VIEW A MOCK-PROTOTYPE HERE (non-data collecting, non-finalized):
madisonakles.github.io/myalgo.html

Background

The "algorithm" has transitioned from a technical sorting mechanism into a central cultural character—an "Algorithmic Imaginary" where users theorize, personify, and attribute intent to the systems that watch them (Bucher, 2017). In an era of algorithmic curation, users increasingly view their social media feeds as extensions of their own identity. On platforms like TikTok, this relationship has shifted from passive consumption to active intimacy, with users employing "folk theories" to frame the "For You" page as a psychological mirror or trusted confidant (Siles et al., 2024). This project investigates the "Algorithmic Shield": a psychological mechanism where the mere belief that a feed is personalized triggers a defensive state that blinds users to bias and fuels the spread of misinformation. By investigating this "Algorithmic Conspirituality" (Schellewald, 2021), this study shifts the focus of polarization research from the technological architecture of "filter bubbles" to the psychological architecture of the user.To test this, I will employ a between-subjects experimental design (N=600) where participants are randomized into either a "Personalized" or "Public" condition. Through a deceptive "Phantom Algorithm" prototype, the personalized group will be led to believe they are viewing a feed uniquely curated from their own social media history, while the public group will view a feed described as generic. In reality, both groups will view identical content containing a mix of neutral news, hyper-partisan content, and misinformation. This approach addresses the "Agency Gap" in current literature by applying the "IKEA Effect"—the overvaluation of labor (Norton et al., 2012)—to digital consumption. It tests whether the "labor of data" creates a cognitive blind spot that protects misinformation from scrutiny simply because the user views the feed as an extension of their own identity (Jawad et al., 2024).

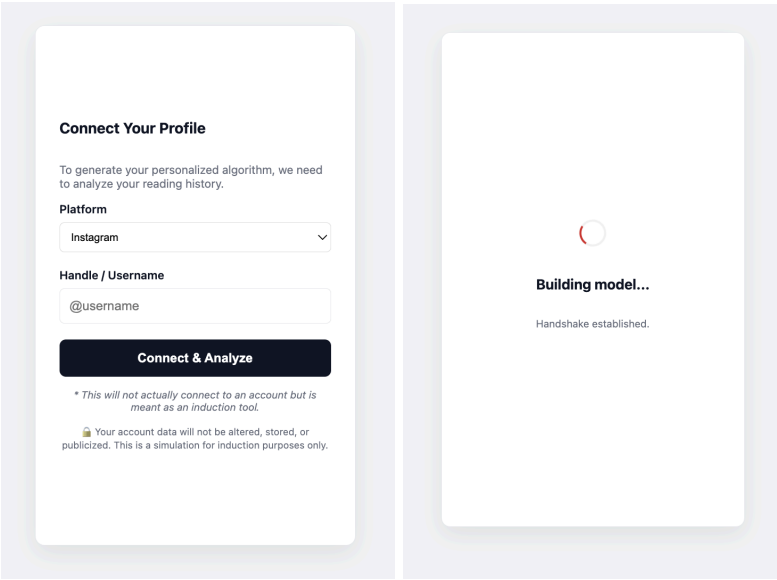
By experimentally decoupling the perception of personalization from actual algorithmic sorting, this study provides the first causal test of "Algorithmic Psychological Ownership." It isolates the belief of personalization as an independent variable, offering a new theoretical lens for understanding why rational agents reject objective facts in digital environments. Ultimately, this work redefines the "marketplace of ideas" by suggesting that the most effective censorship is not top-down suppression, but bottom-up identity defense.

Current Study

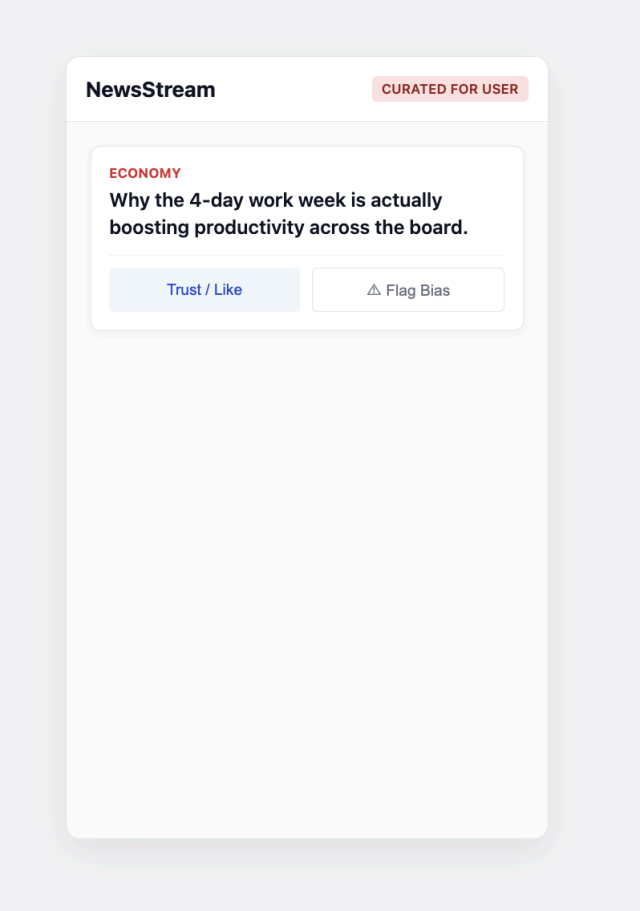
Participants: We will recruit N=600 participants (power analysis based on medium effect size f=0.25, alpha=0.05, power =0.80) via Prolific to ensure a representative sample of political ideology.

Procedure (The "Phantom Algorithm" Protocol):

1. Onboarding: All users are told they are testing a new news aggregation engine.
2. Manipulation (The Deception):
    - Group A (Algorithmic Self): Users are asked to enter their X (formerly Twitter), Instagram, Tiktok, or ‘Other’ handle to "sync" their feed. A loading animation plays: *"Analyzing your likes... Parsing interest graph... Curating feed..."* (No data is actually collected).



    - Group B (Public Control): Users are told they will view a "Standard Trending Feed" viewed by the general public.
3. The Stimulus: Both groups are shown the exact same newsfeed consisting of 12 items:
    - 4 Neutral/Factual items.
    - 4 Hyper-partisan (but factual) items.
    - 4 Verified Misinformation items (flagged by Politifact).
4. Task: For each headline, users must:
    - 1. Choose to “trust” or “flag bias” on the feed simulation.



- 2. The user will view the same headlines and
    i. 1. Rate perceived bias (1–7 scale).
    ii. Indicate likelihood to share (Likert scale).
    iii. (Exploratory) "Is this relevant to you?" (Yes/No).

Measures:

- Dependent Variable 1 (Sharing): Binary "Trust/Flag Bias" rate.
- Dependent Variable 2 (Bias Blindness): Mean bias rating for Hyper-partisan/Misinfo items.
- Dependent Variable 3 (Sharing): Mean bias rating for Hyper-partisan/Misinfo items.
- Mediator: *Perceived Agency* scale (adapted from Sundar & Marathe, 2010) to measure if users feel they "own" the feed.

Hypothesis 1: Participants who believe a feed is "theirs" will flag significantly fewer items as "biased" than participants who believe the feed is "public," despite viewing identical content.

Hypothesis 2: Participants in the "Personalized" condition will report higher intent to share misinformation, driven by a desire to defend their "digital identity" (consistent with Norton et al., 2012).

Note on Use of Deception: This study employs active deception (the "Phantom Algorithm"). This is necessary because using actual algorithms would introduce confounding variables (actual content differences). To mitigate ethical risks:

1. Data Privacy: No actual social media data will be scraped or stored. The "username" field is a dummy input.
2. Debriefing: Immediately post-study, participants will be fully debriefed, told that the feed was generic, and explained the scientific value of the deception.
3. Risk: The risk is minimal (no greater than standard web browsing).

BUDGET JUSTIFICATION

Category	Item Description	Cost Calculation	Total
1. Data Collection	Nationally Rep. Sample (N=600)	$5.50/ppt x 600 ppts (inc. fees)	$3,300
2. Pilot	Protocol Testing (N=40)	$5.50/ppt x 40 ppts	$220
3. Screening	"Political Ideology" Pre-Screening	$0.35/ppt surcharge	$210
4. Software	Qualtrics CoreXM License (1-Year)Academic Project	Rate$1,200	$1200
TOTAL REQUEST			**$4,930**

IHS GRANT PROPOSAL

If IHS were to offer you less than you've requested, how will your research be made more difficult? Which expenses would you prioritize?

If this proposal were funded at a lower level, the deficit would be absorbed entirely by reducing the sample size (N) of the main data collection, a compromise that directly threatens the study's statistical power and ability to detect nuanced effects.

Because this research seeks to identify complex interaction effects between Political Ideology and Feed Type, a robust sample is essential to avoid Type II errors; a reduced sample might successfully reveal the "Algorithmic Shield" among extreme partisans but would likely lack the granularity required to detect effects among political moderates, who are a critical demographic for understanding the health of the "marketplace of ideas."

Consequently, I would prioritize the fixed costs that guarantee the study's internal validity and technical execution, specifically the Qualtrics CoreXM license and the Pilot Study. The experimental "Phantom Algorithm" relies on advanced branching logic, timing triggers, and JavaScript customization that are only available in the professional software tier, meaning that without this license, the study's central manipulation is impossible to build. Therefore, I would treat the software and pilot as non-negotiable fixed expenses and scale down the Prolific recruitment to fit the remaining funds, trading statistical sensitivity for the operational viability of the experiment.

Please explain how your project improves our understanding of human freedom.

Current debates regarding digital freedom often devolve into fatalistic calls for top-down regulation, implicitly assuming that human users are helpless pawns of algorithmic manipulation. This project challenges that deterministic narrative by relocating the site of the problem—and the potential for liberation—back to the individual human mind. We improve the understanding of human freedom by investigating whether the primary threat to the "marketplace of ideas" is not the algorithm itself, but our psychological surrender to it.

The classical liberal ideal of a free society relies on the assumption that individuals are autonomous agents capable of objectively evaluating competing claims. However, this capacity for open inquiry is threatened by the "Algorithmic Self"—a phenomenon where users conflate their digital feed with their own identity. If, as my hypothesis suggests, users treat a "personalized" feed as an extension of themselves, they unconsciously erect an "Algorithmic Shield," rejecting opposing viewpoints not

because those views are false, but because they feel like a personal attack on their curated identity.

This research exposes a critical barrier to epistemic freedom: the voluntary, yet unconscious, outsourcing of critical thinking to a "phantom algorithm." By demonstrating that the mere *belief* of personalization blinds us to bias, this project highlights that true digital freedom requires more than just better code or platform neutrality; it requires the psychological autonomy to distinguish one's self from one's consumption. Ultimately, this work shifts the focus from paternalistic solutions—such as state-mandated content moderation—toward a model of empowered digital citizenship, where freedom is reclaimed through self-awareness and the conscious refusal to let a user interface define reality.

Please explain how your project advances the frontiers of your field. What is new and important about this work? Which gaps in the literature does your project address?

The "algorithm" is no longer just a technical sorting mechanism; it has become a central cultural character in the daily lives of users. Bucher (2017) defines this as the "Algorithmic Imaginary"—the way users theorize, personify, and attribute intent to the systems that watch them. On platforms like TikTok, this relationship has shifted from passive consumption to active intimacy. Siles et al. (2024) observe that users now frequently employ "folk theories" to make sense of their feeds, utilizing phrases like "My FBI agent is watching me" or "The algorithm knows me better than I know myself." This personification has deepened into what scholars call "Algorithmic Conspirituality" (Schellewald, 2022), where users view the "For You" page (FYP) not as a database query, but as a form of divine intervention or psychological mirror. When a user says, "I'm on [Topic]Tok," they are asserting that the algorithm has successfully diagnosed their identity. This cultural shift suggests that the "Algorithmic Shield" is not just a cognitive bias, but a relational one: users defend the feed because they view it as a trusted confidant rather than a neutral publisher.

This project advances the field of digital psychology by shifting the focus from the technological architecture of algorithms (e.g., "Filter Bubbles") to the psychological architecture of the user. While existing literature focuses heavily on how algorithms sort content, this project creates a new frontier by decoupling perception from reality. A major methodological flaw in current research is the inability to distinguish between the effects of personalized content and the *belief* of personalization; existing studies, such as Pariser (2011), compare users on different feeds, often conflating content differences with psychological differences. By using a deceptive "Phantom Algorithm"—where users believe a feed is curated for them when it is actually generic—this project provides the first causal test of "Algorithmic

Psychological Ownership," experimentally isolating the label "Recommended for You" as an independent variable affecting truth discernment.

Furthermore, this research addresses the "Agency Gap" in polarization literature. Current studies largely view users as passive victims of "black box" manipulation (Cheney-Lippold et al., 2011), yet Sundar & Marathe (2010) argue that *agency* is a powerful heuristic. This project addresses a critical gap by applying the "IKEA Effect" (Norton et al., 2012) to digital consumption. We know users overvalue furniture they build, but we do not yet know if they overvalue *information* they believe they "built" with their data. This project tests if this "labor of data" creates a cognitive blind spot—an "Algorithmic Shield"—that protects misinformation from scrutiny because the user views the feed as an extension of their own identity (Jawad et al., 2024). Finally, this work redefines the "marketplace of ideas" by suggesting that the most effective censorship is not top-down suppression, but bottom-up identity defense. By demonstrating that perceived personalization triggers a defensive psychological state, this research moves the frontier of polarization studies from *information access* to *epistemic identity*, offering a new theoretical lens for understanding why rational agents reject objective facts in digital environments.

Please describe the intended outcome, including outlining potential publications resulting from the grant.

The primary tangible outcome of this project will be a high-powered, nationally representative dataset (N=600) that experimentally isolates the psychological effects of "algorithmic labeling" on truth discernment. To ensure the highest standards of scientific rigor and reproducibility, the dissemination strategy prioritizes the Registered Report format. Prior to data collection, I will submit the full introduction, methodology, and analysis plan as a Stage 1 Registered Report to Psychological Science. This format allows for peer review of the experimental logic before results are known, eliminating publication bias and preventing "p-hacking." Securing an in-principle acceptance from the field's flagship journal would ensure that the findings—whether they confirm or reject the "Algorithmic Shield" hypothesis—are published and accessible to the scientific community. Should the report be better suited for a specialized audience, the manuscript will be targeted for the Journal of Experimental Social Psychology (JESP), a venue ideal for research at the intersection of social cognition and digital technology.

Consistent with the Institute's commitment to open inquiry, all data, code for the "Phantom Algorithm" simulation, and analysis scripts will be permanently archived on the Open Science Framework (OSF). This allows other researchers to replicate the study or reuse the "Phantom Feed" tool for future investigations into free speech and digital autonomy.

Finally, to ensure this work influences the broader conversation on designing a freer digital public square, I will submit an abstract to present the final results as a poster at the 2027 Society for Personality and Social Psychology (SPSP) Annual Convention or the 2027 European Association of Social Psychology (EASP) General Meeting. Presenting at these major international venues will place the "Algorithmic Shield" theory directly in front of the field's leading scholars on polarization and bias.

Please describe your plan to promote your work (e.g. social media, podcast interviews, etc.).

To ensure broad dissemination, I will publish accessible summaries of the findings on LinkedIn, specifically targeting networks in social psychology and the spread of misinformation. Academically, I will posit presenting the results as a visiting speaker at social psychology labs. To reach a wider public audience, I will also pitch the study for discussion on Andy Luttrell's *Opinion Science* podcast, which specializes in communicating complex social science research to general listeners.

What other resources could help advance this research? (e.g. peer review from a noted scholar, a manuscript workshop, etc.)

Targeted peer review from a senior scholar within the IHS network specializing in digital liberty and free speech would significantly strengthen the project's impact on the current policy landscape.