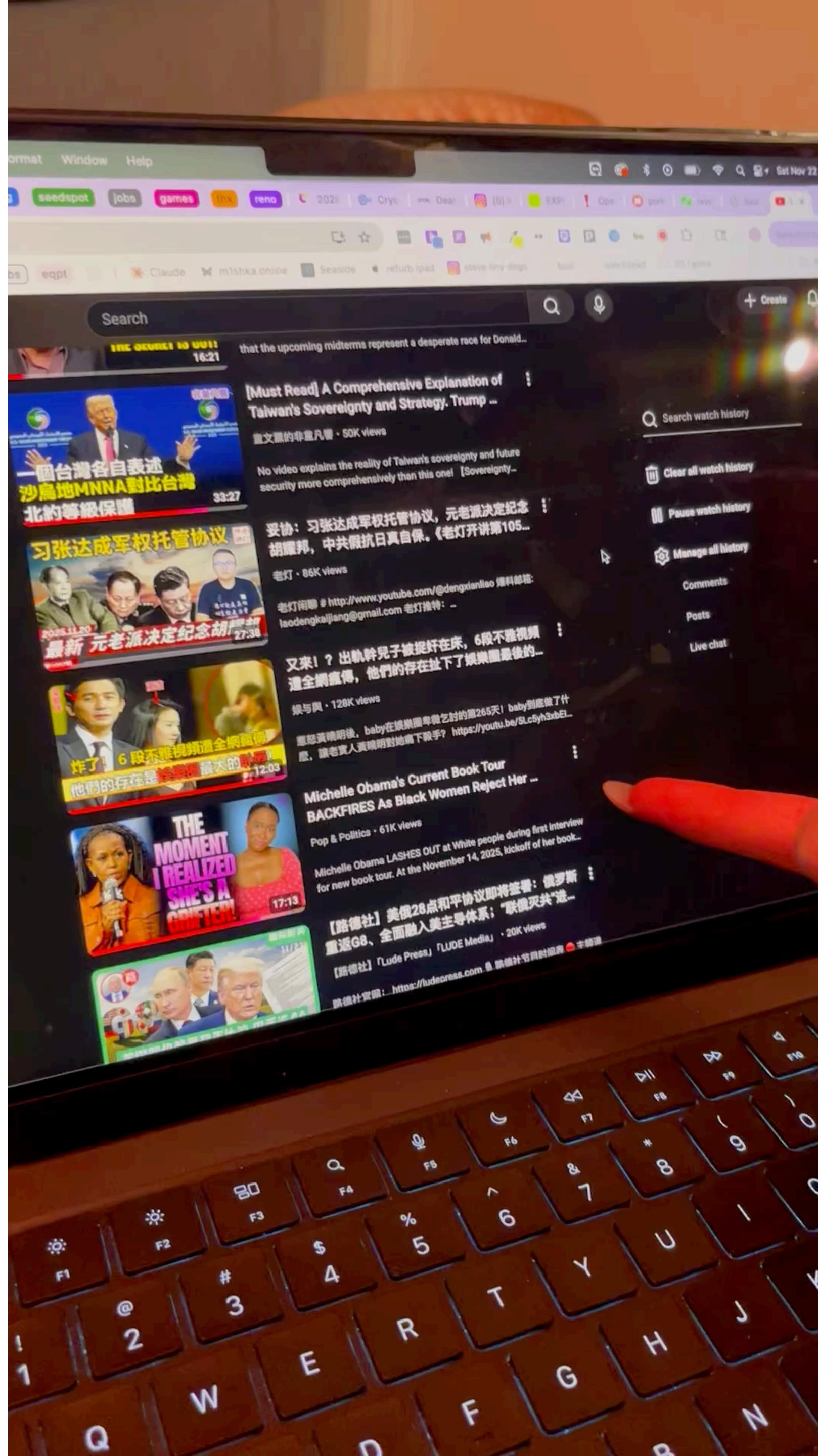


AI susceptibility

An experimental study of memetic vulnerability
patterns among online communities

Context



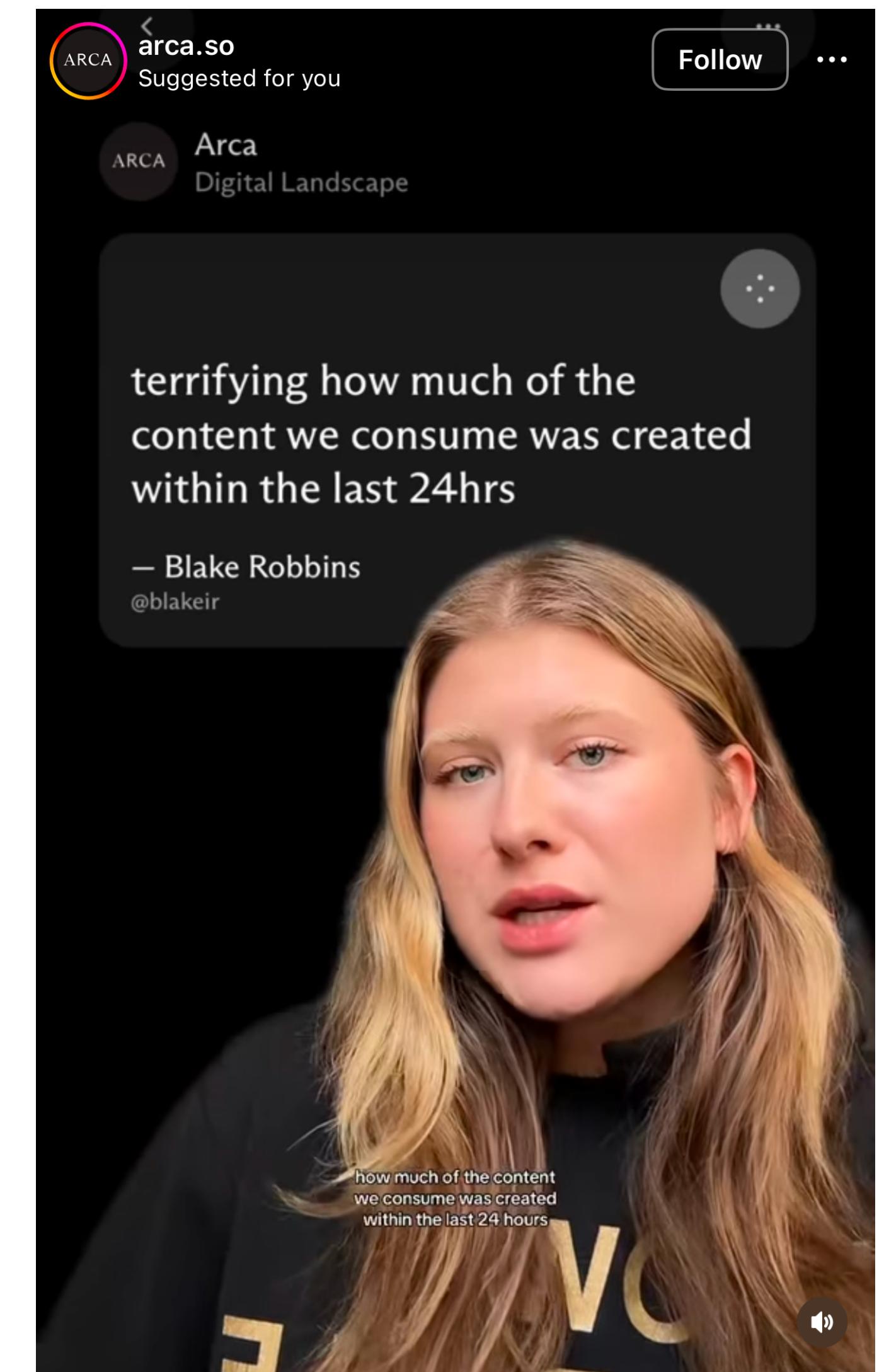


Comments

hidden__place 21h
I can't tell what is real anymore.. is anything real?
Reply View 6 more replies

zebraprawn2 13h
To be fair that's a fucking good looking tomato
Reply View 14 more replies

darkbluern 17h
Is this a fruit
Reply View 1 more reply



Hypothesis

For younger generations (Gen Z/Millennials): Online network position and community membership are stronger predictors of fake image susceptibility than traditional demographics

For older generations (Gen X/Boomers): Traditional demographic factors (education, political affiliation, geographic location) remain primary predictors, with online network effects playing a secondary role

The relationship between online network position and memetic vulnerability is influenced by:

1. Generation × Education

- Gen Z/Millennials: Education correlates with platform literacy but not skepticism
- Gen X/Boomers: Education directly predicts skepticism levels

2. Network position × Isolation paradox

- **Bridges** (high connectivity): More exposure but also more correction mechanisms
- **Isolated users**: Less exposure but fewer corrective social signals
- Prediction: U-shaped curve where moderately connected users are most vulnerable

3. Topic-Specific Vulnerabilities by Generation

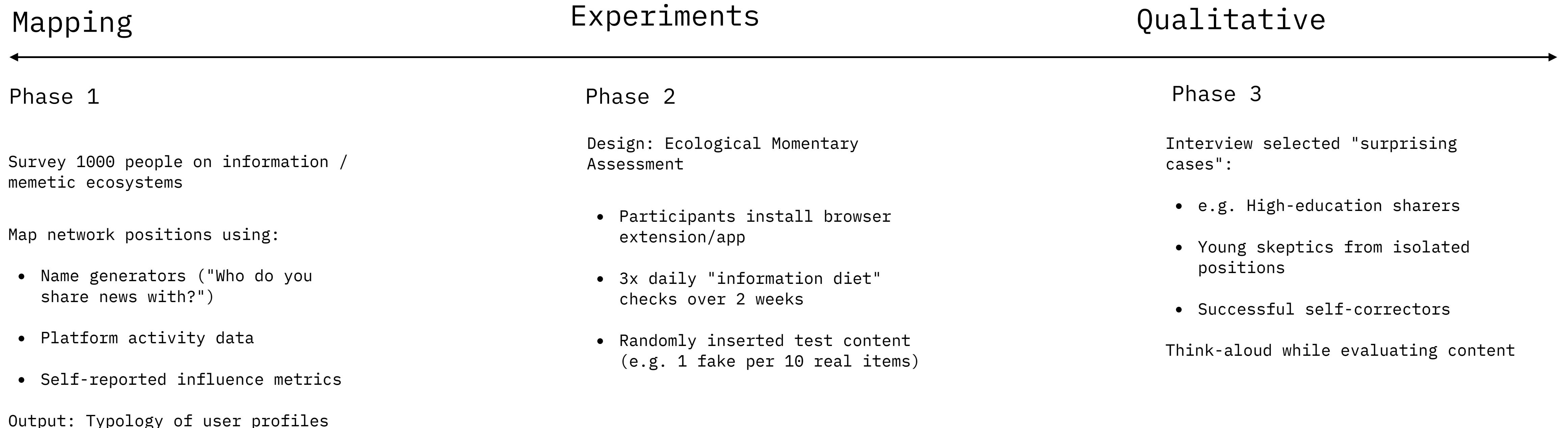
- Gen Z: Climate, social justice, celebrity, emotional triggers override network effects
- Millennials: Economic, health, parenting, peer validation
- Gen X: Political, financial scams, institutional trust
- Boomers: Health, family safety, fear-based content

Methodology

Experimental Design:

- Develop controlled sets of AI-generated images across 4-5 topic categories (politics, health, celebrity, disaster, economic)
- Randomized controlled trial with 3 conditions: image only, text only, image+text
- Measure three key outcomes: belief acceptance, skepticism activation, sharing intention

Process Sketch



Key Measurements:

- 1. Baseline susceptibility** (control for individual differences)
- 2. Topic-matched content** (pre-test 20 topics, 5 images per person's "blind spots"). Test fake content in both vulnerable and resistant topics
- 3. Network correction speed + exposure** (do they see fact-checks?)
- 4. Sharing context: who** (public vs private), **why** (motivation: informative, warning, funny, outrage), **how** (as-is, with comment, skepticism)
- 5. Believability ladder:** "definitely fake - probably fake - unsure - probably real - definitely real"

Analysis Plan

Power Analysis:

- Effect size: Expect medium ($d=0.5$) for main effects
- Interaction effects: Need $n=800$ for 80% power to detect small interactions
- Cluster adjustment: Add 20% for network clustering effects

Analysis Strategy:

1. Multilevel models (person nested in network communities)
2. Causal mediation: Network → Exposure → Belief → Sharing
3. Machine learning: Random forests to identify unexpected predictor combinations
4. Network simulation: Project spread patterns based on findings

Sampling

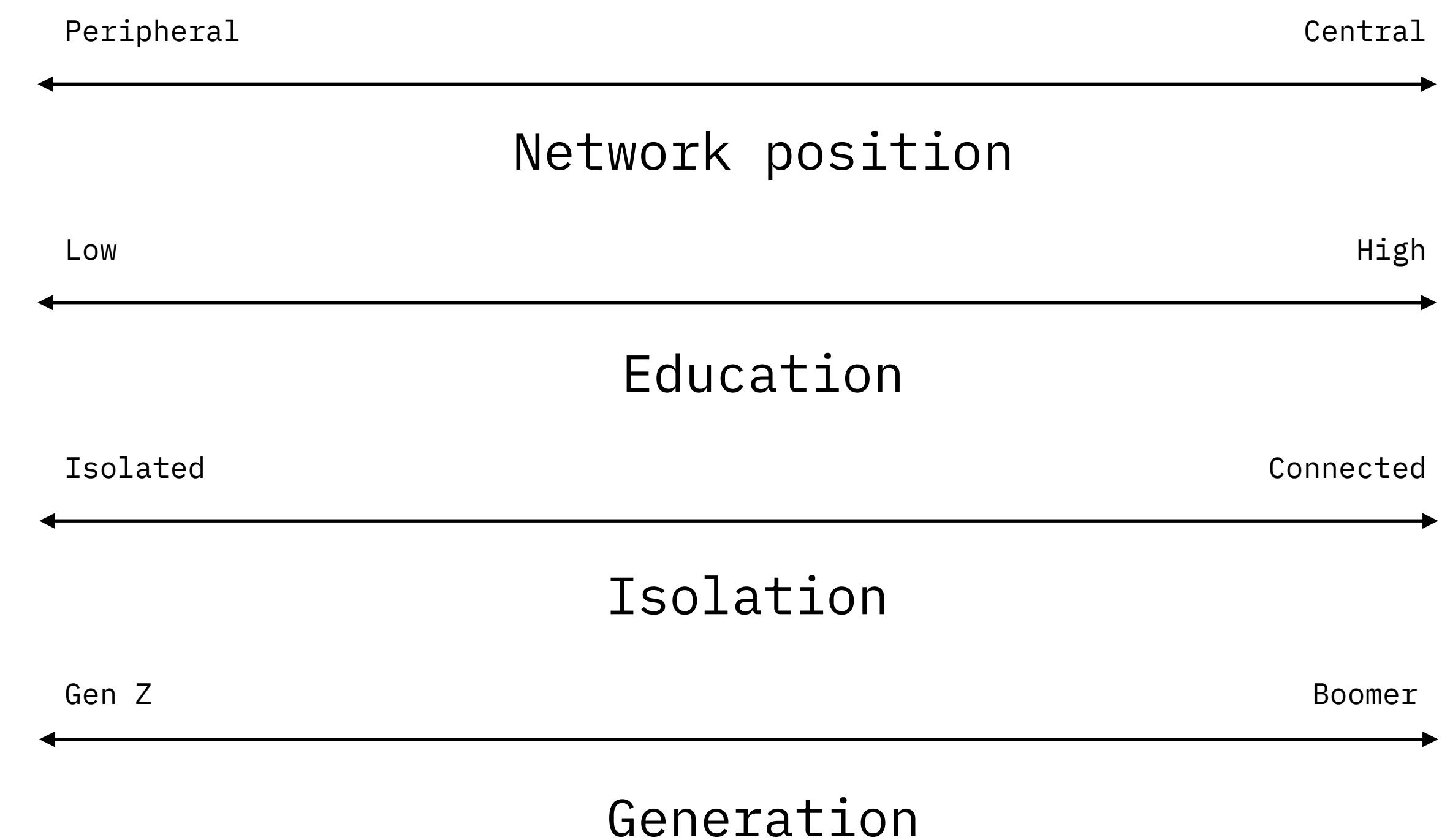
Population Sampling:

- Map participants across both demographic dimensions and network positions
- Target specific network roles: community bridges, central nodes / influencers, peripheral users / lurkers
- Track cross-platform behaviour patterns

Other confounding factors

Sub-hypothesis

- **Education levels** predicts skepticism for users > 50 y.o., but show weak correlation for users < 35 y.o.
- **Network centrality** correlates with sharing behaviour for users < 35 y.o. but not >50 y.o.
- **Cross-platform** users < 35y.o. will demonstrate higher fake image detection than single-platform users



	High Education	Low Education
Isolated + Gen Z	High susceptibility (no peer correction)	Moderate (platform-native skepticism)
Connected + Gen Z	Low (network correction)	High (viral exposure)
Isolated + Boomer	Low (traditional skepticism)	High (no verification sources)
Connected + Boomer	Moderate (mixed signals)	Highest (echo chambers)

Potential Issues

- Sampling bias: self selection (people worried about misinformation more likely to participate)
- Digital divide: recruitment of isolated older users
- Desirability bias: no one will admit to sharing fake news
- Cross platform identity: same person behaves differently on different platforms
- Artificial skepticism: study context triggers unnatural vigilance
- Ethical issues: fake content might cause potential harm, must show fake content without initial disclosure, study materials could spread beyond participants