Hacking the Biomedical Discourse:

Trans Digital Counterpublics and the Self-Governance of Health

EMMA MACHADO DE SOUZA

PhD Candidate,
University of Salamanca

ABSTRACT

Institutional barriers to trans healthcare have compelled trans communities to establish peer-led digital spaces where medical knowledge is collectively produced and circulated outside traditional authority structures. This study investigates how Reddit's trans health communities exhibit counterpublic characteristics through their negotiation of medical authority via distinctive discourse practices. Using a mixed-methods approach combining Critical Discourse Analysis with computational linguistic techniques, the research analyzes 826 discussion threads from six trans subreddits collected between April 2024 and January 2025. The corpus includes medical-focused communities (r/TransDIY, r/AskMtFHRT, r/Transgender_Surgeries, r/TransfemScience; 603 threads) and comparative general trans discourse (r/asktransgender, r/transhealth; 223 threads).

The analysis reveals that medical communities practice what this study terms "engaged counterpublic" formation: strategic negotiation between biomedical appropriation and experiential authority construction (rather than a wholesale rejection of institutional knowledge). This engaged counterpublic formation distinguishes itself from oppositional counterpublics through context-dependent authority deployment.

The findings extend Fraser's counterpublic theory by documenting how marginalized communities navigate relationships with institutional knowledge systems when exclusion necessitates autonomous survival strategies. These digital counterpublics represent sites where communities not only resist medical gatekeeping but innovate knowledge production methods that challenge credential monopolies and establish distributed peer expertise networks as alternative validation systems for health knowledge.

KEY WORDS

CRITICAL DISCOURSE ANALYSIS, TRANS HEALTH, DISCOURSE ANALYSIS, TRANS LINGUISTICS, HEALTH COMMUNICATION, REDDIT

INTRODUCTION

Institutional barriers (as systematic medical gatekeeping, limited provider knowledge or persistent pathologization of trans experiences) to trans healthcare have compelled trans people to seek alternatives to traditional medical systems (Ashley, 2019; Rotondi *et al.*, 2013). In response to these exclusions, trans communities have established peer-led digital spaces where medical knowledge is collectively produced, contested and circulated outside institutional control.

Platforms ranging from specialized Reddit forums like r/TransDIY and r/Transgender_Surgeries to community resources such as the DIY (do-it-yourself) HRT (hormone replacement therapy) Wiki function as what August-Rae *et al.* (2024) theorize as counterpublic health spaces: digital environments where marginalized communities can construct alternative epistemologies that can challenge and (strategically) engage with dominant biomedical discourse. They also serve as sites of political resistance against the medical-industrial complex (Relman, 1980), prioritizing patient autonomy and wellbeing over institutional power and exposing economic inequalities embedded in health access. Within transgender studies, these platforms exemplify trans digital epistemologies, that is, knowledge production systems that emerge from lived transition experiences and community-based learning (Horak, 2014; Raun, 2016).

Despite their growing prominence and the knowledge they generate, these communities remain underexamined within both health communication and discourse analysis. Existing research on digital health communities focuses predominantly on mainstream patient populations, leaving questions about how marginalized communities develop autonomous knowledge systems largely unexplored. Understanding how these communities navigate relationships with biomedical authority (whether through wholesale rejection, strategic appropriation, or hybrid knowledge systems) reveals mechanisms of resistance that extend beyond binary opposition.

Three interconnected questions structure this investigation. First, how do these communities construct epistemic authority through discourse strategies that legitimize health knowledge claims while establishing alternative credentialing systems? Second, what metaphorical frameworks structure transition experiences and healthcare negotiation and how might these linguistic patterns constitute resistance to medical pathologization? Third, how do platform-specific affordances shape the formation and sustainability of these digital health communities? What vulnerabilities do these technological dependencies create?

The stakes of these inquiries extend beyond academic concerns. In the current moment, trans rights face increasing legislative challenges globally and healthcare access remains precarious for many trans people. Understanding how communities develop autonomous health knowledge systems may contribute to broader conversations about medical autonomy and digital health equity.

The research acknowledges that trans digital communities constitute vital infrastructure for community survival and resistance against medical exclusion, yet it also tries to navigate (and operate within) the tension Spade (2015) identifies in trans activism and scholarship: documenting community resilience and self-determination while advocating for structural changes that would make community self-provision less necessary.

Employing a mixed-methods approach combining Critical Discourse Analysis (CDA) with computational linguistic techniques, the study examines health knowledge construction patterns across 603 medical-focused discussion threads from four trans subreddits collected between April 2024 and January 2025: r/TransDIY, r/Transgender_Surgeries, r/AskMtFHRT and r/TransfemScience. The study includes comparative analysis of r/asktransgender (200 threads) to distinguish medical-specific from general trans discourse patterns.

It is necessary to remark that this research emerges from and examines discourse within Reddit, a

predominantly English-language platform whose user demographics and community practices reflect particular technological and cultural contexts. Reddit's user base concentrates heavily in North America, particularly the United States, with significant representation from other English-speaking nations including the United Kingdom, Canada and Australia. The communities analyzed here reflect this geographic distribution, with discussions frequently referencing healthcare systems, insurance structures and legislative contexts specific to these regions. While discrimination against trans people exists across healthcare systems globally, the specific mechanisms of exclusion vary significantly between differently organized healthcare contexts. The gatekeeping practices, insurance barriers and legislative restrictions documented in this study reflect characteristics common to several Anglophone healthcare systems, though these systems vary considerably in their organization. The United Kingdom, for instance, operates a universal healthcare system through the NHS; yet trans healthcare access within it still involves gatekeeping mechanisms, extended waiting lists and systemic barriers that produce dynamics analogous to those in private-insurance-based systems.

It is also necessary to acknowledge Reddit as both enabling factor and constraint: the platform provides technological infrastructure for community formation while embedding these spaces within concrete linguistic, cultural and jurisdictional frameworks. While Reddit's specific affordances shape the analysis in platform-specific ways, the theoretical insights about counterpublic health formation and community knowledge production may offer implications for understanding how marginalized communities navigate healthcare exclusion through digital technologies.

LITERATURE REVIEW

Trans communities' development of peer-led digital health spaces emerges from systematic epistemic exclusion within institutional medicine. Carel and Kidd (2014), drawing on Fricker's (2007) foundational work on epistemic injustice, identify two forms that operate simultaneously in trans healthcare contexts: testimonial injustice, which occurs when healthcare providers discount trans patients' self-knowledge about their own gender identities and healthcare needs; and hermeneutical injustice, which emerges when medical frameworks pathologize gender diversity, providing only deficit-based conceptual resources for understanding trans experiences. Ashley (2019) demonstrates how these epistemic injustices manifest concretely through gatekeeping protocols that treat hormone therapy access as something requiring extensive psychiatric assessment rather than informed consent, positioning trans people as inherently unreliable narrators of their own experiences. This systematic credibility deflation creates conditions under which trans communities must develop alternative spaces where experiential knowledge gains legitimacy that institutional medicine denies it.

Fraser's (1990) theory of subaltern counterpublics provides a framework for understanding how marginalized groups respond to such exclusions. Fraser theorizes counterpublics as parallel discursive arenas where members of subordinated groups formulate oppositional interpretations of their identities, interests and needs. These spaces serve dual functions: they provide venues for internal identity formation and collective self-understanding while generating discourse that challenges dominant public sphere frameworks. In stratified societies, counterpublics expand discursive possibilities, enabling forms of participation and knowledge production that dominant institutions foreclose. Subsequent scholarship extended this framework to digital contexts, with Brouwer and Asen (2010) demonstrating how online platforms enable counterpublic formation across geographic boundaries that previously prevented dispersed populations from sustaining collective discourse. Ziebland and Wyke (2012) document how digital platforms specifically transform health information practices, enabling individuals to share experiences they would never discuss in clinical settings and collectively produce medical knowledge outside

institutional frameworks, a shift particularly significant for marginalized communities facing barriers to conventional healthcare.

However, trans digital health communities reveal a tension unaddressed in standard counterpublic theory. Fraser's framework assumes counterpublics can develop discourse systems in opposition to dominant frameworks, maintaining separation while articulating critique. Trans health communities face a distinctive constraint: they cannot wholly reject biomedical knowledge because accessing transition-related healthcare, whether through formal medical systems or community-based alternatives, requires technical expertise in endocrinology, pharmacology, surgical techniques and monitoring protocols. This produces what might be theorized as "engaged counterpublics": formations that must simultaneously challenge institutional authority and strategically appropriate institutional knowledge for survival. Communities cite endocrine research when advocating for specific hormone protocols, demonstrating biomedical literacy to legitimize knowledge claims, yet simultaneously assert experiential knowledge to challenge provider practices like systematic underdosing. This epistemological hybridity raises a theoretical question: how do communities construct authority when they must both oppose institutional frameworks (that pathologize and gatekeep) and deploy institutional knowledge (that enables healthcare access)?

Frameworks theorizing resistance beyond binary opposition-compliance models help explain this navigation. Certeau (1984) distinguishes between strategies (actions available to those with institutional power and designated social space) and tactics (improvisational actions available to those without institutional locations who must operate within spaces controlled by others). Trans health communities employ tactical appropriation, using biomedical knowledge for community purposes, operating within medical discourse while lacking authority to define its legitimate applications. Katz (2004) elaborates how resistance operates through three modalities: resilience (working within systems while maintaining critical awareness), reworking (transforming institutional practices for community purposes) and resistance (direct opposition). Trans communities likely deploy all three depending on context: engaging biomedical knowledge through resilience when accessing care, reworking medical discourse when developing autonomous protocols and resisting provider authority when challenging pathologization. Understanding how these tactical modalities operate requires examining the discourse practices through which communities actually construct knowledge claims, which existing research has not systematically analyzed.

Moreover, counterpublic status itself requires empirical verification through observable discourse practices rather than assumptions based on a marginalized positioning. Asen (2000) argues counterpublic formation must be demonstrated through recognition and articulation of exclusion via alternative communicative norms, observable in actual discourse patterns. Squires (2002) provides analytical precision by distinguishing enclave publics (hidden from view due to threat), counterpublics (openly oppositional with independent media access) and satellite publics (oscillating between separation and engagement). She emphasizes examining observable features: relationships to state institutions, available resources, modes of communication and relationships to dominant political-economic structures. Crucially, communities may shift between modes contextually rather than maintaining fixed status. This directs attention toward discourse analysis: how do communities actually construct alternative authority systems, what communicative practices mark counterpublic formation and how does platform infrastructure shape these possibilities?

Trans studies scholarship emphasizes that trans communities develop distinctive epistemological approaches that cannot be understood simply through frameworks developed for other patient populations. Nicolazzo (2021) theorizes "trans epistemologies" as ways of knowing emerging from

navigating institutions predicated on binary gender assumptions, encompassing not only medical knowledge but survival strategies, self-advocacy techniques and collective wisdom about healthcare navigation. Awkward-Rich (2017) argues trans knowledge production involves "reading practices" attending to what triumphant medical narratives systematically exclude: persistence when treatments fail, labor of provider education and ongoing embodiment negotiations that never resolve into stability. These theoretical contributions suggest trans health knowledge construction operates through specifically trans ways of knowing, shaped by experiences of simultaneous pathologization and access withholding. Yet how these epistemologies manifest in actual discourse (what linguistic strategies construct authority, what metaphorical frameworks organize experience) remains underexamined.

Empirical research on patient-led knowledge production provides relevant precedents. Epstein (1996) documented how AIDS activists acquired biomedical expertise sufficient to challenge research protocols and reshape clinical trials, becoming "lay experts" engaging professionals on scientific terms while maintaining community advocacy. This demonstrates possibilities for patient communities developing medical expertise outside institutional frameworks and successfully challenging institutional authority. However, AIDS activism occurred under specific conditions (epidemic urgency creating political will and coordinated organizing infrastructure) differing from trans communities' ongoing, geographically dispersed contexts. Contemporary DIY healthcare research provides more direct comparisons. Wexler (2022) maps DIY medicine practices spanning complementary approaches (supplementing mainstream medicine) to substitutive approaches (replacing inaccessible care). Trans DIY hormone therapy represents primarily substitutive practice driven by gatekeeping, provider scarcity and cost barriers rather than ideological rejection of medical science. Significantly, Kennedy *et al.* (2022) found comparable health outcomes between peer-supported and physician-supervised hormone therapy when communities maintained monitoring protocols, challenging assumptions that medical supervision is prerequisite for safety and suggesting gatekeeping serves authority maintenance rather than patient protection. Yet Kennedy *et al.* emphasize DIY emerges from necessity not preference; removing institutional barriers would better serve community health than normalizing constrained self-provision.

Research examining trans digital health communication specifically documents community practices and significance. Augustaitis *et al.* (2021) identified facilitators including peer expertise, experiential validation and stigma-free discussion, alongside barriers including information overload, misinformation concerns and platform precarity. Edenfield *et al.* (2019) analyzed DIY HRT communities as "queering tactical technical communication," positioning appropriation of medical discourse as self-determination rather than dangerous deviation. They emphasize communities' risk assessment and harm reduction protocol development, challenging deficit models positioning community knowledge as inferior and recognizing different epistemological approaches suited where institutional medicine fails marginalized populations. However, this research has not systematically examined the discourse mechanisms through which such knowledge construction occurs, how communities linguistically establish credibility, what metaphorical frameworks structure medical understanding and how authority gets negotiated in specific interactions.

Nevertheless, platform architecture shapes which knowledge construction becomes possible. Record *et al.* (2018) found Reddit communities provide valuable peer support while requiring critical evaluation given information quality variation. Deutsch (2016) noted substantial variation in transgender health information accuracy; some community content rivals institutional sources while other materials contain outdated information. Reddit's specific affordances (pseudonymity, nested threading, voting systems, subreddit organization) create specific conditions for counterpublic formation. Pseudonymity

enables stigmatized healthcare discussion, voting surfaces community-valued content. However, platform governance through moderation policies and algorithmic ranking constrains counterpublic autonomy, with corporations retaining authority to alter or eliminate spaces (Lupton, 2014).

The existing literature establishes that trans digital health communities constitute significant knowledge production sites operating under distinctive constraints requiring tactical biomedical appropriation while opposing epistemic injustice, providing essential information while navigating platform precarity and developing trans-specific epistemologies while engaging institutional frameworks.

METHODOLOGY

This research combined qualitative Critical Discourse Analysis (CDA) with computational linguistic techniques to investigate both nuanced meaning-making practices through close textual analysis and broader patterns across larger corpora.

This study treats counterpublic status as an empirical question requiring demonstration through observable discourse features rather than an assumption based on marginalized social positioning. Following Asen (2000) and Squires (2002), the analysis establishes four testable criteria: (1) explicit recognition and articulation of institutional exclusion, (2) construction of alternative authority structures that challenge dominant credentialing systems, (3) development of oppositional discourse while strategically engaging institutional knowledge and (4) formation of community-specific communicative norms. The research design tests whether trans health communities meet these criteria by examining patterns in authority construction, metaphorical frameworks and discourse organization. This approach distinguishes counterpublic formations from other online health communities (patient support groups, information aggregators) that may serve marginalized populations without constituting counterpublics.

The corpus comprises Reddit threads from six trans health communities representing distinct approaches to healthcare navigation. Four communities focus specifically on medical knowledge construction: r/TransDIY (self-managed hormone protocols, 200 threads), r/Transgender_Surgeries (surgical experiences and outcomes, 200 threads), r/AskMtFHRT (technical hormone therapy questions, 199 threads), and r/TransfemScience (hormone pharmacology research, 4 threads). One additional community provided comparative context: r/asktransgender (multipurpose forum where health discussions intersect with identity and social topics, 200 threads). r/transhealth (general health discussion, 23 threads) was initially included but excluded from analysis due to insufficient volume.

At data collection (April 2024-January 2025), subscriber counts ranged from approximately 5,900 (r/TransfemScience) to 342,000 (r/asktransgender). The 651 unique contributors who authored the 826 analyzed threads represent a small percentage of total membership, reflecting typical Reddit participation patterns where core groups sustain discourse that circulates more widely.

Inclusion criteria required threads addressing hormone replacement therapy protocols, surgical procedures, provider interactions, harm reduction practices or medication pharmacology. Exclusion criteria eliminated threads focusing exclusively on non-health topics, archived or inactive communities (>6 months without posts), non-English language or image-based content without substantive text.

Using Python Reddit API Wrapper (PRAW), data collection gathered original posts and associated comment threads between April 24, 2024, and January 4, 2025. The initial raw corpus (4,937 posts) underwent cleaning to remove deleted content, insufficient text and duplicates, yielding 826 threads with complete comment trees. Of these, 819 (99.2%) addressed health themes.

Primary analysis focused on 603 threads from the four medical-specific subreddits, while the 200 r/

asktransgender threads were analyzed separately to determine whether biomedical engagement patterns differ between specialized medical forums and general trans discourse spaces.

The study integrated three complementary approaches: Critical Discourse Analysis for examining power relations and identity construction, computational methods for systematic pattern identification and qualitative close reading for nuanced meaning-making practices. The analytical framework combined theoretically informed coding categories with computational operationalization. Drawing on Fricker's (2007) epistemic injustice framework, van Leeuwen's (2007) legitimation theory and Epstein's (1996) work on lay expertise, the analysis developed three primary discourse dimensions through iterative engagement between theoretical frameworks and preliminary data exploration. These dimensions provide the analytical apparatus for testing the four counterpublic criteria established above: authority source analysis reveals whether communities construct alternative credentialing systems (criteria 1 and 2), discourse theme analysis identifies articulation of exclusion and oppositional engagement (criteria 1 and 3) and metaphorical framework analysis examines the formation of community-specific communicative norms (criterion 4). The three dimensions are:

1. Authority sources (biomedical citations, experiential knowledge, community-based authority, counter-authority positioning)

2. Discourse themes (medical information dissemination, peer advice, challenging biomedical authority, institutional barriers)

3. Metaphorical frameworks (war/battle, journey/path, technology/machinery, construction/building, metamorphosis/transformation)

Table 1.

Authority Source Classification Patterns

Authority type	Subcategory	Pattern keywords
Biomedical	Medical citation	study shows, research indicates, according to, published, peer-reviewed, clinical trial, evidence shows, medical literature, scientific evidence
	Professional authority	doctor said, medical professional, clinician, specialist, healthcare provider, my endo, therapist told me
	Statistical evidence	statistics show, data indicates, surveys reveal, studies find, research demonstrates, meta-analysis
Experiential	Experiential authority	my experience, I've found, in my case, personally, for me, I can confirm, from my perspective, speaking from experience
	Community wisdom	others have said, community, shared experience, common knowledge, collective wisdom, community consensus, many people report
	Peer validation	others here, fellow trans, community members, people like us, shared understanding, solidarity
	Anecdotal evidence	I heard, someone told me, a friend, anecdotal, word of mouth, rumor, supposedly
Counter-authority	Challenge authority	gatekeeping, outdated, restrictive, barriers, access, bureaucracy, red tape, institutional bias

Note: Patterns matched via case-insensitive regex across the full corpus. The biomedical/experiential ratio in Table 3 aggregates biomedical authority markers (medical citation + professional authority + statistical evidence) versus experiential authority markers (experiential authority + community wisdom + peer validation + anecdotal evidence).

Qualitative CDA focused on representative threads selected through maximum variation sampling, examining lexical choices, metaphorical language, evidential marking and authority construction. Coding followed an iterative process with initial categories refined through systematic comparison.

Computational analysis employed dictionary-based pattern matching for thematic categorization and regular expression matching for metaphor identification. BERTopic modeling was used for corpus-level discourse frame identification as a triangulation method to validate qualitative findings. Bootstrap resampling and cross-validation assessed statistical stability. All computational coding utilized explicitly defined regex criteria to ensure consistency and reduce subjective interpretation variability.

The computational and qualitative components serve complementary functions within this design: a computational pattern matching identifies the distributional patterns across the full corpus while qualitative CDA provides the interpretative framework for understanding what those patterns mean in discourse contexts. This approach follows Charteris-Black's (2004) three-stage procedure of identification, interpretation and explanation: the computational component addresses identification at scale, while the qualitative analysis addresses interpretation and critical explanation.

Metaphorical framework categories were developed through a two-stage process informed by Conceptual Metaphor Theory (Lakoff & Johnson, 1980), corpus-based Critical Metaphor Analysis (Charteris-Black, 2004) and prior research on metaphor in trans discourse (Lederer, 2015; Martynyuk, 2021). Initial qualitative reading of a stratified subset of threads identified recurring conceptual patterns structuring how community members discuss transition and healthcare. Seven candidate categories emerged from this exploratory phase: journey, transformation, technical, medical, puberty, warfare and construction. Two categories (medical and puberty) were subsequently excluded because their constituent terms functioned literally rather than metaphorically in this corpus: terms such as "treatment" or "therapy" describe actual medical processes in health discourse rather than serving as conceptual mappings, and "second puberty" refers to the physiological reality of HRT effects rather than operating as a metaphorical framing. The remaining five categories (war/battle, journey/path, technology/machinery, construction/building, metamorphosis/transformation) were then operationalized as keyword lists and regex patterns for systematic computational application across the full corpus.

Table 2:
Metaphorical Framework Categories, Seed Terms and Corpus Occurrences

Framework	Seed terms	Occurrences	Status
War / battle	battle, fight, struggle, combat, war, enemy, victory, defeat, strategy, tactics, weapon, armor, defense, attack, resistance, rebellion	1,049	Included
Journey / path	journey, path, road, destination, milestone, steps, progress, direction, crossroads, detour, arrival, departure, map, guide, compass, adventure	871	Included
Technology / machinery	hacking, coding, programming, debugging, system, protocol, algorithm, process, optimization, configuration, settings, upgrade, patch, version, compatibility, integration	443	Included
Construction / building	building, construction, foundation, structure, framework, blueprint, design, architecture, scaffold, renovation, reconstruction, repair, maintenance	295	Included
Metamorphosis / transformation	transformation, metamorphosis, evolution, becoming, change, transition, shift, development, growth, emergence, awakening, rebirth, renewal, reformation	43	Included
Medical	treatment, therapy, prescription, diagnosis, protocol, intervention, procedure, remedy, cure, healing, recovery, medicine, dosage, symptoms, condition	17,252	Excluded
Puberty	second puberty, adolescence, development, growth, changes, maturation, teenage years, coming of age, physical changes, hormonal changes, body development	1,895	Excluded

Following AoIR ethical guidelines (Franzke et al., 2020), this research treats publicly accessible Reddit posts as analyzable discourse while maintaining commitments to avoid harm, respect community autonomy and contribute rather than extract. Usernames and identifying details were removed; analysis avoids deficit framing that positions community practices as inferior to institutional medicine.

Engaging with Tuck's (2009) critique of "damage-centered research," this analysis centers community knowledge production and epistemic innovation rather than portraying trans people primarily as victims. While documenting healthcare exclusion and survival strategies, the goal is contributing empirical evidence about counterpublic health formation for academic understanding and policy advocacy. However, community members did not consent to research participation when posting in peer support spaces. The researcher's positionality as a trans scholar shapes interpretive choices and she accepts complete responsibility for all analytical choices and acknowledges that community members may interpret their discourse practices differently.

THEMATIC FINDINGS AND ANALYSIS

The following sections integrate qualitative observations, quantitative patterns and theoretical interpretation to demonstrate how these digital health

communities function as engaged counterpublics navigating complex relationships with institutional medicine.

Trans health communities on Reddit practice epistemic negotiation, strategically appropriating biomedical discourse while constructing experiential authority as a complementary validation mechanism. Communities consistently employ what can be characterized as "technical insubordination": using precise pharmacological terminology while explicitly questioning provider competence and intent.

A TransDIY post about underdosing exemplifies this pattern:

> "I started on 2 mg of estradiol and 25 mg of spiro... after 6 months still at male levels. Am I being underdosed?"

The response directly challenges medical judgment:

> "Massively underdosed and it's hard to believe it's not intentional. The fact that they would boost you by 1mg after your levels were that low reads like malicious compliance."

Such exchanges use clinical specifications to establish credibility while asserting different therapeutic standards, positioning community knowledge as authoritative enough to evaluate and critique medical recommendations.

Discussions about hormone protocols generate peer review using clinical specifications. When evaluating Dr. Powers' HRT recommendations, one response states:

> "For reference, the standard guidelines that we tend to suggest to people here are total T below 50 ng/dl, total E2 between 80-200 pg/ml at their minimum levels."

Community members explicitly reject premises that external authorities possess greater expertise about their healthcare needs than what they have developed through lived transition experiences and collective knowledge production, a stance aligning with Ashley's (2019) analysis of medical gatekeeping as dehumanization rather than patient protection.

Computational analysis across 603 medical-focused threads confirms these qualitative patterns while revealing their systematic character. Biomedical authority citations (3,585 total) outnumber experiential knowledge references (2,879 total), yielding a ratio of 0.80 (experiential/biomedical). However, this overall pattern masks significant variation by discourse context. Even in threads containing markers of challenge to biomedical authority, biomedical citations predominate (2,190 versus 1,583 experiential, ratio 0.72). When challenging providers, they deploy biomedical expertise against inadequate practice, appropriating institutional authority to support oppositional claims.

Authority patterns vary systematically across contexts. Medical information dissemination threads use biomedical authority most frequently, creating discourse spaces where formal medical knowledge maintains central relevance alongside experiential validation. Peer advice and harm reduction discussions demonstrate stronger reliance on experiential knowledge, where lived experience serves as the key criterion for advice credibility. Threads challenging biomedical authority show highest rates of counter-authority positioning while maintaining substantial biomedical citation patterns, indicating complex engagement rather than wholesale rejection.

Table 3:
Context-Dependent Authority Patterns in Medical Subreddits

Context	Biomedical	Experiential	Ratio (Exp/Bio)	Pattern
Medical subreddits (overall)	3,585	2,879	0.80	Bio > Exp
TransDIY	1,117	1,003	0.90	Bio > Exp
Transgender_Surgeries	1,821	1,024	0.56	Bio >> Exp
AskMtFHRT	636	845	1.33	Exp > Bio
TransfemScience	11	7	0.64	Bio > Exp
By discourse theme				
Challenging authority	2,190	1,583	0.72	Bio > Exp
Not challenging	1,395	1,296	0.93	Nearly equal

Note: Ratio calculated as Experiential/Biomedical. Values <1.0 indicate biomedical citations predominate; values >1.0 indicate experiential references predominate. Data from 603 medical-focused threads.

Co-occurrence analysis reveals that documents frequently combine experiential and biomedical authority markers, suggesting community members create hybrid knowledge claims synthesizing formal medical information with practical implementation insights derived from personal experience. Communities selectively incorporate biomedical knowledge while constructing experiential authority as complementary validation, strategically prioritizing different authority types depending on communicative context.

These findings extend Fraser's (1990) counterpublic theory by revealing what might be understood as "engaged counterpublic" formation, distinct from the oppositional counterpublics Fraser originally theorized. Unlike feminist counterpublics that could reject patriarchal discourse entirely, trans health communities cannot afford wholesale rejection of biomedical knowledge when life-threatening consequences accompany inadequate healthcare access. This necessity produces tactical engagement: communities master technical expertise while maintaining oppositional critique of institutional authority structures. The context-dependent authority negotiation documented here represents sophisticated epistemological navigation rather than simple resistance or wholesale adoption of institutional frameworks.

To assess whether biomedical engagement patterns in medical subreddits represent strategic choices specific to health contexts or reflect broader trans community communication norms, comparative analysis examined r/asktransgender (200 threads), a large multipurpose space where health discussions intersect with identity development, social navigation and political topics.

In r/asktransgender, experiential knowledge references (5,250 total) substantially exceeded biomedical

authority citations (2,028 total), yielding a ratio of 2.59 (experiential/biomedical), which inverts the medical subreddit pattern (0.80). When trans communities discuss identity, social experiences and political issues alongside health topics, experiential knowledge predominates. The contrast demonstrates that medical communities' extensive biomedical engagement represents a deliberate strategic choice.

This comparative finding reveals what makes medical counterpublics theoretically distinctive from broader trans counterpublic formations. In general trans discourse spaces, conversations range across identity exploration, discrimination experiences, social transition and political advocacy, with occasional health questions appearing alongside these topics. In these contexts, lived experience naturally constitutes the primary authority source. However, in spaces explicitly dedicated to medical knowledge construction, communities choose to engage extensively with biomedical discourse while constructing experiential knowledge as complementary validation. When health knowledge construction becomes the central discourse function, communities actively choose biomedical engagement over pure reliance on experiential authority, showing epistemological navigation. Medical spaces cannot afford wholesale rejection of biomedical knowledge because accessing transition-related healthcare requires technical expertise and engagement with medical systems, producing "engaged counterpublics" that maintain oppositional critique of inadequate care while strategically appropriating institutional knowledge for community survival.

Alongside biomedical engagement, communities construct experiential authority as a distinct epistemological category providing insights unavailable to medical providers. A post about progesterone effects demonstrates this pattern:

> "this all kinda happened to me, you can read my comments and post history to see more about what i experienced."

These experiential accounts create authority structures where community members develop recognition as informal experts through consistent provision of accurate information and long-term engagement with transition processes. Peer knowledge networks operate through consultation mechanisms where collective wisdom is explicitly positioned over individual medical authority. A discussion about DIY harm reduction states:

> "I think directing users here makes the most sense just from a 'keeping things central' point of view. The amount of combined knowledge that's sitting here is incredible."

The community becomes a repository of specialized knowledge that complements and, in areas of trans-specific healthcare where providers often lack expertise, sometimes fills gaps left by individual medical providers.

Posts about hormone management generate detailed peer guidance providing practical advice that supplements or replaces medical consultation. A discussion about injection overdose produces responses like:

> "Most likely they are fine but its probably going to be an uncomfortable time for them physically and emotionally. With a depot that large it would probably take months to clear."

These exchanges demonstrate clinical reasoning while maintaining accessible communication that democratizes medical knowledge.

The temporal dimensions of transition knowledge emerge as particularly significant. Posts with high experiential authority scores regularly include specific timeline markers establishing credibility through sustained engagement with transition healthcare. Long-term outcome documentation functions as research methodology supplementing medical literature. A four-year post-surgical update explicitly addresses information gaps: "There arent a ton of post op pics from years after surgery and wanted to provide some."

Community members position themselves as researchers contributing to collective knowledge production about long-term transition outcomes. Users regularly reference years of observation and outcome tracking to evaluate treatment approaches and provider recommendations, including recognition of changing political and regulatory environments affecting healthcare access.

This sustained community engagement functions as alternative credentialing. Nicolazzo (2021) theorizes "trans epistemologies" as distinctive ways of knowing emerging from experiences of gender transition and navigating institutional systems predicated on binary gender assumptions. The temporal authority patterns documented here instantiate this theorization: users who document transition experiences over extended periods gain credibility through demonstrated outcomes rather than formal training, creating "experiential credentialing" where community members evaluate expertise based on documented results and consistent participation rather than institutional certification.

However, this system privileges users who have time and emotional resources for extensive platform engagement, potentially excluding those facing economic constraints, mental health challenges or digital access limitations. Reddit's upvoting mechanism and comment threading structure amplify certain voices while potentially marginalizing others, suggesting digital platforms shape community authority in ways that may reproduce rather than challenge traditional hierarchies. Communities must navigate tensions between developing specialized knowledge networks and maintaining inclusive participation, particularly significant when expertise becomes concentrated among members with greater platform visibility.

The longitudinal knowledge production documented through sustained community participation reflects what Awkward-Rich (2017) theorizes as trans forms of relationality and collective survival. Awkward-Rich explores how shared experiences of medical inadequacy and systemic marginalization generate "trans negativity", not pessimism but attentiveness to failure, ambivalence and persistence that dominant narratives of medical transition typically exclude. Community knowledge production encompasses not only successful protocols but also documentation of treatments that failed, complications that emerged and persistent challenges that clinical literature often minimizes. This negative knowledge builds collective resources from shared experiences of surviving inadequate healthcare systems, creating epistemologies that value persistence and survival as much as optimized outcomes.

Corpus-level topic modeling provides additional confirmation of the epistemic patterns documented above. BERTopic modeling across the full 826-thread corpus identified four guided discourse frames, with 817 threads receiving topic assignments: "Resistance and Autonomy" (395 threads), "Desperation and Necessity" (219 threads), "Scientific Exploration" (180 threads) and "Medical Safety and Caution" (23 threads). Cross-validation demonstrated topic stability coefficients above 0.70, indicating robust identification of underlying discourse structures. The predominance of resistance and autonomy framing provides further empirical support for characterizing these communities as counterpublics that challenge institutional authority while developing alternative care pathways. The substantial presence of desperation and necessity framing confirms that these practices emerge from constrained circumstances (and not just from ideological preference): communities navigate healthcare access through autonomous knowledge production because institutional systems have systematically failed to provide adequate, affirming care. The presence of scientific exploration as a substantial discourse frame further challenges deficit models positioning community knowledge as inferior to institutional expertise, reinforcing the pattern of strategic biomedical engagement documented in the qualitative analysis above.

Having established how these communities construct epistemic authority, the analysis now turns to the second research question: what metaphorical

frameworks structure transition experiences and healthcare negotiation, and how might these linguistic patterns constitute resistance to medical pathologization?

Metaphorical analysis of the full 826-thread corpus reveals conceptual frameworks structuring health discourse that constitute forms of resistance to medical pathologization while maintaining practical utility. The dominance of war/battle/conflict metaphors (1,049 total occurrences) indicates communities consistently frame healthcare access as adversarial encounters requiring strategic navigation and resistance, creating conceptual space for understanding medical encounters as sites where strategic action is appropriate rather than passive compliance.

Journey/path metaphors appeared 871 times, reflecting transition-related healthcare as progressive movement through developmental stages with identifiable milestones and decision points. Technology/machinery metaphors characterized 443 instances, primarily appearing in discussions of medical interventions and hormonal modifications, suggesting communities conceptualize transition-related treatments as technical processes requiring precise calibration and maintenance.

Construction/building metaphors (295 occurrences) structured discussions of treatment protocol development and knowledge accumulation, indicating communities approach health planning as systematic building projects. Metamorphosis/transformation metaphors, while least frequent (43 occurrences), appeared in theoretically significant contexts discussing transition-related bodily changes, suggesting communities selectively employ biological transformation concepts when addressing fundamental identity-body relationships. This selective deployment indicates careful navigation between medical frameworks that pathologize trans embodiment and community frameworks that assert transition as natural development.

Metaphorical usage patterns varied systematically across thematic contexts, revealing how different discourse topics activate distinct conceptual frameworks. Institutional barriers discussions demonstrated elevated war/battle metaphors; peer advice contexts showed increased journey/path metaphors, indicating communities adjust conceptual framing strategies based on discourse functions and audience needs.

The prevalence of war metaphors creates conceptual space for understanding medical encounters as sites where strategic action is appropriate, rejecting expectations of passive compliance. This aligns with trans digital epistemologies (Horak, 2014) that challenge clinical expertise through alternative knowledge production forms. However, the role of journey metaphors suggests communities also maintain progressive frameworks positioning transition as natural development rather than medical intervention, creating space for positive identity construction alongside strategic resistance.

This metaphorical diversity enables communities to navigate complex relationships with institutional medicine. War metaphors legitimate oppositional positioning when challenging inadequate care; journey metaphors support identity affirmation and normalize transition experiences; construction metaphors emphasize agency and intentionality in healthcare planning. The sophisticated deployment of multiple metaphorical frameworks demonstrates communities' capacity to shift conceptual positioning strategically depending on discourse context and audience.

The discourse patterns documented here also suggest these communities maintain more expansive frameworks for understanding transition goals than institutional medicine typically accommodates. Medical transition protocols often assume binary gender outcomes focused on passing as desired result, yet community discussions reveal more diverse transition intentionality. Posts about hormone protocols discuss not only feminization or masculinization but achieving specific aesthetic goals including androgynous presentations, non-binary embodiments or

selective physical changes that reject binary endpoints. Community knowledge systems encompass broader understanding of gender possibility than clinical frameworks that often pathologize non-binary outcomes or ambiguous presentations as failures rather than legitimate goals. The epistemic frameworks communities develop thus challenge not only who controls medical knowledge but also the normative gender assumptions embedded within institutional medicine's conceptualization of what successful transition looks like.

The third question asks how platform-specific affordances shape the formation and sustainability of these digital health communities and what vulnerabilities technological dependencies create. The corpus itself provides evidence of platform shaping: Reddit's subreddit architecture enables the coexistence of highly specialized knowledge communities (r/TransfemScience, with approximately 6,700 subscribers) alongside large multipurpose spaces (r/asktransgender, with 396,000 subscribers). This architectural fragmentation facilitates the epistemic specialization documented in the preceding analysis: the distinct authority patterns found across medical versus general subreddits (0.80 versus 2.59 experiential/biomedical ratios) are partly produced by platform affordances that allow communities to self-organize around specific knowledge functions. Reddit's pseudonymity enables stigmatized healthcare discussion that would be impossible under real-name conditions, while its voting system surfaces community-valued content, creating an informal peer review mechanism that substitutes for institutional validation. However, these enabling affordances exist within corporate governance structures that simultaneously introduce important vulnerabilities.

Platform dependency introduces vulnerabilities that traditional counterpublic theory, developed before digital technologies became central to public sphere participation, did not anticipate. Posts discussing medical access barriers articulate this precarity directly:

> "apparently bigots are using any medical advice to get other trans subreddits shut down."

Community knowledge sharing remains vulnerable to platform moderation decisions that may eliminate essential healthcare resources.

Sharon (2018) argues that digital health platforms enable new freedoms while simultaneously facilitating data commodification and user exploitation. Digital counterpublics exist within corporate governance structures that may undermine community autonomy despite appearing to support it. Reddit's content policies prohibit certain forms of medical advice, creating tension between harm reduction information sharing and platform terms of service that may characterize such guidance as impermissible. The threat of content moderation eliminating community knowledge exemplifies this contradiction—platforms that enable peer support can also destroy it through policy enforcement.

These dependencies position trans health communities within what Sharon terms "digital capitalism": peer support creates genuine value for participants, but platform corporations capture economic value through advertising, data harvesting, and user engagement metrics. Community knowledge constitutes valuable resources generated through unpaid labor. Yet communities lack ownership over hosting platforms and cannot control policy changes that might eliminate their spaces. The capacity for platform governance to eliminate community knowledge through content moderation or terms of service changes represents ongoing vulnerability distinguishing digital counterpublics from physical organizing spaces, which cannot be deleted by corporate decree.

Communities must navigate opposition from medical institutions while simultaneously managing precarity inherent in depending on corporate platforms potentially unsympathetic to marginalized health practices. However, discussions reveal awareness of these vulnerabilities. Users reference archived resources, backup forums, and distributed knowledge storage

as hedges against platform elimination, suggesting digital counterpublics develop resilience strategies specific to technological contexts. These mitigation efforts require additional labor and may prove insufficient against coordinated platform policy changes, yet they demonstrate communities' sophisticated understanding of their technological dependence and efforts to build redundancy into knowledge preservation systems.

CONCLUSION

This study documents how trans digital health communities function as engaged counterpublics, a distinctive formation that extends Fraser's (1990) counterpublic theory by revealing how marginalized communities facing healthcare exclusion must simultaneously appropriate and challenge institutional expertise. Unlike oppositional counterpublics that can reject dominant discourse entirely, trans health communities cannot afford wholesale rejection of biomedical knowledge when life-threatening consequences accompany inadequate healthcare access. This necessity produces epistemological practices that are more complex than simple opposition or assimilation.

The empirical evidence confirms counterpublic status across multiple dimensions. Communities explicitly articulate institutional exclusion (with authority-challenging discourse constituting the dominant thematic context in the corpus, as Table 3 documents), construct alternative authority systems through experiential credentialing, develop oppositional critique while strategically engaging biomedical knowledge (war/battle metaphors as the dominant conceptual framework with 1,049 occurrences, technical insubordination patterns) and establish community-specific discourse norms through distributed peer expertise networks. However, these practices reveal a theoretically significant pattern: context-dependent authority negotiation where communities draw extensively on biomedical discourse when discussing medical protocols while asserting experiential authority when challenging inadequate care. The comparison with general trans discourse—where experiential authority predominates (ratio 2.59) versus medical subreddits' biomedical emphasis (ratio 0.80)— demonstrates that this represents deliberate strategic choice rather than communication preference.

This engaged counterpublic formation manifests through three primary mechanisms. Communities construct epistemic authority via "technical insubordination," citing clinical specifications while questioning provider competence and "experiential credentialing," where sustained participation confers expertise independent of institutional certification. Metaphorical frameworks enable strategic conceptual positioning: military metaphors (38.8% of total metaphor keyword occurrences) frame healthcare navigation as strategic action against institutional resistance, journey metaphors (32.2%) construct transition as natural development and construction frameworks (10.9%) emphasize active self-creation. Platform affordances shape community formation through Reddit's pseudonymity, voting systems and specialized spaces, though corporate governance introduces critical vulnerabilities where content moderation threatens harm reduction sharing and platform capitalism extracts value from unpaid knowledge production.

These epistemic practices align with broader patient-led health movements (HIV/AIDS activism (Epstein, 1996), rare disease communities, chronic illness networks) that developed alternative expertise systems when mainstream medicine proved inadequate. However, trans health communities differ fundamentally: they face systematic pathologization positioning trans identity itself as medical disorder rather than simply disputing treatment approaches for accepted conditions. This represents what Stryker, Currah and Moore (2008) conceptualize as transgender embodiment's inherent disruption to conventional biomedical categorization systems. Where other patient movements challenge how medicine treats recognized conditions, trans communities challenge the medical authority to define

their identities as pathological conditions requiring treatment.

These findings raise questions about healthcare delivery transformation: medical education could incorporate community expertise through structured partnerships where peer specialists contribute to provider training; healthcare systems might develop formal roles for peer health navigators bridging institutional and community knowledge while maintaining independence from clinical oversight; insurance coverage could recognize peer support services as legitimate healthcare interventions, acknowledging the substantial labor communities provide.

However, such integration must avoid transforming unpaid mutual aid into exploitable labor or turning autonomous practices into sites for extracting economic value. The central question becomes not whether institutional medicine should recognize community expertise (the evidence makes such recognition empirically warranted) but whether healthcare institutions can support community autonomy without undermining the self-determination and oppositional positioning that make community knowledge systems epistemologically distinct and politically necessary. The epistemic injustice Carel and Kidd (2014) identify cannot be addressed by incorporating community practices into unchanged systems. Reform requires fundamental restructuring of authority relationships currently positioning medical professionals as sole legitimate knowers of trans healthcare needs.

Several limitations constrain these findings. First, the Reddit focus restricts understanding of counterpublic health formation across different technological environments. Second, the English-language content concentrated in Anglophone regions limits insights into cultural variations. Third, digital access requirements may exclude economically marginalized members facing greatest healthcare barriers, suggesting these findings represent relatively privileged segments. Finally, the temporal scope captures discourse during increasing legislative challenges to trans rights, while the focus on public posts excludes private communications that may represent significant knowledge circulation. Future research should examine comparative patterns across platforms, policy environments, and regulatory contexts while investigating private communication channels.

This study reveals how specific digital counterpublics function as sites where marginalized communities innovate knowledge systems in response to institutional exclusion. Within the scope of English-language trans health communities on Reddit, the findings document functioning alternatives to institutional gatekeeping that maintain safety standards through peer monitoring, produce reliable medical knowledge grounded in collective experience and provide affirming care that clinical systems have often failed to deliver. The engaged counterpublic practices documented demonstrate epistemological work challenging simplistic narratives of either resistance or compliance. While these findings are necessarily bounded by their platform-specific and linguistically situated context, they raise broader questions relevant to health communication research: how marginalized communities navigate the tension between needing institutional knowledge and opposing institutional authority, what forms of evidence communities develop when excluded from formal knowledge production and how digital platform architectures both enable and constrain autonomous knowledge systems. These questions extend beyond trans healthcare specifically, with potential relevance for understanding other communities navigating healthcare exclusion through digital technologies, though further research across platforms, languages and healthcare systems would be needed to assess the generalizability of the engaged counterpublic formation documented here.

Asen, R. (2000). Seeking the "Counter," in Counterpublics. *Communication Theory*, *10*(4), 424–446. https://doi.org/10.1111/j.1468-2885.2000.tb00201.x

Ashley, F. (2019). Gatekeeping hormone replacement therapy for transgender patients is dehumanising. *Journal of Medical Ethics*, *45*(7), 480–482. https://doi.org/10.1136/medethics-2018-105293

Augustaitis, L., Merrill, L. A., Gamarel, K. E., & Haimson, O. L. (2021). Online Transgender Health Information Seeking: Facilitators, Barriers and Future Directions. *Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems*, 1–14. https://doi.org/10.1145/3411764.3445091

August-Rae, B. C., Baker, J. T., & Buzzanell, P. M. (2024). "Not just rebellious, it's revolutionary": Do-it-yourself hormone replacement therapy as Liberatory Harm Reduction. *Social Science & Medicine*, *345*, 116681. https://doi.org/10.1016/j.socscimed.2024.116681

Awkward-Rich, C. (2017). Trans, Feminism: *Or*, Reading like a Depressed Transsexual: Winner of the 2017 Catharine Stimpson Prize for Outstanding Feminist Scholarship. *Signs: Journal of Women in Culture and Society*, *42*(4), 819–841. https://doi.org/10.1086/690914

Brouwer, D., & Asen, R. (2010). *Public modalities: Rhetoric, culture, media and the shape of public life*. University of Alabama Press. https://doi.org/10.2307/jj.30297324

Carel, H., & Kidd, I. J. (2014). Epistemic injustice in healthcare: A philosophical analysis. *Medicine, Health Care and Philosophy*, *17*, 529–540. https://doi.org/10.1007/s11019-014-9560-2

Certeau, M. de (1984). *The Practice of Everyday Life*. University of California Press.

Charteris-Black, J. (2004). *Corpus Approaches to Critical Metaphor Analysis.* Palgrave Macmillan. https://doi.org/10.1057/9780230000612

Deutsch, M. B. (2016). Evaluation of Patient-Oriented, Internet-Based Information on Gender-Affirming Hormone Treatments. *LGBT Health*, *3*(3), 200–207. https://doi.org/10.1089/lgbt.2015.0116

Edenfield, A., Holmes, S., & Colton, J. (2019). Queering Tactical Technical Communication: DIY HRT. *Technical Communication Quarterly*, *28*, 177-191. https://doi.org/10.1080/10572252.2019.1607906

Epstein, S. (1996). *Impure Science: AIDS, Activism, and the Politics of Knowledge.* University of California Press.

Franzke, A. S., Bechmann, A., Ess, C. M., & Zimmer, M. (Eds.) (2020). *Internet Research: Ethical Guidelines 3.0*. AoIR (The International Association of Internet Researchers). https://aoir.org/reports/ethics3.pdf

Fraser, N. (1990). *Rethinking the public sphere: A contribution to the critique of actually existing democracy.* Social Text, 25/26, 56–80. https://doi.org/10.2307/466240

Fricker, M. (2007). *Epistemic Injustice: Power and the Ethics of Knowing*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780198237907.001.0001

Horak, L. (2014). Trans on YouTube. *TSQ: Transgender Studies Quarterly*, *1*(4), 572–585. https://doi.org/10.1215/23289252-2815255

Katz, C. (2004). *Growing Up Global: Economic Restructuring and Children's Everyday Lives*. University of Minnesota Press.

Kennedy, C. E., Yeh, P. T., Byrne, J., van der Merwe, L. L. A., Ferguson, L., Poteat, T., & Narasimhan, M. (2022). Self-administration of gender-affirming hormones: a systematic review of effectiveness, cost, and values and preferences of end-users and health workers. *Sexual and Reproductive Health Matters*, *29*(3), 82-98. https://doi.org/10.1080/26410397.2022.2045066

Lakoff, G. and Johnson, M. (1980). *Metaphors We Live By.* University of Chicago Press.

Lederer, J. (2015). Exploring the Metaphorical Models of Transgenderism. Metaphor and Symbol, 30(2), 95–117. https://doi.org/10.1080/10926488.2015.1016809

Lupton, D. (2014). Critical Perspectives on Digital Health Technologies. *Sociology Compass*, *8*(12), 1344–1359. https://doi.org/10.1111/soc4.12226

Martynyuk, A. (2021). Transition Trauma Metaphor in Transgender Narrative. *East European Journal of Psycholinguistics*, *8*(1), 70–82. https://doi.org/10.29038/eejpl.2021.8.1.mar

Nicolazzo, Z. (2021). Imagining a Trans* Epistemology: What Liberation Thinks Like in Postsecondary Education. *Urban Education*, *56*(3), 511–536. https://doi.org/10.1177/0042085917697203

Raun, T. (2016). *Out Online: Trans Self-Representation and Community Building on YouTube* (1st Edition). Routledge. https://doi.org/10.4324/9781315599229

Record, R. A., Silberman, W. R., Santiago, J. E., & Ham, T. (2018). I Sought It, I *Reddit*: Examining Health Information Engagement Behaviors among Reddit Users. *Journal of Health Communication*, *23*(5), 470–476. https://doi.org/10.1080/10810730.2018.1465493

Relman, A. S. (1980). The new medical-industrial complex. *The New England Journal of Medicine*, *303*(17), 963–970. https://doi.org/10.1056/NEJM198010233031703

Rotondi, N. K., Bauer, G. R., Scanlon, K., Kaay, M., Travers, R., & Travers, A. (2013). Nonprescribed hormone use and self-performed surgeries: "do-it-yourself" transitions in transgender communities in Ontario, Canada. *American Journal of Public Health*, *103*(10), 1830–1836. https://doi.org/10.2105/AJPH.2013.301348

Sharon, T. (2018). When digital health meets digital capitalism, how many common goods are at stake? *Big Data & Society, 5*(2). https://doi.org/10.1177/2053951718819032

Spade, D. (2015). *Normal Life: Administrative Violence, Critical Trans Politics, and the Limits of Law*. Duke University Press.

Squires, C. R. (2002). Rethinking the Black Public Sphere: An Alternative Vocabulary for Multiple Public Spheres. *Communication Theory*, *12*(4), 446–468. https://doi.org/10.1111/j.1468-2885.2002.tb00278.x

Stryker, S., Currah, P., & Moore, L. J. (2008). Introduction: Trans-, Trans, or Transgender? *Women's Studies Quarterly*, *36*(3), 11–22. https://doi.org/10.1353/wsq.0.0112

Tuck, E. (2009). Suspending Damage: A Letter to Communities. *Harvard Educational Review*, *79*(3), 409–428. https://doi.org/10.17763/haer.79.3.n0016675661t3n15

van Leeuwen, T. (2007). Legitimation in discourse and communication. *Discourse and Communication*, *1*(1), 91–112. https://doi.org/10.1177/1750481307071986

Wexler, A. (2022). Mapping the Landscape of Do-it-Yourself Medicine. *Citizen Science: Theory and Practice*, *7*(1), 38. https://doi.org/10.5334/cstp.553

Ziebland, S., & Wyke, S. (2012). Health and illness in a connected world: How might sharing experiences on the internet affect people's health? *The Milbank Quarterly*, *90*(2), 219–249. https://doi.org/10.1111/j.1468-0009.2012.00662.x