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Trans* Vulnerability and Digital Research Ethics

A Qubit Ethical Analysis of Transparency Activism

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ABSTRACT

Trans^{*} communities across the United States are under assault. Researchers seeking to work with trans^{*} people and other multiply marginalized and underrepresented communities must attend to ethical research practices within the communities in which they participate. Digital research ethics is particularly murky with issues of embodiment, vulnerability, and unclear IRB guidance. Comparing two transparency activist organizations—Wikileaks and DDoSecrets—we introduce "qubit ethics," a trans*material, transcorporeal ethics of care as praxis within vulnerable online communities. We then demonstrate how this unique approach to research design allows for the complex entanglements that is trans* life, particularly digital life. Finally, we present clear take-aways for qubit-ethics informed social justice research.

CCS CONCEPTS

- B7; Social and professional topics \rightarrow User characteristics; Gender.

KEYWORDS

Vulnerability, trans*materialism, transparency activism, social justice, research ethics, rhetoric

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1 ANTI-TRANS* VIOLENCE & DIGITAL RESEARCH

Trans*1 bodies and communities across the United States are under siege.² The Human Rights Campaign has labeled fatal antitransgender violence a "national epidemic" that has not slowed down since the organization began tracking this violence in 2013 [3]. The National Center for Transgender Equality [4] adds that murders of trans* people surged in 2020, with more murders in the first seven months of 2020 than in all of 2019. At the time of writing in 2021, seven trans* women have been murdered in the month of April alone [5]. Fueling this very literal threat of death to trans* bodies, particularly the bodies of Black trans* women [3], right-wing extremists have pushed hateful ideologies against trans* communities as wedge issues. They have teamed up with transexclusionary "feminist" groups such as the Woman's Liberation Front to argue that trans* rights "threaten the safety and sanctity of women-only spaces" [6]. Trans* exclusion becomes a point of interest convergence between conservatives and these "feminists," leading to an increase in anti-trans* legislation, such as bills penalizing medical professionals who provide medical treatment to trans* youth or to banning trans* youth from participation in same-gender sports.

Statistics alone cannot adequately convey the human toll such violence takes on the physical, social, and psychological health of trans^{*} communities. Digital and technical communication researchers can help by leveraging narrative expertise to bring the lived realities of harmed communities to the forefront of academic, corporate, and policy debates about abating endemic anti-trans violence. However, and because of the trans-modalities of modern media, digital research can too easily become extractive and potentially harmful to subject communities. In theorizing a trans^{*}material trans-corporeal ethics of care (qubit ethics) approach to digital research we hope to enrich practitioner and scholar tools for thinking through the ethical implications of internet-based research activity.

1.1 Digital research as social justice activism

We are in an increasingly dangerous moment for trans^{*} men and women, a fact that needs to be acknowledged and critically reflected upon. Non-trans^{*} people who live in safety have an obligation to

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¹We have chosen to use trans* in this article because, as Halberstam [1] recognizes, adding an asterisk in internet search functions as a wildcard (p. 368) and, thus, adding it to a word names "expansive forms of difference, haptic relations to knowing, [and] uncertain modes of being" [2].

²As we share such miserable, terrifying data emphasizing how trans* bodies are always already at existential risk, we invite readers to pause and to reflect on the reality described above: the harms done, lives needlessly lost, dignity and humanity denied.

generate change so trans* people can move about in the world safely, access the healthcare they need, witness their children grow up, care for their families, date and fall in love. It is imperative that social justice-minded scholars and researchers use their social and academic capital to mitigate threats to the trans* community.

One path to socially-just research alongside trans* communities may be through analyzing contexts and objects of analysis that meaningfully impact trans* lives every day, particularly those with a veneer of justice and safety. Historically, the internet has provided the space for openness and socializing that was unavailable "offline" for many LGBTO people [7-10]. In fact, Weinrich [11] traces queer uses of digital space back to the Department of Defense, where LGBTQ folks participated in the development of the internet. As such, digital research plays an important role for researchers who seek to better understand trans* and queer public, cultural, and technical [12] rhetorics. However, upon close inspection, and keeping in mind our earlier consideration of transphobia as a unique point of interest convergence, it becomes clear that digital spaces do not always provide the safety and justice they appear to offer, especially for trans* users. In fact, more insidious examples may lie within progressive spaces themselves.

Take, for example, transparency activism, research, and reporting. This activism is motivated by the public's right to know how institutions and corporations act behind closed doors, particularly when the decisions and actions of those organizations impact the public. Transparency activism, research, and reporting has a long and storied history within civil rights reform. In 1892, investigative journalist Ida B. Wells-Barnett brought the horrific lynching of Black men to the attention of white audiences. Undercover, Nelly Bly exposed the inner workings of a women's asylum and led an effort towards national reform. More recently, this work primarily occurs in digital spaces. The International Consortium of Investigative Journalists (ICIJ) released the Panama Papers, revealing currents of dark money in the form of "the offshore holdings of 140 politicians and public officials from around the world" [13]. This reporting led to the recovery of billions of dollars in assets and the downfall of political leaders around the world. These examples evidence the ways in which transparency activism tends to occupy a progressive space. Unfortunately, transmisogynistic infiltration has, at times, tainted some of these seemingly progressive environments.

1.2 Digital transparency activism

WikiLeaks is perhaps one of the best-known outlets of digital transparency activism. Wikileaks

.... [S]pecializes in the analysis and publication of large datasets of censored or otherwise restricted official materials involving war, spying and corruption. It has so far published more than 10 million documents and associated analyses. [14].

It has been accused of playing an outsized role in the results of the 2016 United States presidential election [15] by strategically timing the release of information discovered through hacked email accounts, though at the time of writing no one has been charged [16].

2 SOCIAL JUSTICE AND TRANS* TECHNICAL RHETORICS

In their award-winning 2019 book, Walton, Moore, & Jones argue that the field of technical and professional communication (TPC) has taken a turn toward social justice, claiming that "[i]njustice IS a technical communication problem" [17]. Citing decades of social justice work and trends in the field, they call on technical communicators to take an active, explicit role in addressing injustice. Arguing for the importance of the trans* experience is an important extension of that call. While literature in TPC on LBGTQ issues is still underdeveloped [18], attention to these topics is slowly growing. For example, Cox [19] argues for the use of queer rhetorics in TPC pedagogy. In 2019's SIGDOC, Moeggenberg & Walton [20] described how queer theory can inform design thinking pedagogy. Ramler [21] offers a framework for queer usability, which centers the experiences of potentially LBGT users. In a comment we do not mean as criticism, Ramler's case study of Tumblr follows a trend that is common in some literature in which "queer" is understood as an identity marker (i.e., the Q in LGBTQ). The tension of whether queer is most-appropriately applied as an identity or an intangible concept is one that queer studies has and continues to wrestle with. For example, in an oft-cited definition, Halperin describes queer as "whatever is at odds with the normal, the legitimate, the dominate" [22]. Thirteen years later, he published another article that critiques the way queer theory has been normalized and pacified by the status quo force that is the academy [23]. In this article, Halperin recognizes that one appeal of queer studies is that through it, academics can escape the "irreducibly sexual" identities of lesbian and gay [23]; that is, queer theory can provide an escape from materiality and corporeality. But what then of the very existential threat to existence experienced by folks inhabiting materially queer bodies?

2.1 Queer Online Vulnerability

Vulnerability within digital spaces can present a difficult challenge for researchers. In fact, part of the exigence for this manuscript is one author's (Edenfield's) experience with his university IRB office in planning a digital research project within trans* online forums. De Hertogh [24] has raised similar concerns within vulnerable online communities, concerns which led her to develop a "feminist digital research methodology," a methodology De Hertogh describes as:

> An intersectional methodology that helps rhetoricians of health and medicine contend with the overlapping rhetorical, technological, and ethical frameworks affecting how we understand and collect health information, particularly within vulnerable online communities. (p. 480)

As one example of how digital spaces can be harmed by researchers, a widely read magazine published an unredacted exposé of one popular trans* forum, an online disclosure which resulted in punitive action offline. We are intentionally vague as to disrupt further amplification of the story and its harmful effects. In instances where disclosure itself puts the community at risk, online amplification and virality can compound offline and online risks. As De Hertogh has discussed, issues of privacy, disclosure, risks of publication, and offline impacts add to the difficulty of ethical decision making.

2.2 Research Guidelines

The Association of Internet Researchers has provided guidelines for online research. In their most recent guidelines—Internet Research Ethics (IRE) 3.0 [25]—they encourage ethical deliberations beyond informed consent, writing:

[W]e emphasize deliberative processes of ethical reflection. At the same time, we believe that in times of Big Data, experimental research needs to be done that requires considerations beyond informed consent, but further includes careful reflection on research design, the context of research, and the basic requirement to minimize associated risks and harms. An ongoing ethical reflection might be more helpful and beneficial in the long term for society than now restricting research. (p. 2, italics ours)

"Involved Subjects" includes this statement regarding the vulnerability of online research subjects:

A primary ethical imperative is to avoid harm - to subjects as well to researchers. But the primary question is, who are the subjects? This question then interacts with a classical ethical principle: the greater the vulnerability of our subjects, the greater our responsibility and obligation to protect them from likely harms. (p. 17)

The authors add that LGBTQ individuals and/or communities and other minority communities may require specific attention [25]. Like De Hertogh and the Association of Internet Researchers, we recognize the complexity of digital research within/alongside vulnerability communities, and the potential online and offline impacts and harms research can bring. We posit an ethics of care formulated around the qubit (qubit ethics) as a way for researchers to, as recommended in IRE 3.0, "emphasize deliberative processes of ethical reflection" [25] with specific attention to trans* spaces.

3 QUBIT ETHICS & TRANSPARENCY ACTIVISM

Qubits, also known as quantum bits, are the base unit of quantum computing. They exhibit unique properties that, in defying supposedly absolute physical laws, illustrate what feminist theorist Barad has argued is the basis of ethics: mattering. That is, all beings and all things "are already materially entangled across space and time" [26] in ever expanding and differentiated new expressions and relations. Qubit ethics is a trans*material trans-corporeal ethics that helps theorists bridge the gap between applying ethical systems derived from physical phenomena and the virtual experiences that are increasingly inseparable from in-real-life (IRL) phenomena. As we will demonstrate in the following sections, virtuality has mass-that is, IRL experience is both encoded in and by virtual systems. Within the context of anti-trans* violence and threats to existence outlined above, we argue that qubit ethics are a necessary consideration for researchers who are dedicated to or would like to actively involve themselves in the mitigations of this social

injustice. To demonstrate the queer potential that qubit ethics can provide researchers, we return to our discussion of transparency activism.

3.1 A case study of WikiLeaks and DDoSecrets

Distributed Denial of Secrets (DDoSecrets) is a 501(c)3 non-profit collective of transparency activists who index leaked data to make it accessible for journalists, researchers, and the public at large. Two archival operations, BlueLeaks and the Parler data dump, helped launch DDoSecrets into public discourse and establish them as the new kids on the transparency block. BlueLeaks, a 269GB trove of hacked information from more than 200 law enforcement agencies released in the wake of protests over the murder of George Floyd, secured DDoSecrets a spot in Twitter infamy by having the collective's handle and website links banned by the social media giant [27]. Seven months later, after the January 6th U.S. Capitol insurrection, DDoSecrets released 70TB of data scraped from Parler [28], a social media company that has attracted right-wing communities because of their loose content moderation policies. In addition to being used as evidence in former President Trump's second impeachment trial, the scraped Parler data is has been used by law enforcement to research, track down, arrest, and prosecute insurrectionists across the country.

The DDoSecrets collective is a rising star in the world of online activism, filling the void left by the embattled WikiLeaks founder, Julian Assange. This changing of the transparency activist guard is not an accident as DDoSecrets appears to be set up to avoid many of the ethical and legal pitfalls that contributed to the demise of WikiLeaks. In fact, one member of DDoSecrets, Emma Best, published over 11,000 private messages exchanged between the WikiLeaks Task Force, a group of ten individuals chosen by Assange to help him run the organization. Best [29] has written that the "chat log shows WikiLeaks' private attitudes" and "examples of homophobia, transphobia, ableism, sexism, racism, antisemitism, and other objectionable content" (para. 3-4). For example, while discussing a controversy over a statue of Chelsea Manning while using her "dead name" (her formerly used, male name), an antitrans* sentiment thinly veiled as woke, ironic humor pervaded the conversation:

- WikiLeaks: They probably thought Bradley Chelsea Manning was a good way of getting the popular name in, and the new one, and not getting diverted. But that's going to happen regardless thanks to statist fake radicals.
- WISE Up Wales: Gender identity politics is a nightmare. & a gift to the state, unfortunately.
- WISE Up Wales: There's no liberation where the fight's ended up: now we've 'the cotton ceiling' where blokes who say they feel like they're women possibly only part time, complain that lesbians won't have sex with them!
- WikiLeaks: Manning does have Y chromosome and male genitalia.
- WISE Up Action: Hah, well Chelsea prefers trans* (with a * OK?) It's a fucking minefield!! [29] [comments are examples and are not sequential]

The above comments should not be surprising when considering Assange's lengthier history with gender violence—specifically his

seven-year stay in the Ecuadorian embassy hiding from two sexual assault allegations in Sweden [30]. During that time, the WikiLeaks Twitter account, reportedly run by Assange himself, posited Assange as the victim of a global conspiracy and attacked feminism as statist and reactionary. Writing about Assange's rhetorical tactics to avoid prosecution, criminologist Julia Downes [31] argues that "counter-claims of victimhood can be made by the privileged, to deflect from the experiences of survivors and a need for accountability" (p. 47). Such behavior is at odds with an organization that has elevated truth seeking to a near transcendent universal good.

The story of DDoSecrets reads differently. From the "progress pride flag" imbued logo to their pronoun conscious "About" page [32], trans* and queer identity are embedded at the heart of the organization-a stark contrast to the white non-trans* identideology of Julian Assange and the transphobia of his WikiLeaks Task Force. Ident-ideology is our term for describing a privileged identity functioning metonymically for an ideological cause. In this case, the privileged identity is the white non-trans* male Julian Assange, and the ideological cause is transparency (or anti-state secrecy) activism. Unlike ideological identities (e.g., political partisanship or religious sectarianism), which articulate identities that follow from ideological difference, ident-ideology names ideology that follows from particular-sometimes personal but always socialidentity. Cult leaders like Jim Jones, Charles Manson, and David Koresh are all examples of ident-ideology, where atomistic personal identities become representative, in part or in whole, of a larger ideological cause. Design based evidence of the ident-ideology of Assange may be observed in the Official WikiLeaks Shop where nearly every product commodifies his name, likeness, and/or words. Assange is WikiLeaks and WikiLeaks is Assange.

Our contention in this article is that to understand the nuanced differences between WikiLeaks and DDoSecrets that make them fundamentally different transparency activism organizations, we need a construct for ethics that takes social and material effects of gender seriously. The queer collectivity of DDoSecrets separates their transparency activism from WikiLeaks' operations in a way that may be easily missed by journalists and the broader public for whom leaked data has more appeal than the assemblages that make access to leaked data possible. As we describe in the next section, queer collectivity is rooted in a trans*material (spacetimemattering) and trans-corporeal (inter-bodily connectedness) ethic of care that we call qubit ethics. Based on a qubit ethical framework, we argue that DDoSecrets, unlike WikiLeaks, exhibits ethical awareness of and sensitivity to the impact virtual disclosure has on the physical world.

3.2 A qubit ethical analysis of transparency activism

Bits, or binary digits, are the basic unit of information in computing. Although bits may conjure up ones and zeroes, they may also be expressed as other binary states like on/off and true/false. Juxtaposed against qubits, bits are flat, fixed, and deterministic. Bits are to qubits as biological essentialism is to trans*materiality; that is, although qubits are materially grounded, their potentiality is near infinite. In this section, we demonstrate that ethics too may be understood as bits and qubits. More specifically, we argue that when it comes to transparency activism, WikiLeaks exhibits bit ethics, characterized by the qualities of position, isolation, forcing, and adherence, and DDoSecrets exhibits qubit ethics, characterized by the qualities of superposition, entanglement, tunneling, and decoherence. The table below (Table 1) compares the bit transparency ethics of WikiLeaks to the qubit transparency ethics of DDoSecrets.

3.2.1 Position vs. Superposition. Position describes a preference for fixed determinate states. Something is or it is not. In contrast, superposition accepts all states in an indeterminate yet very material manner. A flipped coin is positioned to land on heads or tails, but a spun coin is superpositioned to be heads, tails, and everything between heads and tails, at least for the duration of the spin. The ident-ideology of Julian Assange is positioning that promotes a unitary identity ideologically imposed on the transparency activism of WikiLeaks. Position enables binaristic thinking which, we argue, radically short circuits ethical behavior by refusing to entertain moral complexity. Assange, and thus WikiLeaks, seems to understand their purpose as transcendent, their cause righteous, and their critics as evil, unenlightened, enemies. In contrast, the queer collectivity of DDoSecrets comfortably superpositions themselves in the gray mess of transparency activism. DDoSecrets embraces a multiplicity of identities that constitute the collective. Unlike WikiLeaks, DDoSecrets also refuses to editorialize or attempt to control the media narrative surrounding their leaks. They spin the coin without regard for where it may fall, understanding their superpositioning as archivists and indexers whose role is to inform and enable rather than persuade and determine. Case in point, "Best says [the group] is moving toward a 'co-op' model with a 'horizontal structure' of leadership, with no single person in charge of the group's direction" [27, para. 17]. As Edenfield has pointed out, "cooperatives have historically been a site of social justice work" [33]. DDoSecrets potently combines online queer collectivity, cooperative organizing, and a radical ethical commitment to transparency at all costs.

3.2.2 Isolation vs. Entanglement. Bits are isolated, discrete units of information. Qubits are never alone, even when they are alone; that is, their entanglement with other (and their own) matter, touching, and what Barad [34] calls "self-touching" or intra-activity, effectively prohibits isolation. Bits, isolatable as they are, privilege order (one comes before the other) and atomization (individualism). Built on such a bit foundation, the Assange/WikiLeaks assemblage made many selfish and individualistic missteps such as publishing material without a source's (not institutional source, rather, the collector of information source) permission and refusing to disclose when information came from state-sponsored hackers, as was the case with the hacked DNC emails [27]. Qubits are too entangled to act selfishly; they function in a broader ecology that spans non/existence. As a collectivity, DDoSecrets is built on relational entanglementwith one another, with their sources, and with their audience of journalists, researchers, and the broader public. In their espoused beliefs and observable behavior, DDoSecrets appears to recognize interconnectedness and their specific transparency facilitating role in a much broader ecology of social justice activism.

3.2.3 *Forcing vs. Tunneling.* Forcing is the characteristic activity of a bit—it compels through physical coercion like flipping switches, polarizing magnets, or pressurizing vacuum tubes. Tunneling, on

Bit Ethics	Qubit Ethics	WikiLeaks (bit)	DDoSecrets (qubit)
Position – preferencing fixed binary states of existence (something or nothing)	Superposition – accepting diverse and indeterminate states of existence (something, nothing, and everything)	Unitary identity: Julian Assange; cult of personality; white cis male indent-ideology; good/evil	Multiplicitous identity: queer collectivity; archive as public memory – temporally boundless; moral complexity
Isolation – privileging hierarchical order and individualism (something is more than nothing)	Entanglement – accounting for the interconnectedness of all beings and things regardless of space, place, or time (nothing is something; something is nothing)	Source disclosure practices (Russia); publishing without source permission (Phineas Fisher); free market ethic (radical individualism)	"Public good" mission; consistent transparency ethic; respects relationships with sources while also contextualizing the sources within the broader ecology of indexed data
Forcing – compelling change through the exercise of power (something must be)	Tunneling – coaxing change through the revelation of power (something is)	Transparency as power brokering and geopolitical manipulation; editorializing data dumps	Transparency as revelatory social justice (notable apocalyptic tone in motto).
Ádherence – demands ideological attachment to a singularity (I)	Decoherence – embrace of shyness as tactical movement for queer collectivity (we)	Justice4assange.com; singularity is too rigid to be durable. Assange's arrest has meant defunct movement. WikiLeaks' website still exists but has been inactive since November 2019.	Collectivity is resilient and makes direct observation difficult.

Table 1: WikiLeaks Bit Ethics vs. DDoSecrets Qubit Ethics

the other hand, has no need for physical coercion, not because it is absent physicality but because it may ignore other physical bodies. Where there is a barrier, a bit will push while a qubit will simply teleport. For the Assange/WikiLeaks assemblage, transparency activism was a means for geopolitical power brokering. Decisions about who was targeted, what data was leaked, and how information was presented-as evidenced by Best's [29] WikiLeaked archive- often appear to be made vengefully and to amass influence. Forcing is a means of persuasion to enact personal will; it is the modus operandi of an organization that ident-ideologically privileges the will of its white cis leader over the mission that supposedly governs said organization. Practiced as forcing, transparency activism does little more than sow chaos under the guise of championing truth. DDoSecrets, we argue, practices tunneling. In revealing injustice, rather than enforcing their will, DDoSecrets operationalizes transparency activism without the need for coercion; that is to argue they practice transparency as revelatory social justice rather than geopolitical manipulation. Their commitment is expressed in apocalyptic [35] terms: veritatem cognoscere ruat cælum et pereat mundus-roughly translated as 'know the truth, though the heavens may fall and the world burn' [32].

3.2.4 Adherence vs. Decoherence. Rhetorically, the difference between adherence and decoherence may be understood along two axes: strategy/tactics and brash/shy. Borrowing from Kimball's use of De Certeau's distinction between strategy and tactics to articulate tactical technical communication [36] as a user-centered noninstitutional approach, we contend that bit ethics are institutional. Bits are bound to their binary logic: one-zero, on-off, true-false, good-evil. No space is left for the messiness of activism and research in transparency work when guided by bit ethics. Once the

medium of a bit is wiped away, adherence fades. WikiLeaks.org is still online but the last published action on the site is from November 2019, perhaps due to Assange's arrest that year. The collectivity of DDoSecrets, in contrast, exhibits shyness by nature-they are prone to tactical subversion through revelation over institutional power building. As such, they are a far more flexible transparency organization; the fall of an ident-ideologue will not doom the collective. The brash and rigid nature of the Assange/WikiLeaks assemblage made statist targeting more effective; the organization that cannot bend will break. The decoherence of qubits makes their measurement the basis of their dissolution, but that does not mean they disappear. Any transparency researcher or activist in DDoSecrets may be targeted, but the collective appears designed to move on. Decoherence is durable because it is tactically shy-it can bend, break, and be reconstituted elsewhere. The world may burn, but the collective truth will win out.

4 IMPLICATIONS AND APPLICATIONS FOR RESEARCHERS

Our purpose for this manuscript is to investigate the opportunities a hybrid quantum/trans*/feminist theory of research in virtual environments poses for online research practices, particularly in trans* spaces. We have argued above and elsewhere [37] that trans* digital research necessitates an ethic of care that attends to the vulnerabilities of those communities. In this final section, we draw from our above qubit ethics analysis of DDoSecrets concepts that researchers can take away from qubit ethics, offering specific applications for researchers, academics, and practitioners alike. As a reminder, our definition of research is wide and encompasses the research of transparency networks, citizens, nongovernmental organizations, journalists, activists, scholars, among others.

4.1 Research should consider superposition

Superposition is the ability to contain all possibilities at once, thus rejecting binary notions of existence. A basic starting point for applying this ethic is ensuring that research options are never limited to binaries, that there is always the potential for an alternative option. Researchers should embrace gray messiness and work with stakeholders to make decisions. For example, when designing surveys, attending to superposition may include rejecting and restating questions that are based in dichotomous assumptions: male/female, gay/straight, black/white, dis/abled. Recall that even sliding scales would not encompass superposition.

4.2 Research should consider entanglement

Entanglement accounts for the interconnectedness of all beings regardless of space, time, or place. Entanglement shows us how legislation titled "Save the Adolescents from Experimentation" in 2021 in Arkansas, U.S. affects all trans* and non-trans* people alike across all countries and times. Because of these complex interconnections, research must consider its implications before, during, and after and understand the relationality of our being. For example, returning to the challenge about disclosure, attending to quantum entanglement requires researchers to consider that digital impacts are not fixed in time and space. An accidental disclosure may linger in web indexes for years. Heeding quantum entanglement requires researchers to consider research impacts—including those within stakeholder communities—far after the research is done.

4.3 Research should consider tunneling

Tunneling rejects the constraints of what currently exists. In tunneling is where we find a queer potential for social justice. Walls have been constructed over a history of injustice. But those walls can't hold us. Consider the roots of the LGBTQ liberation in the United States: Stonewall was a riot in response to police brutality against trans^{*} women and other gender expansive identities. Considering quantum tunneling means cultivating an awareness of "shy" communicative actions that are not always available to non-trans^{*} and otherwise majority people. Yet, recall that disclosure can be a risk itself; researchers must also consider entanglements when encountering tunneling. Not every idea discovered through research should be shared. Decisions about disclosure should not be based on self-serving interests but should be deliberated within the communities those disclosures impact.

4.4 Research should consider decoherence.

Decoherence is the inability to maintain form once measured. Research, research subjects, and knowledge are constantly shifting, fluid notions. As soon as something is measured (researched), it restructures to avoid common form. For example, researchers should be careful with who and how we do research to avoid destabilizing communities with our observance. And further, as De Hertogh [22] commented, participation in those communities is also ethically difficult. In sum, as mentioned at the beginning of the piece, transparency activism represents a space that, while seemingly progressive, can also fall into national trends of transphobia and violence. Researchers from many disciplines can learn from DDoSecrets research and publishing ethics, particularly regarding queer collectivity. Research that seeks to bring about social justice for communities must never forget the people whose bodies and lives are on the line.

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REFERENCES

- Jack Halberstam. 2016. Trans* Gender transitivity and new configurations of body, history, memory and kinship. Parallax, 22, 3, 366-375.
- [2] Jack Halberstam. 2018. Trans* A quick and quirky account of gender variability. University of California Press.
- [3] Human Rights Campaign. 2019. A National Epidemic: Fatal Anti-Transgender Violence in the United States in 2019. Retrieved https://www.hrc.org/resources/anational-epidemic-fatal-anti-trans-violence-in-the-united-states-in-2019
- [4] National Center for Transgender Equality. 2020. Murders of Transgender People in 2020 Surpasses Total for Last Year in Just Seven Months [Blog post]. Retrieved from https://transequality.org/blog/murders-of-transgender-people-in-2020-surpasses-total-for-last-year-in-just-seven-months
- [5] Anagha Srikanth. 2021. Seven transgender women of color were killed in April. Almost twice as many transgender Americans have been killed as this time last year. The Hill. May 3, 2021. https://thehill.com/changing-america/respect/ equality/551573-five-transgender-women-of-color-were-killed-in-april
- [6] Samantha Schmidt. 2020. Conservatives find unlikely ally in fighting transgender rights: Radical feminists. The Washington Post. https://www.washingtonpost.com/dc-md-va/2020/02/07/radical-feministsconservatives-transgender-rights/
- [7] Jonathan Alexander. 2002. "Behind the Mask": An African Gay-Affirmative Website. International Journal of Sexuality and Gender Studies, 7, 2, 227-234.
- [8] Jonathan Alexander. 2002. Homo-pages and queer sites: Studying the construction and representation of queer identities on the World Wide Web. International Journal of Sexuality and Gender Studies, 7, 2, 85-106.
- [9] Jonathan Alexander. 2002. Queer webs: Representations of LGBT people and communities on the world wide web. International Journal of Sexuality & Gender Studies.
- [10] Kate O'Riordan and David J. Phillips. 2007. Queer online: Media technology & sexuality (Vol. 40). Peter Lang Publishing.
- [11] James D. Weinrich. 1997. Strange bedfellows: Homosexuality, gay liberation, and the Internet. Journal of Sex Education and Therapy, 22, 1, 58-66.
- [12] Erin A. Frost and Michelle Eble. 2015. Technical Rhetorics: Making specialized persuasion apparent to public audiences. Present Tense, 4, 2, 1-9.
- [13] The International Consortium of Investigative Journalists, n.d. The Panama Papers: Exposing the Rogue Offshore Finance Industry. Retrieved from https: //www.icij.org/investigations/panama-papers/
- [14] UCI Libraries. 2021. Political Science: WikiLeaks. Retrieved from: https://guides. lib.uci.edu/polsci/WikiLeaks
- [15] Raphael Satter. 2020. WikiLeaks, key player in 2016 U.S. election, suffers brief outage. Reuters. Retrieved from https://www.reuters.com/article/us-usa-wikileaksoutage-idUSKBN25R2JZ
- [16] Jason Leopold and Ken Bensinger. 2020. New: Mueller investigated Julian Assange, WikiLeaks, And Roger Stone for DNC hacks. Buzzfeed. Retrieved from https://www.buzzfeednews.com/article/jasonleopold/new-muellerinvestigated-julian-assange-wikileaks-and-roger
- [17] Rebecca Walton, Kristen R. Moore and Natasha N. Jones. 2019. Technical communication after the social justice turn: Building coalitions for action. Routledge.
- [18] Natasha N. Jones. 2016. The technical communicator as advocate: Integrating a social justice approach in technical communication. Journal of Technical Writing

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and Communication, 46, 3, 342-361.

- [19] Matthew Cox. 2018. Shifting grounds as the new status quo: Examining queer theoretical approaches to diversity and taxonomy in the Technical Communication classroom. In A. M. Haas & M. F. Eble (Eds.), Key Theoretical Frameworks. Teaching Technical Communication in the Twenty-first Century (pp. 287-303). Utah State University Press.
- [20] Zarah C. Moeggenberg and Rebecca Walton. 2019. How queer theory can inform design thinking pedagogy. SIGDOC '19: Proceedings of the 37th ACM International Conference on the Design of Communication. 4. 1-9. https://doi.org/10. 1145/3328020.3353924
- [21] Mari E. Ramler. 2020. Queer Usability. Technical Communication Quarterly, DOI: 10.1080/10572252.2020.1831614
- [22] David Halperin. 1990. One hundred years of homosexuality and other essays on Greek love. London, New York: Routledge.
- [23] David Halperin. 2003. The Normalization of Queer Theory. Journal of Homosexuality, 45, 2/3/4, 339-343.
- [24] Lori Beth De Hertogh. 2018. Feminist digital research methodology for rhetoricians of health and medicine. Journal of Business and Technical Communication, 32, 4, 480-503.
- [25] franzke, aline shakti, Bechmann, Anja, Zimmer, Michael, Ess, Charles and the Association of Internet Researchers. 2020. Internet Research: Ethical Guidelines 3.0. https://aoir.org/reports/ethics3.pdf
- [26] Karen Barad. 2007. Meeting the universe halfway: quantum physics and the entanglement of matter and meaning. Durham & London: Duke University Press.
- [27] Andy Greenberg. 2020. An embattled group of leakers picks up the WikiLeaks mantle. Wired. Retrieved from https://www.wired.com/story/ddosecretsblueleaks-wikileaks/
- [28] Vilius Petkauskas. 2021. 70TB of Parler users' messages, videos, and posts leaked by security researchers. cybernews. Retrieved from

https://cybernews.com/news/70tb-of-parler-users-messages-videos-and-posts-leaked-by-security-researchers/

- [29] Emma Best. 2018. WikiLeaked: over 11,000 messages from private WikiLeaks chat released. Retrieved from emma.best: https://emma.best/2018/07/29/11000messages-from-private-wikileaks-chat-released/
- [30] Jude Ellison Sady Doyle. 2017. It's time to take sexism seriously as a political force. Elle. Retrieved from https://www.elle.com/culture/career-politics/a42042/putintrump-and-julian-assange-sexism-politics/
- [31] Julia Downes. 2017. "It's not the abuse that kills you, it's the silence": the silencing of sexual violence activism in social justice movements in the UK left. Justice, Power & Resistance, 1, 2, 35-58.
- [32] DDoSecrets. 2021. Main Page. Retrieved from Distributed Denial of Secrets: https://ddosecrets.com/wiki/Distributed_Denial_of_Secrets
- [33] Avery C. Edenfield. 2019. Research in cooperatives: developing a politically conscious research methodology. Technical Communication Quarterly, 28, 4, 376-390. doi:10.1080/10572252.2019.1621388
- [34] Karen Barad. 2015. Transmaterialities: Trans*/matter/realities and queer political imaginings. GLQ: A Journal of Lesbian and Gay Studies, 21, 2–3, 387–422. doi:10.1215/10642684-2843239
- [35] Ryan Cheek. 2020. Zombie ent(r)ailments in risk communication: a rhetorical analysis of the CDC's zombie apocalypse preparedness campaign. Journal of Technical Writing and Communication, 50, 4, 401-422. doi:10.1177/0047281619892630
- [36] Miles A. Kimball. 2006. Cars, culture, and tactical technical communication. Technical Communication Quarterly, 15, 1, 67-86. doi:10.1207/s15427625tcq1501_6
- [37] Avery C. Edenfield and Ryan Cheek. Under review. Qubit ethics: A Trans*Material trans-corporeal ethics of care for researching with vulnerable online communities. Enculturation.