

Repression and Mobilization in the Digital Age: a Triangular Set of Relations

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Introduction

As technology is evolving at a seemingly-exponential rate, social movement scholars are exploring the relationship between technological innovation and movement repression. This relationship has been operationalized in numerous ways, such as through the typologization of digital repression acts (Earl et al. 2022, 2), the proposal of a complex repression-mobilization nexus (Cunningham 2007, 121), and more. In examining technology's effects on repression, recent discourse has also focused on relatively new tools which include AI, big data, and social media surveillance (Sen & Bennett 2023; Yilmaz 2023; Earl et al. 2022). As these and related technologies become ubiquitous, perspectives on repression in the technopolitical sphere will likely grow. What remains agreed upon, however, is that surveillance and repression actors' adoption of these resources has led to an increasingly intertwined relationship between digitization and repression. The question that arises from this consensus is how can the connections between digitization (i.e. technological innovation), repression, and mobilization be conceptualized?

I will argue that the relationships between technological innovation, repression and mobilization are best visualized as a triangle, because the three fields' effects on each other depend on different combinations of variables which occupy different locations within the shape. To convey my argument, my paper is organized as follows: first I will review current literature on the relationships between digitization, repression and mobilization as well as research on why current understandings of these relationships are lacking. Next, I will advance my case for the triangular model by exploring how (a) digitization and repression, (b) digitization and mobilization, and (c) repression and mobilization interact depending on combinations of variables such as actor type, strategy utilized, and visibility. Finally, I will apply the triangular

framework to the case of American colleges' purchase of AI-based monitoring services to surveil student protesters.

Current Discourse on Technology, Repression, and Mobilization

The existing literature on technology, repression and mobilization agrees on some core ideas yet diverges at more nuanced points. At the most basic level, scholars have established that repression and mobilization can be mutually-developing. In other words, one may evolve in response to changes in the other (Cunningham 2007, 121; Yilmaz 2023, 10). This is no less true for technology-based repression and technology-based mobilization (Leisert 2012, 447). For instance, according to Oliver Leisert, cyber-surveillance against activists evolves from activists' employment of privacy-enhancing methods and vice versa (2012, 441). Specifically, Leisert explores this dynamic by examining how activists' telecommunications have been used to produce metadata for law enforcement agencies (LEAs). Information regarding cell phone geo-coordinates, phone numbers, the name of the user of a given SIM card, and much more are captured by LEAs (2012, 449). This capture of metadata is significant because it demonstrates how activists' efforts to conceal the content of their communications—efforts such as using code words and encryption methods—inevitably fall short of securing privacy so long as LEAs are able to acquire an abundance of metadata for any social movement actor it perceives to be a threat. As implied by the kind of information it collects, this data can then be used to identify the whereabouts of people of interest. In this sense, then, Leisert proposes a circular or spiral relationship between technology-driven surveillance and technology-driven resistance due to the cyclical nature of their respective development. Yet he notes this relationship is inherently asymmetrical because of modern social movements' reliance on telecommunications

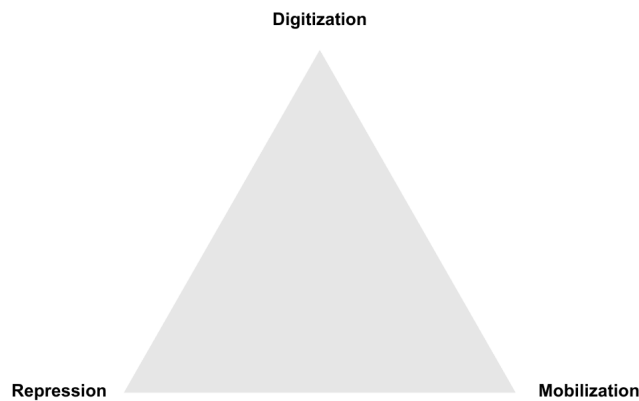
infrastructure, which is a key aspect of digital surveillance (2012, 455). To offset this imbalance, Leisert suggests solutions like switching SIM cards regularly or switching off phones at random times to disrupt patterns of surveillance as well as developing alternative telecommunications infrastructures or services which are run by “trustworthy” partners or even activists (2012, 446).

Leisert’s conceptualization of the relationship between technology-based repression and technology-based mobilization differs somewhat with my approach to digitization, repression and mobilization, as well that of other scholars such as Özgür Yılmaz. For example, where Leisert studies the two-way relationship between technology-based repression and resistance, I separate digitization from repression and mobilization so as to examine the numerous ways that digitization may affect repression and mobilization. Thus, the model applies to a wide range of scenarios, whereas Leisert’s focuses on cell phone metadata to exemplify the circular relationship between technological repression and mobilization. Similarly, Özgür Yılmaz examines the reciprocal relationship between digital repression and digital mobilization. However, Yılmaz studies this relationship in terms of big data. He proposes that the proliferation of big data—i.e. enormous data sets which are (1) generated by users’ digital activity and (2) increasingly difficult to manage—reflects our current landscape of surveillance: one that progressively uses digital means to regulate and monitor social movement groups (Yılmaz 2023, 4). At the same time, digitization has given rise to “digital populism,” a mobilization strategy that encourages members of the public to assemble online. Yılmaz argues that this mobilization is inherently limiting because the strategy of promoting mass organization online necessarily produces big data which makes it easier for repression actors to surveil participants (2023, 14). Yılmaz’s interpretation of the relationship between digital surveillance and mobilization strategies overlaps with Leisert’s: both point out the tension between (1) technological

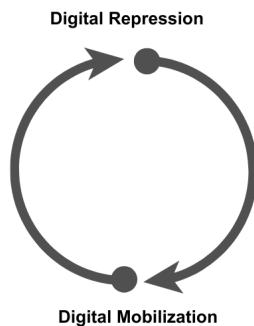
innovation as a means of movement empowerment and (2) movements' reliance on technology which produces big data that intrinsically empowers authorities. However, Yilmaz's analysis concludes on a more ambivalent note in response to this overlooked tension (2023, 14).

Additional scholars such as Earl et al. and David Cunningham study the intersection of digitization, repression, and mobilization. Earl et al., for instance, attempt to break down digital repression into two groups: acts of digital repression which occur similarly to their predigital counterparts (2022, 2), and acts of digital repression which are unique to the digital age because of their aim in disrupting flows of online information which might otherwise mobilize potential protesters (2022, 6). Examples of the former group include the arrest of digital activists, private surveillance, and local government grievance websites. Examples of the latter include state-based filtering of online content, private platforms' filtering of protest-related content, and misinformation produced by local governments in order to discourage mobilization. As the different examples within these two clusters suggest, digital repression can be subclassified by (1) level of repression actors' connection to national government, (2) the repression act's visibility (i.e. overtness or covertness), and (3) whether they seek to repress mobilization by punishing targets or incentivize compliant behavior before contention arises (i.e. strategy) (2022, 2). The two overarching typologies and three sub-characteristics described by Earl et al. account for a complex understanding of the umbrella term 'digital repression.' It is these sub-characteristics/variables which I believe a triangular model accommodates for rather than a singular two-way model which does not have the ability to capture nuances in causes and effects (see Figures 1.1, 1.2, and 1.3).

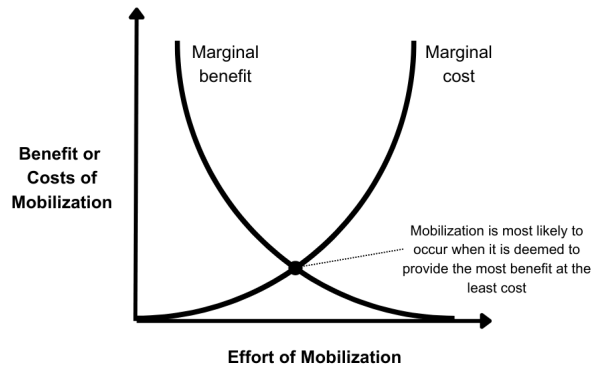
1.1 - Digitization, Repression, and Mobilization: a Triangular Model



1.2 - Leisert's Circular Model of Digital Repression and Mobilization (2012)



1.3 - The Classic Cost-Benefit Model of Repression and Mobilization's Impacts on Each Other (Tilly 2005, 224)



Similar to Earl et al., David Cunningham acknowledges that repression-mobilization literature suffers from a static conceptualization of repression, and the idea that repression invariably decreases mobilization while mobilization provokes repression. Thus, the work of Earl et al. is a step in the right direction towards “disaggregating” repression-mobilization analyses because it expresses repression as a set of relational configurations (e.g. between actor type, visibility, and strategy) rather than a monolith. Overall, then, Cunningham argues that the classic repression-mobilization approach is too simplified. Instead, he promotes Charles Tilly’s

approach of recognizing multiple mechanisms of repression and mobilization that lead to divergent outcomes; it is this variation in mechanisms and outcomes that scholars should aim to address (2007, 122). Accordingly, the bilateral repression-mobilization relationship that Leisert and Yilmaz describe likely fall short of considering different actor types, strategies, and visibilities—i.e. ‘configurations’—that exist within both repression and mobilization. Thus, like Leisert and Yilmaz, I propose that two-way relationships exist between repression and mobilization. At the same time, my triangular model follows Tilly’s mechanisms approach by providing room for different configurations and divergent outcomes of each to be diagrammed.

Digitization, Repression, and Mobilization: a Triangular Relationship

In this section I present my argument for a triangular visualization of the dynamics between digitization, repression and mobilization. This set of relationships is best described as triangular for two main reasons: (1) to account for differing configurations of the three concepts which vary along characteristics such as actor type, strategies utilized, etc., and (2) to account for the divergent outcomes which may arise under similar circumstances. Thus, the multidimensional nature of the triangular framework contains room for the variation in arrangements that exist within the three fields, as well as the distinct (yet predictable) outcomes that can occur in one based on particular configurations of factors. The relationships between digitization, repression and mobilization are also two-way, meaning that each is affected by developments in the other. In the following subsections, I will explain how digitization, repression, and mobilization interact within this triangular and bilateral set of relations. In part (d) of this section, I will briefly describe why “aggregated” or catch-all understandings do not

capture the diverse configurations of variables and diverse outcomes that exist within the relationships between digital repression and digital mobilization.

a. Digitization and Repression

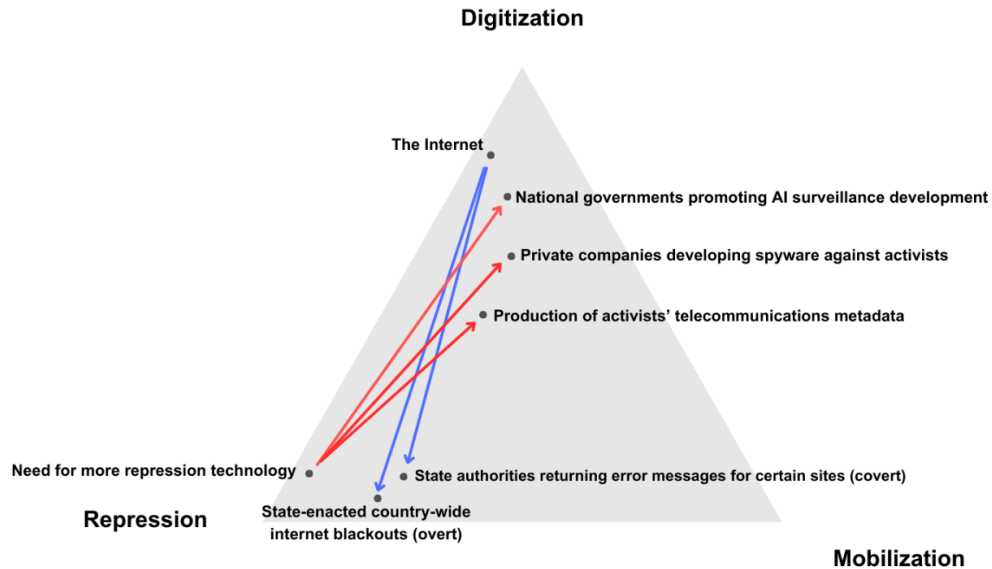


Figure 2

The relationship between digitization and repression is a reaffirming one, meaning that each complement the growth of one another. This is even more true today, as modern technology such as AI and social media generate more information which can then be obtained by repression actors. What's important to note is that technological innovation's effects on repression are not only numerous but differ depending on the technologies utilized. For example, AI-based social media monitoring will likely garner different information on targets than telecommunications metadata. State officials may leverage the importance of the Internet by enacting country-wide blackouts or returning error messages to citizens who wish to access certain information. Though

the blackout is a more overt form of repression, blackouts and error messages both ultimately constrict information flow which is why their positions in the repression arena would be charted close to one another (see Figure 2). Likewise, repression's effects on technological innovation are manifold and thus represented towards the digitization end of the digitization-repression relation. As Figure 2 illustrates, repression's ramifications for the field of technology range from national governments producing demand for AI surveillance technology (Funk et al. 2023) to private companies developing spyware targeting activists (Amnesty International 2023, 25) and local authorities producing telecommunications metadata to monitor targets' activities (Leisert 2012, 447). As these examples show, modern movement repression has not only incorporated recent technological innovations into its repertoire but also promoted technological innovation. Even so, these examples also demonstrate the different repression-related mechanisms—e.g. actors, technology utilized, etc.—that combine to advance digital technology in a number of specific areas. As with digitization's effects on repression, the multi-dimensionality of the model I put forward accommodates space for these distinct configurations and effects to be depicted while still maintaining a coherent organization.

b. Digitization and Mobilization

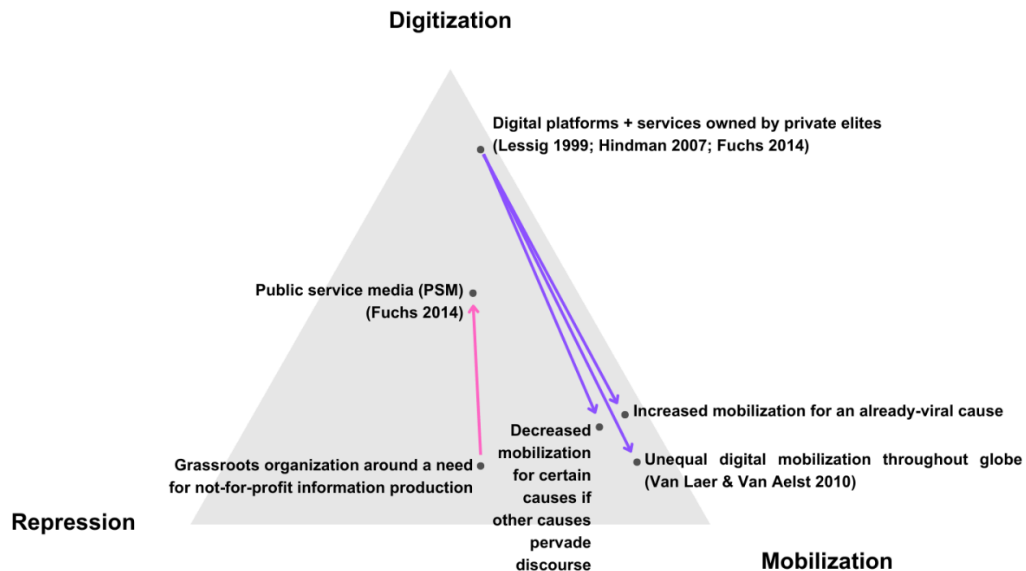


Figure 3

The triangular framework also effectively demonstrates the relationship between digitization and mobilization because as with digitization and repression, its dynamicity captures the combinations of mechanisms and divergent outcomes of each. Unlike digitization's relationship with repression, however, the former has had more ambiguous effects for mobilization. On one hand, technological innovation has been a positive development for social movement mobilization (Van Laer & Van Aelst 2010, 1164). Digital advancements such as the Internet, mobile phones and more have contributed to today's world of movement mobilization. These advancements are known as information communications technologies (ICTs). As Victoria Carty notes, ICTs have become integral to today's social movements. This phenomenon is attributed to ICTs' abilities to spread information instantly and widely, promote recruitment into virtual collective identities, expose perceived injustices, and provide individuals with the opportunity to create and distribute their own messages (2018, 5-9). It makes sense that ICTs

have been readily adopted by social movements because they fit in with numerous social movement theories such as Tilly's protest repertoire theory.

For one, digitization's positive effects on mobilization complement Tilly's repertoire of protest theory because of the ways that movements have been able to adopt ICTs into pre-existing understandings of protest tactics. According to the scholar, a society's repertoire of protest or contention is comprised of tactics that: (1) appeal to peoples' sense of justice, (2) fit in with their daily routines, (3) accompany their prior knowledge of collective action, and (4) minimize the kinds of repression that members experience (Tilly 1986, 11). As phones, the Internet and more have become ubiquitous, it follows that such technologies easily incorporate into society's repertoires because (1) they facilitate holding perceived wrongdoers accountable, (2) are already intertwined with peoples' everyday lives, (3) strengthen methods communication that already exist, and (4) are able to amass advocacy for change on a larger scale.

In addition to the triangular model's ability to display digitization's positive effects on mobilization in relation to each other, the same can be said for digitization's potentially limiting effects on mobilization. For one, scholars point out that digital platforms and services are managed by commercial actors and elites (Lessig 1999, 6; Hindman 2007, 17). The result is the Internet's tendency to increase the visibility of already-viral sites, outlets, and voices because virality garners profit. Christian Fuchs takes this analysis one step further, and in the Marxian tradition, applies critical theory to social media's effects on politics. He argues that social media—as a privately-owned entity—operates in the capitalist interest of its owners, which in turn gives owners the ability to influence media content and exclude voices that question the logic of for-profit information production (Fuchs 2014, 215). This perspective draws on Jürgen Habermas' conception of the public sphere, or the social spaces within which citizens can freely

engage in discourse relating to public concerns (Carty 2018, 31). Habermas notes that the public sphere is more of an idealization than reality, due to its constituency of “economically dependent masses” who have less education and resources to participate in the public sphere than elites (1992, 434; 1989, 227). Recent scholars have connected such participatory inequities to the geographical divide of technology’s distribution. This so-called digital divide persists at a global level: wealthy countries are more likely to enjoy greater internet access than less-developed countries (Van Laer & Van Aelst 2010, 1160), and English remains the Internet’s dominant language (Statista 2023). In regards to other forms of technology, inequitable distributions of the telephone may persist due to its nature as an ongoing expenditure (Schement 1999, 9). This implies that technological innovation’s inequitable distribution can adversely impact mobilization when activists who rely heavily on new media do not represent potentially-important constituents in less connected parts of the world (Van Laer & Van Aelst 2010, 1161).

In sum, digitization may be a double-edged sword for modern social movements because communication infrastructures’ control by global elites helps maintain the political status quo. The triangular framework accommodates for the related yet distinct limitations of technological innovation on mobilization. Within the model, the centralization of Internet ownership would be one point charted in the digitization arena, while the aforementioned shortcomings of digitization on mobilization would be diagrammed towards the mobilization end (see Figure 3). On the other side of this relation, that is, mobilization’s effects on digitization, the literature is scant. Some scholars note that social movements can drive technological change, however there is much less evidence that this occurs remotely close to the level that repression motivates technological innovation. One instance in which media is not driven by for-profit interests is public service

media (PSM). According to Fuchs, PSM is completely “run, owned and controlled” by citizens. This means that PSM is able to promote diverse political discourse because they are publicly owned and less likely to produce information that originates from hierarchical social and economic relations (Fuchs 2014, 217). In the triangular model, this effect would be illustrated at the digitization end of the mobilization-digitization line (see Figure 3).

c. Repression and Mobilization

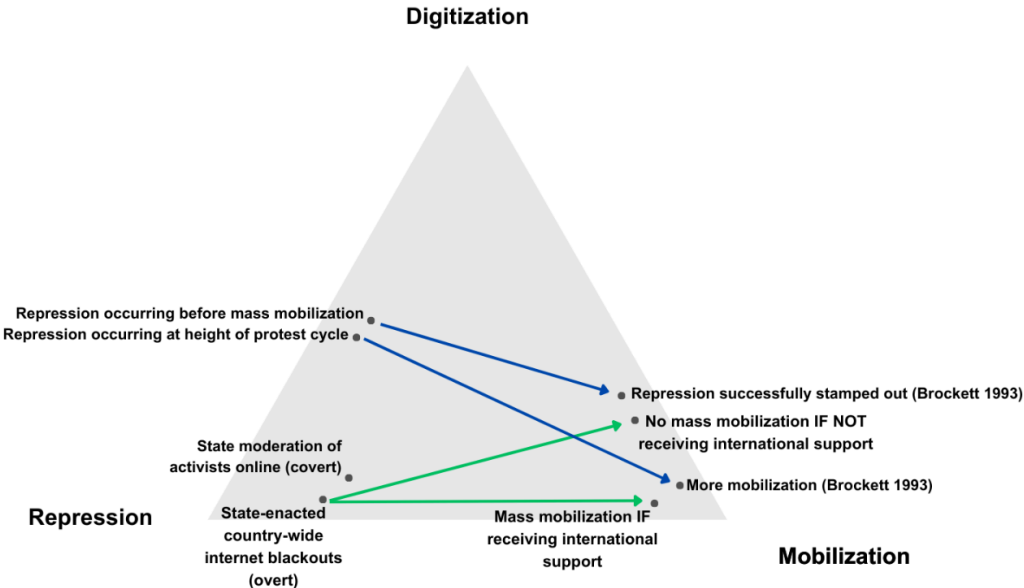


Figure 4

As previously mentioned, the relationship between digital repression and digital mobilization *can* be mutually-developing (Leisert 2012, 442; Yilmaz 2023, 9). However, repression does not always encourage more mobilization (Cunningham 2007, 122). The triangular digitization-repression-mobilization model accounts for repression’s wide-ranging effects on mobilization; other models do not. Furthermore, the triangular shape of these relations allows for different configurations of repression to be charted and classified by actor, strategy,

and visibility type. The three-sided model also allows consideration for other repression variables, such as the timing of a repression act within a protest cycle: according to research by Charles D. Brockett, repression carried out before a movement achieves mass mobilization is more likely to succeed in stamping out protest than if the repression occurs at the height of protest (1993, 471-472). In this sense, the same repression act that occurs at different stages within the protest cycle would be represented as two opposing points in the repression arena of the repression-mobilization relation. They would each also be connected to different outcomes on mobilization because as suggested by Brockett, the timing of the acts is what differentiates their effects on mobilization (see Figure 4).

In the case of digital repression's effect on mobilization, acts such as nationwide internet blackouts and social media companies' moderating of an activists' content would be diagrammed close to each other because they are both attempts to crack down on dissent and control information, though the repression actors and visibilities differ (see Figure 4). Continuing with the example of state-wide internet blackouts, divergent mobilization outcomes can be seen in the Egyptian Revolution and 2021 Myanmar coup. In the former case, internet blackouts perpetrated by the Egyptian government motivated global outcry and mobilization (Castells 2013, 64), whereas blackouts in the latter case only led to local mobilization which lacked much support from global actors such as the United Nations (Advox 2023). Within the structure, then, these outcomes would both appear towards the mobilization end of the repression-mobilization line, but be located far apart from each other along the third axis because the repercussions are opposite (See Figure 4). Thus, the triangular model also provides space for varying configurations of variables (i.e. causes) and divergent outcomes to be diagrammed in relation to each other depending on how similar/dissimilar they are.

Mobilization's effects on repression can also be illustrated within the triangular model. Notably, however, literature supports the notion that mobilization usually intensifies repression and rarely decreases it (Leisert 2012, 441; Cunningham 2007, 122). As an example, activists' efforts to secure privacy may encourage metadata surveillance when such privacy measures take place on mobile phones (Leisert 2012, 447). Though the three-sided framework has room to represent various configurations of movement assembly, in the case of mobilization's effects on repression, different configurations of the former usually tend to lead to heightened repression.

d. What Aggregated Understandings Don't Capture

With this triangular understanding of digitization, repression and mobilization in mind, I return briefly to the oversight that other models of digital repression and digital mobilization make. In so doing, I take this section to emphasize why the triangular model captures fuller complexity of mechanisms—i.e. variables—and effects that digital repression and digital mobilization contain and impose on one another. As mentioned in my discussion of related literature, I operationalize technological innovation as its own analytical category to understand its various forms and functions within the broader landscape of repression and mobilization. In other words, the triangular model has an edge over circular/spiral models (Leisert 2012, 455) and “classic” cost-benefit curves (Tilly 2005, 224) which only analyze digital repression/mobilization's relationships to each other because the separation of digitization from these two fields allows scholars to better understand (1) in which instances different forms of technology affect repression and mobilization, and (2) in which instances different forms of repression and mobilization affect digitization. Moreover, circular models and cost-benefit curves consider digital repression and digital mobilization as “bounded phenomena” or

aggregated categories whose different characteristics/variables are not capable of producing alternative outcomes in the other field (Cunningham 2007, 121). As subsections (a) through (c) have shown, however, the configurations of variables in one field *usually* affects what kind of consequences it has on the other field. Because the triangular model articulates technological innovation as its own analytical category and disaggregates the categories of repression mobilization, then, it can be said that this framework attempts to put a digital spin on Tilly’s conceptualization of a mechanism-based approach to repression and mobilization. In the following section, I will attempt to apply the triangular model to understand how digitization, repression, and mobilization interact in one case: social media surveillance by U.S. colleges.

Applying the Triangular Model: AI-Based Social Media Surveillance on American Campuses

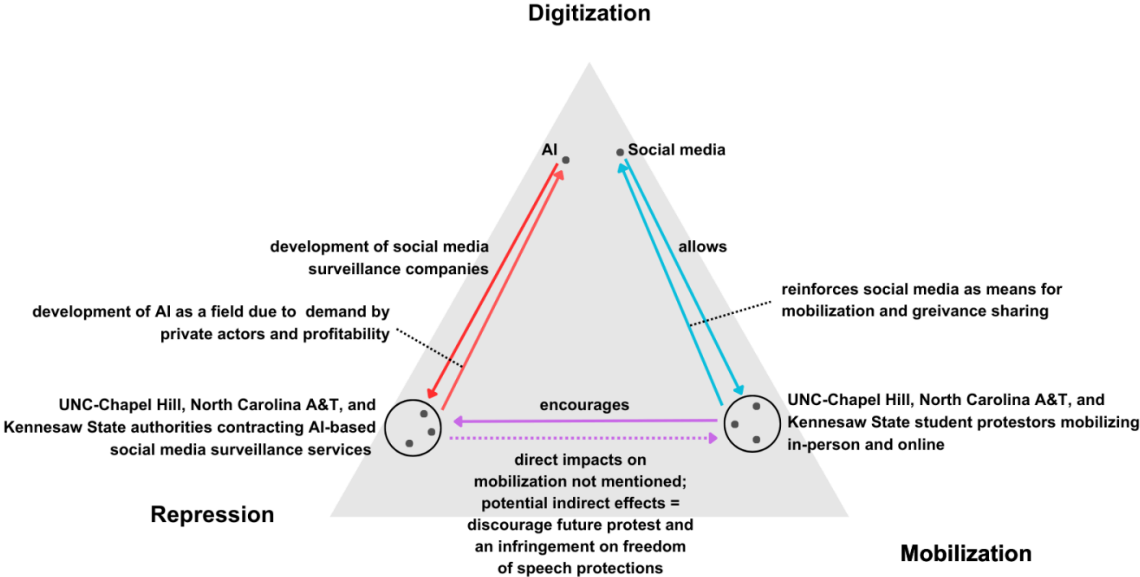


Figure 5

To demonstrate how the triangular framework applies to current issues, examining American colleges' social media monitoring of student activists is useful. In the first case, recent investigation has found that various American universities have been contracting AI-based services which promise to monitor student's social media profiles. Ostensibly, such services—such as the identified contractor Social Sentinel—claim to exist to help prevent campus shootings. Nonetheless, a recent investigation by *The Dallas Morning News* and the Investigative Reporting Program at UC Berkeley's Graduate School of Journalism has revealed that Social Sentinel advertised their technology as a resource to preempt protest. This is significant given that at least 37 colleges, collectively containing “hundreds of thousands of students,” have contracted the company since 2015 (Sen & Bennett 2022). What's more is that Social Sentinel provided various sub-features such as Local+ List, a tool which allows colleges to monitor particular keywords and students, as well as email monitoring. As Sen and Bennett note, this investigation's findings have implications for the greater use of AI-based social media monitoring services. For one, Social Sentinel is just one social media monitoring service at the disposal of campuses and other non-governmental organizations; thus, when Social Sentia's CIA-funded competitor Geofeedia came under fire for questionable practices years ago, some colleges decided to contract with Social Sentinel instead. Without proper guardrails or regulation for such services, then, the proliferating nature of these surveillance tools continues to pose concerns for student activists' rights to freedom of speech (Sen & Bennett 2022).

This case of American colleges' contracting of AI-based social media surveillance against student activists demonstrates the triangular relationship between digitization, repression and mobilization fairly well. As Figure 5 illustrates, modern technological resources such as AI and social media played important roles in this study: AI development allowed the growth and

subsequent use of social media surveillance services such as Social Sentinel and Geofeedia by American colleges. Sen & Bennett point out that before particular instances of repression occurred, social media was a key means for students to discuss perceived grievances and subsequent mobilization (2022). According to this case, particular examples of student protest that occurred and can be charted within the triangular model are (1) UNC-Chapel Hill students using social media to protest a Confederate statue in 2017, (2) a North Carolina cheerleader leveraging social media to protest her school's mishandling of her rape case in 2019, and (3) Kennesaw State University students posting about an upcoming protest at a town hall which was attended by a U.S. senator in 2017. Though these occurrences slightly differ in characteristics such as grievance and campus location, they share commonalities in actors (students) and means of mobilization (social media). As such, these three occurrences are clustered together in the mobilization arena of the and can be said to all reinforce social media as a means for young people to organize and share grievances.

In the relationship between AI and repression, it can be said that AI-based surveillance services allowed the above colleges to respond to student protest by (1) monitoring students and posts challenging UNC-Chapel Hill's Confederate statue, (2) use keyword search to find posts related to the cheerleader's allegation, and (3) track Kennesaw State demonstrators (Sen & Bennett 2022). Within the triangular model, these instances of repression are clustered together because they are all acts carried out by college authorities, all use AI-based social media surveillance as a means of covert repression, and all acted as a strategy to punish perceived threats after mobilization (rather than incentivizing compliance or preventing contention from arising). These repression acts collectively encourage the continued development and contracting of services such as Social Sentinel and Geofeedia because they demonstrate the field's

profitability and demand. As the arrows from mobilization acts to their corresponding repression outcomes imply—and as I argued earlier—mobilization usually intensifies repression. Finally, Sen & Bennett do not share whether repression in the cases of UNC-Chapel Hill, North Carolina A&T and Kennesaw State led to direct increases or decreases in mobilization. Nonetheless, a potential arrow can be drawn from the repression arena to the mobilization arena because Social Sentinel advertised itself as being able to preemptively stem student protest. And more indirectly, the unregulated use of such surveillance services can be argued to infringe on students' rights to free speech (Sen & Bennett 2022).

Conclusion

Previous models of digital repression and digital mobilization's impacts on one another have been found to be too simplifying because they do not capture (1) the different configurations of variables which occur within each field, and (2) divergent outcomes in either field that nonetheless arise from similar causes (Cunningham 2007, 121). In other words, models such as Oliver Leisert's circular/spiral model (2012) and conventional cost-benefit conceptualizations of repression and mobilizations (Tilly 2005, 224) analyze repression and mobilization as aggregate phenomena whose combinations of subcharacteristics and variables (such as actor type, means of technology used, etc.) do not change repression's effect on mobilization and vice versa.

More detailed models of the relationship between digital repression and digital mobilization must ask the question, *how does technological innovation affect repression and mobilization?* This is because technological innovation's various forms (e.g. telecommunications, mobile phones, the Internet, AI, and so on) may produce varying

implications for repression and mobilization when applied in certain contexts, i.e. configurations. Likewise, repression and mobilization have diverse effects on innovation and its particular technologies. For these two reasons, the triangular model classifies technological innovation as its own analytical category. The triangular framework is also more useful for understanding the relationship between digitization, repression and mobilization because it disaggregates repression and mobilization by providing room for multiple configurations of repression and mobilization to be diagrammed (1) in relation to each other and (2) based on variables such as actor type, strategy and visibility which may lead to divergent outcomes in the other arena. When analyzing the relationships between digitization, repression and mobilization according to the triangular model, some overarching patterns emerge: technological innovation and repression are becoming increasingly intertwined; mobilization—regardless of its form—tends to beget repression, though repression can either increase or decrease mobilization (Leisert 2012, 441; Cunningham 2007, 122); finally, technological innovation has ambiguous implications for mobilization, because it simultaneously empowers social movement organization while the digital infrastructure utilized is overwhelmingly owned and controlled by private elites with for-profit motives (Lessig 1999, 6).

This study of a triangular lens towards the relationships between digitization, repression and mobilization leaves one implication. Particularly, the triangular model suggests that technological innovation is politically biased towards social movement repression, which in turn raises a concern of the ethics guiding technological innovation and its potential for repression. This is an area meriting further research.

Works Cited

1. Amnesty International. (2023). *The Predator Files: Caught in the Net* (Report No. ACT 10/7245/2023).
2. Brockett, Charles D. (1993). A Protest-Cycle Resolution of the Repression/Popular-Protest Paradox. *Social Science History*, 17(3), 457-484. <https://doi.org/10.2307/1171433>
3. Carty, Victoria. (2015). *Social Movements and New Technology*. Taylor & Francis Group.
4. Castells, Manuel. (2015). *Networks of Outrage and Hope: Social Movements in the Internet Age*. Polity Press.
5. Cunningham, David. (2007). Product Review: Surveillance and Social Movements: Lenses on the Repression-Mobilization Nexus. *Contemporary Sociology: A Journal of Reviews*, 36(2), 120-125. <https://doi.org/10.1177/009430610703600205>
6. Lessig, Lawrence. (1999). *Code and Other Laws of Cyberspace*. Basic Books.
7. Earl, J., Maher, T. V., Pan, J. (2022). The Digital Repression of Social Movements, Protest, and Activism: A Synthetic Review. *Science Advances*, 8(10), 1-15. <https://doi.org/10.1126/sciadv.abl8198>
8. Fuchs, Christian. (2014). Twitter and Democracy: A New Public Sphere?. In M. Steele (Ed.), *Social Media: A Critical Introduction* (205–235). SAGE Publications Ltd.
9. Funk, A., Shahbaz, A., Vesteinsson, K. (2023). *The Repressive Power of Artificial Intelligence*. Freedom House. <https://freedomhouse.org/report/freedom-net/2023/repressive-power-artificial-intelligence>
10. Habermas, Jürgen. (1989). *The Structural Transformation of the Public Sphere*. MIT Press.
11. Habermas, Jürgen. (1992). *Further Reflections on the Public Sphere*. MIT Press.

12. Hindman, Matthew. (2007). Open-Source Politics Reconsidered: Emerging Patterns in Online Political Participation. In V. Mayer-Schönberger & D. Lazer (Eds.), *Governance and Information Technology: From Electronic Government to Information Government*. MIT Press.
13. Leistert, Oliver. (2012). Resistance against Cyber-Surveillance within Social Movements and How Surveillance Adapts. *Surveillance & Society*, 9(4), 441–56.
<https://doi.org/10.24908/ss.v9i4.4345>
14. Statista. (2023, November 26). *Most Used Languages Online by Share of Websites 2023*. Retrieved December 1, 2023, from
<https://www.statista.com/statistics/262946/most-common-languages-on-the-internet/>
15. Schement, Jorge. (2001). Of Gaps by Which Democracy We Measure. In B. M. Compaine (Ed.), *The Digital Divide: Facing a Crisis or Creating a Myth?*. MIT Press.
16. Sen, A., Bennett, D. K. (2022, September 20). Tracked: How Colleges Use AI to Monitor Student Protests. *UC Berkeley Graduate School of Journalism*.
17. Tilly, Charles. (1986). *The Contentious French*. Harvard University Press.
18. Tilly, Charles. (2005). Repression, Mobilization, and Explanation. In C. Davenport, H. Johnston, & C. Mueller (Eds.), *Repression and Mobilization* (pp. 211-226). University of Minnesota Press. <http://dx.doi.org/10.1080/13691181003628307>
19. Van Laer, J., & Van Aelst. (2010). Internet and Social Movement Action Repertoires. *Information, Communication & Society*, 13(8), 1146–1171.
20. Yilmaz, Özgür. (2023). The Limitations of Social Movements and the Increasing Impact of Digital Surveillance in the Age of Big Data. *AJIT-e: Academic Journal of Information Technology*, 14(54), 204–222. <https://doi.org/10.5824/ajite.2023.03.003.x>