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New Avenues for Public Value Management and the Role of Nonprofit Policy Innovation Labs: Co-Experience and Social Media

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ABSTRACT

The past decade has witnessed the global rise of policy innovation labs (PILs), many of which are nonprofit organizations. Policymakers have promoted PILs as a novel approach to addressing pressing economic and social issues. Concurrent with the growing importance of PILs has been the shift to public value management (PVM), which focuses on policy outcomes that benefit the public and the needs and problems in society. One relatively new process raised in the public management literature is co-experience, which considers stakeholders' engagement with public policies or programs within the broader context of life experience. This, the authors argue, is an important contribution to public value creation. Social media platforms such as Twitter (now X) are one tool that PILs can employ to assess and develop stakeholder co-experience. The authors analyzed 13,009 Twitter messages largely generated by stakeholders relating to 42 U.S.-based PILs.

RÉSUMÉ

La dernière décennie a vu l'essor mondial des laboratoires d'innovation politique (LIP), dont plusieurs sont des organismes sans but lucratif. Les décideurs politiques ont présenté les LIP comme une approche nouvelle pour résoudre des problèmes économiques et sociaux urgents. Parallèlement à l'importance croissante des LIP, on a assisté à une transition vers une gestion de la valeur publique qui se concentre sur des résultats politiques pouvant profiter au public en s'adressant aux besoins et problèmes de la société. Dans un tel contexte, la co-expérience, un processus relativement nouveau évoqué dans la littérature sur la gestion publique, tient compte de l'engagement des parties prenantes dans les politiques ou programmes publics dans un contexte plus large d'expérience de vie. Selon les auteurs, il s'agit là d'une contribution importante à la création de valeur publique. Les plateformes de médias sociaux telles que Twitter (maintenant X) sont un outil que les LIP peuvent utiliser pour évaluer et développer la co-expérience des parties prenantes. Les auteurs ont analysé 13 009 messages Twitter générés dans une grande mesure par des parties prenantes associées à 42 LIP basés aux États-Unis.

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INTRODUCTION

Many nonprofit organizations have enthusiastically employed social media as a method of day-to-day engagement, which has inspired increased scholarship on the topic (Guo & Saxton, 2014; Svensson, Mahoney, & Hambrick, 2015; Campbell & Lambright, 2019; Xu & Saxton, 2019; Halpin, Fraussen, & Ackland, 2021; Wallace & Rutherford, 2021; Taylor, 2022). To this growing area of scholarship, this article makes three significant contributions. First, it describes the trend of how U.S. nonprofit organizations have taken on the role of becoming policy innovation labs (PILs). Policy innovation labs are organizations and spaces often touted as a novel approach to addressing pressing policy issues and stakeholder engagement (McGann, Blomkamp, & Lewis, 2018; Olejniczak, Borkowska-Waszak, & Domaradzka-Widta, 2020). They are engaged in policy design, public sector reform, and program delivery. In each, a well-established co-design approach plays a central role. Second, and central to this analysis, is assessing how co-experience manifests through Twitter-based[1] stakeholder engagement. We argue that this recently introduced mode of engagement in the public management literature captures individuals' expressive acts and statements by considering stakeholders' engagement within a digital public sphere (Yanow, 1996). Third, PILs and their co-design activities have contributed to public value management (McGann et al., 2018; Hansen & Fuglsang, 2020; Cole, 2022; Kim, Wellstead, & Heikkila, 2023). Broadly defined, public value management (PVM) refers to the value generated by the government through services, laws, and policies that benefit the public and contribute to the common good (Moore, 1995) and contrasts with the older "new public management" paradigm and its focus on efficiency, competition, and performance management (O'Flynn, 2007). Social media-based co-experience *vis-à-vis* PILs also contributes to PVM, which is the focus of this article.

The literature review below borrows from various perspectives, beginning by chronicling the rise of policy innovation labs (PILs), in which nonprofit organizations play a leading role. Then, the public value management literature is introduced, providing the larger framework for this analysis. Finally, the authors describe co-design and co-experience, followed by an overview of how social media qualifies as a co-experience activity and contributes to public value. The data and methods section details the method of collecting and analyzing over 67,000 tweets from 42 U.S.-based PILs actively engaged in Twitter activity. Co-experience was based on three criteria. First, the authors measured PILs' social media interaction by examining the intensity of the tweets. Second, the types of tweets (retweets, mentions, and mentions in retweets), which indicate the interaction between the PIL and stakeholders, were analyzed. Finally, from the nonprofit literature, the authors employ Lovejoy and Saxton's (2012) and Guo and Saxton's (2014) "action, community, and information" categories to assess Twitter content. This article summarizes how nonprofit organizations contribute to PVM through co-design and co-experience activities. First, the context for this article is provided, as well as how Twitter contributed to the larger public sphere.

Context: The turbulent events of 2020

2020 was unprecedented in terms of Twitter usage and represented an excellent opportunity to examine PIL's Twitter activity and how users responded to the four highlighted events and activities. First, COVID-19 started to spread at the end of 2019 and became an issue of concern in the United States early in 2020. In mid-March, the World Health Organization (WHO) declared COVID-19 a pandemic, and the reality of the deadly virus was causing schools and businesses to shut down in-person operations. By April 2020, in the United States 6.6 million people had filed for unemployment (History, 2020). Daily life had changed dramatically by June when data collection started, including high unemployment levels, shifts from the physical to virtual work and school environments, and mask mandates ("What a year," 2020).This all prompted much discussion on Twitter around the issue of COVID-19 as a public health concern, data collection and modelling, the policies to address the situation, and community-level solutions to problems caused or influenced by COVID-19. There was considerable Twitter-related COVID-19 research (see Dalili & Dastani's 2020 overview of Twitter-related activity related to COVID-19).

At the same time, there was a series of high-profile murders of Black Americans, including at the hands of police officers. This issue started to gather widespread attention in February 2020 with the killing of Ahmaud Arbery, followed by Breonna Taylor and Daniel Prude in March, leading up to George Floyd's murder in May ("What a year", 2020). The murder of George Floyd and the viral video account of the incident sparked protests against police brutality and for Black lives. The protests started in Minneapolis and spread nationally and internationally through May and June and prompted discussion on Twitter around structural racism, policing, and the responses of corporations, businesses, and schools to public sentiments regarding police behaviours and discussions on race. Nguyen, Criss, Michaels, Cross, Michaels, Dwivedi et al. (2021) found that Twitter traffic increased public awareness of structural racism and a desire for social change.

2020 was also tied as the hottest year on record, and began with bushfires that burned millions of acres in Australia (NASA, 2021). There were above-average occurrences of tropical storms and more intense droughts and monsoons throughout the globe (Blunden & Boyer, 2021). August, the end of the collection period, marked the beginning of the wildfires on the West Coast of the United States, which had fire emissions "almost three times higher than the ten-year mean" (Blunden & Boyer, 2021, p. 4). On Twitter, climate change-related events prompted discussions and the work PILs and other organizations could do to address its causes and impacts.

National politics also took center stage in the United States. First, the presidential election combined President Trump's active use of Twitter and spreading conspiracy theories and disinformation about COVID-19. In May, Twitter labelled one of his tweets as misleading for the first time, though he was allowed to remain on the platform until 2021 ("What a year", 2020). These actions prompted political discussions on Twitter, which sometimes centered on fake news and disinformation, in addition to the political campaign messages and updates about government actions (Lewandowsky, Jetter, & Ecker, 2020). Unsurprisingly, many scholarly contributions linked Twitter, the Presidential election, and former President Trump (Fuentes & Peterson, 2021).

LITERATURE REVIEW

What are policy innovation labs?

Policy innovation labs (PILs), which often include nonprofits, engage in many fields of work (Wellstead, Gofen, & Carter, 2021). A commonality across types of PILs is that they typically use innovation and co-design methods to address complex public policy problems (Lewis, 2021). They are "arenas for experimentation," which can be added to an organization and function independently (Criado, Dias, Sano, RojasMartín, Silvan, & Filho, 2020, p. 1). They often break down hierarchies and encourage creative thinking to develop possible solutions to address key public problems, often by employing collaborative methods to create user-centred designs (Bellefontaine, 2012).

The "labification" approach to public policy encourages citizen engagement to improve public outcomes (Williamson, 2015; Criado et al., 2020). The growing popularity of PILs "can be seen as one of the elements in the ongoing public-sector innovation discourse and related reform attempts," as governments are facing new challenges in the current era of complex policymaking (Tõnurist, Kattel, & Lember, 2017, p. 1456). There are now an estimated 475 PILs across the globe (Villa Alvarez, Auricchio, & Mortati, 2022) and well over 100 in the United States (Wellstead & Nguyen, 2020), indicating their growing popularity. Key features that distinguish PILs include organizational structure, focus area, methods, and collaboration (Lindquist & Buttazzoni, 2021). Policy innovation labs operate at various levels of autonomy within and outside the public sector (Olejniczak et al., 2020) in setting their targets and working methods (Tõnurist et al., 2017), allowing them to be more open and agile than traditional hierarchically-based government policy units (Lewis, 2021).

Policy labs: Purveyors of public value management

Public value, a public management concept, was first introduced in 1995 by Mark Moore as an approach for public managers to realize "the outcomes that citizens want from government achieved in a way that is consistent with their values and expectations" (Moore, 1995, p. 5). Central to his framework is that public managers need to meet three tests to ensure that the public's strategies meet three specific conditions to create public value. They include a value that is "substantively valuable," "legitimate and politically sustainable," and "operationally and administratively feasible" (Moore, 1995, p. 23). This approach contrasts with new public management's focus on efficiency, competition, and performance management. Subsequent developments in the public value literature have expanded beyond the actions of public managers and now include multi-actor level and organizational public value creation (Bryson et al., 2017; Jarman, Luna-Reyes, & Zhang, 2016; Jørgensen & Bozeman, 2007; Kelly, Mulgan, & Muers, 2002; Meynhardt, 2009). In short, when analyzing the work of policy labs, we should bear in mind that public value(s) can be generated through the workings of the policy processes (trust and legitimacy) rather than exclusively in the output (service delivery and efficiency) itself. Recent scholarship suggests that policy labs are public value vanguards emphasizing adding value to the public sphere (McGann et al., 2018; Cole, 2022; Kim et al., 2023).

Policy lab processes: Co-design and co-experience

Policy innovation labs generally employ various co-design approaches and tools emphasizing stakeholders' involvement and engagement in policy design, public sector reform, and program delivery.

Co-design activity has received considerable empirical coverage (see Evans & Terrey, 2016; Whicher & Crick, 2019; Olejniczak et al., 2020; Ferrarezi, Brandalise, & Lemos, 2021; Komatsu, Salgado, Deserti, & Rizzo, 2021). Einfield and Blomkamp (2021) define co-design as "an iterative, participatory and action-oriented process to address public problems [and] puts the people affected by an issue … at the heart of a creative process" (p. 2). They and Schwoerer, Keppeler, Mussagulova, and Puello (2021) point to how co-design draws heavily on design thinking and human-centred design. Inspired by commercial product design, the co-design process is a series of stages that aims to understand a complex issue or problem from multiple perspectives, followed by designing new approaches and solutions that include initiating, designing, and testing user-centred solutions (Bellefontaine, 2012). Critical to co-design is the active collaboration with affected stakeholders, including members from the key groups of practitioners, community, and researchers (Schwoerer et al., 2021). By engaging with "a more diverse range of voices and inputs into the policy process that resonates with principles of network governance," an accurate representation of citizens and their opinions can be achieved (McGann et al., 2018, p. 252).

In their study of PILs, Wellstead, Howlett, and & Chakrabarty (2022) found that nearly half (47.8%) of PILs in their sample primarily employed a co-design approach. A recent contribution by Osborne, Nasi, and Powell (2021) raises the importance of other "co-" related activities that engage stakeholders in public service activities, including co-production (managing and delivering public services), co-construction (evaluating the lived experience of a public service), and co-experience. Co-experience focuses on stakeholders' engagement with public policies or programs within the context of their broader life experiences (Osborne et al., 2021; Strokosch & Osborne, 2020). Battarbee and Koskinen (2004) further clarify, arguing that experiencing is a constructive activity created in social interaction and is a seamless blend of user experience of products and social interaction. Notably, they add that the experience, while essentially created by the users, would only be the same or even possible with the presence of the product and the possibilities for an experience it provides.

In their study of online professional networks on Twitter, Talip and Narayan (2020) found that co-experience occurs in social contexts, where experiences are created together or shared. Like Osborne et al. (2021), they argue that co-experience "emerge[s] serendipitously when an individual posts updates, and when others share their stories or experiences related to the topic or post" (Taplip & Narayan, 2020, p.1). In pre-Twitter research, Forlizzi and Battarbee (2004) argue that co-experience creates meaning and emotion through product use (i.e., social media), considering an experience in a social context. Critically, they state [c]o-experience reveals how the experiences an individual has and the interpretations that are made of them are influenced by the physical or virtual presence of others" (Forlizzi & Battarbee, 2004, p. 263).

Co-experience, social media, and public value

Xu and Saxton (2019) argue that social media is important for enhancing stakeholder engagement by nonprofits and can improve social capital. Nonprofit organizations generally use social media for "cost reductions, improvements in customer relations, and enhanced accessibility of information" (Tajudeen, Jaafar, & Ainin, 2018, p. 310). Svensson, Mahoney, and Hambrick (2015) also confirm

that Twitter is used primarily for sharing information but less as a mobilization tool. Despite its potential, Young (2017) found that many nonprofit organizations reported using social media only as a medium for passively providing information. This shortcoming supports Waters and Jamal's (2011) finding that many nonprofits tended to use Twitter for only one-way announcements, thus not taking advantage of their co-experience possibilities.

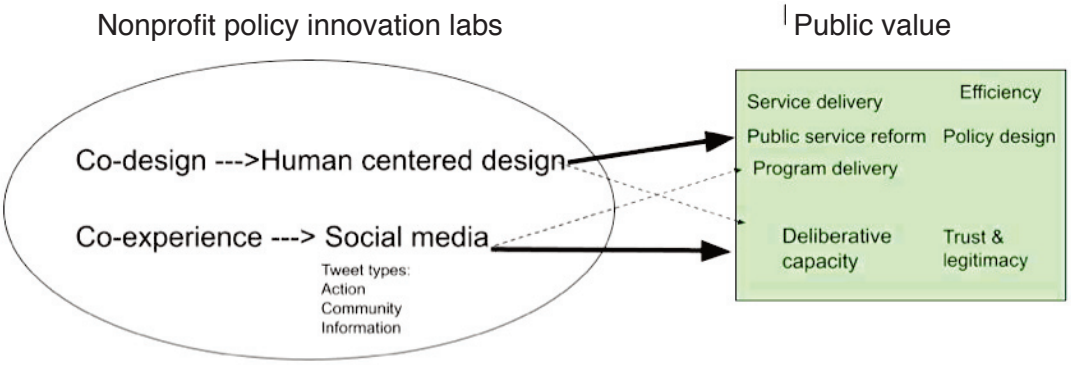
Lovejoy and Saxton's (2012) highly cited article examining the tweets of 100 U.S. Twitter-active nonprofit organizations provides a basis for analyzing the content of PILs' co-experience activities. They identified three essential functions of microblogging updates that correspond to Coleman's argument that policy often is "shaped, announced, and evaluated," namely, action, communication, and information (2012, p. 151).

Action-based tweets aim to mobilize followers to take concrete actions such as participating in a promoted event, volunteering, engaging in lobbying and advocacy, donating, buying a product, learning how to help, and joining another site or voting for an organization (Saxton & Lovejoy, 2012). In relation to this call for action, Gupta, Ripberger, & Wehde (2018) found that Twitter was increasingly becoming an important tool for nonprofits to bring attention to and promote their organizational goals.

Nonprofits use Twitter to interact, share, and converse with stakeholders in a way that facilitates an identifiable online community. Community-based tweets, representing 26.4 percent of all tweets studied by Saxton and Lovejoy (2012), were helpful in building relationships, networks, and online communities. Saxton and Lovejoy (2012) identify two important types of community tweets. The first type describes tweets that initiate interactive conversations and dialogue between organizations and stakeholders. The second type of community tweet announces something to strengthen the community without involving an expectation of interactive conversation. Finally, information-based tweets, which were the most prominent type of tweet (58.6%) in their study, involve broadcasting organization's activities or highlighting their events, news, and reports that are of potential interest to followers (Lovejoy & Saxton, 2012). By sharing information, these types of tweets promote transparency, accountability, and public trust. Campbell, Lambright, and Wells (2014) also found that information-based tweets dominated their study of local government agencies and nonprofits in New York State.

Much of the nonprofit Twitter analysis has focused on the one-way transmission from the organization to its followers. However, stakeholder reciprocal tweeting is also a critical function for co-experience activity. Wang and Yang (2020) found that some organizations use Twitter to establish dialogic relationships with their public, specifically through users retweeting messages or sharing the organization's tweets with others. This open communication, they found, often motivates intense and meaningful stakeholder interactions (Tajudeen et al., 2018). The current analysis accounts for this critical two-way interaction by adapting Lovejoy and Saxton's functional approach. Naidoo & Holtzhausen (2020) identified similar themes in their study of how social media contributed to public value in South Africa. Figure 1 summarizes the themes introduced in the above review into a conceptual framework linking the co-design and co-experience activities with public value. It provides the context for this study of Twitter activity by U.S.-based PILs at the height of the COVID-19 pandemic.

Figure 1. Co-design and co-experience public value framework



DATA AND METHODS

This section summarizes Twitter data collection via NodeXL and the coding procedures used in the NVivo content analysis. It then provides an overview of the types and content of tweets, the data collection, and a description of the data analysis.

Types of tweets

Twitter (now X) is a popular micro-blogging platform with 330 million active users who can interact with short messages of 280 characters. At the time of the study, any individual could create an account for their personal or organizational use. In 2019, the Pew Research Center found that 22 percent (52 million) of U.S. adults used Twitter (Wojcik & Hughes, 2019). Compared with the public, users younger than 50 tended to be overrepresented, especially those in the 30–49 age range, and those over 50 were underrepresented, with a sharp drop off in those users aged 65 and older (Wojcik & Hughes, 2019). Users with a college degree, with a higher income, and who identify as Democrats were also overrepresented among U.S. Twitter users (Wojcik & Hughes, 2019).

The PILs' Twitter audience can be generally categorized as their stakeholders. Due to Twitter's public nature, an exact audience is challenging to quantify since any user on Twitter can access a PIL's profile and contribute messages. However, PILs tend to actively target specific audiences with their messages, focusing on well-defined topics or promoting events related to the PIL's activities.

In addition to direct tweets originating from PIL, stakeholders can reciprocate through retweets, mentions, mentions in a retweet, and replies. Table 1 provides examples from one of the PILs in this study, the GovLab, a nonprofit organization located in New York, NY.

Table 1. Examples of tweets, retweets, mentions, mentions in retweets, and replies from and to GovLab

Tweet type	Description	Example
Tweet	A message containing up to 280 characters that a user posts to their own profile.	"Three months ago, The GovLab put forth a Call for Action to develop the data infrastructure needed to address the #COVID19 pandemic."
Retweet	A message where one user shares another user's tweet on their profile.	Five other users retweet the same tweet above.

Table 1 (continued)

Tweet type	Description	Example
Mention	A message that contains another user's username.	"We have important work to do, urgently." #MakingBetterWork #Data4Good #CivicTech @urbaninstitute @DataDotOrg @TheGovLab @BennettInst @BrookingsEcon https://t.co/COlq6OfAK6 https://t.co/3YTNdHiowV
Mention in a retweet	A message that contains another user's username while retweeting one of their messages.	The same mention is retweeted to other users.
Reply to	A message in response to another user's tweet.	

Twitter content

The content of a Twitter message was a second feature of co-experience, which the authors operationalized by applying and adapting Lovejoy and Saxton's (2012) "action," "community," and "information" Twitter classification scheme. As illustrated in Tables 2 to 4, each tweet was coded with at least one code from these three categories,[2] based upon the content of the message. Each message was only coded once per week. To analyze the engagement of users with the messages, and not just the content of the messages themselves, some messages were coded more than once under certain conditions.[3]

Table 2. Action code categories

Category names	Example
Lab holds/ participates in an event	August 13: Results4America "Which states are leading the nation using #evidence and #data for COVID response? Find out tomorrow at 1 PM ET with @Results4America launch event for the 2020 #StateStandard of Excellence."
Job posting/ sharing	August 5: @ImmigrationLab "Want to join us in advancing immigration policy worldwide? IPL is looking for an executive director for our branch at ETH Zurich."
Lab reaches out/ requests	June 16: NRPA_news "Within the next few days, the US Senate is expected to consider the Great American Outdoors Act, which would fully fund the Land and Water Conservation Fund. Tell your Senator to vote YES on S.3422 and #FundLWCF."
Lab work/ research sharing	June 16: GlobalDevLab "The increased use of #digital technology during #COVID19 is posing risks to women and girls. In this new post, @GlobalDevLab shares key considerations and several resources for applying a gender lens to digital development."
Other shared information	July 21: TheLab_DC "Good thread on the Georgia map of Covid-19 cases by former @TheLab_DC colleague."

Data collection and analysis[4]

A catalog of 116 U.S.-based PILs was the initial source of the PILs examined in this study (Wellstead & Nguyen, 2020). In addition to this catalog, the authors conducted an online search for PILs and identified an additional nine formed after 2020. Of these, 57 had no Twitter account or their Twitter

account was inactive (not in use for 12 months or more), and 25 were infrequent Twitter users during the 11-week study period, June 1, 2020, to August 13, 2020. Of the 42 active PILs, 14 were nonprofits, 15 were located within government-based agencies, and 13 were based in universities.

Table 3. Community code categories

Category names	Category example
Awards/ props/ thanks	June 30: UChiUrbanLabs "Choose2Change provides trauma therapy and mentorship, proven to deter youth involvement with crime and the justice system. Thank you to @chicagosmayor for the ongoing support of this important initiative."
Lab says a statement	July 28: NRPA_news "Parks and public spaces must remake themselves as sanctuaries for all and become places where black people and all people can celebrate, heal, and breathe."
Responses/ conversations	Helpful example: Aug 5: CIERP_Fletcher "Agreed. To further your call for real climate action, I'm highlighting reforestation. Check it out, and please spread the word!" Unhelpful example: August 13: Results4America "We live here, and we have seen firsthand how terrible your handling of this crisis has been. From having an incompetent staff to not taking decisive action on measures to curtail the spread, to leaving our school restart in chaos. You should be ashamed of yourself."
Others call on lab	June 30: NRPA_news "Any movement on opening water fountains?"

Table 4. Information code categories

Information	Categories
COVID	Businesses/activities
	Cases/testing
	Data/science/information
	Masks/social distancing
	Medical aspects
	Regulations/policy
	Societal issues/recovery
Development	
Education	Education
	Covid school (in person)
	Extracurriculars
	Remote learning
	Reopening schools
Environment	Environment
	Clean energy
	Climate change
Food insecurity	
Government	
Health/hospitals	
Housing	
Immigration	
Jobs	
Museums	
Outside - Parks	
Police	Police – General
	Crimes/prison
	Defund the police
	Gun violence
	Police violence
Race	Race
	Black Lives Matter
	Equity actions
Research	
Technology	Technology – General
	Data
	Internet
Transportation	
Voting/elections	

Twitter activity was analyzed using NodeXL, a Microsoft Excel-supported network analysis and visualization software package that analyzes social media data. The NodeXL Twitter Search "network data collector" started by performing a query on the Twitter Search service at http://search.twitter.com. Searches can be performed for any string of characters, including Boolean operators such as "AND" or "OR." The authors searched for the 42 Twitter user handles over the 11-week collection period. A NodeXL search can analyze up to 18,000 tweets over seven days of activity. NodeXL displays the results on an Excel worksheet labelled "edges." Each "edge" represents a relationship between two users who interacted with each other. In the case of Twitter, these interactions (edges) include tweets, replies, retweets, mentions, and mentions in retweets (Table 1). The data collection included the weekly tweets and responses on the 42 PILs' profiles, regardless of whether the tweet originated from the PIL or the stakeholders in the form of retweets, mentions, and mentions in retweets. Researchers created a unique file for each week of data collection, for a total of 462 files. In the NVivo content analysis program, individual messages were coded into two categories based on tweet types and content codes. Once all the messages were assigned a tweet type (tweet, retweet, mention, mention in a retweet) and a tweet content code (action, community, information), four different types of NVivo queries were performed. They formed the basis of the results (Table 5).[5]

Table 5. Twitter queries

Query	
1. Tweets per PIL	Calculates the distribution of tweets for each message on a PIL's Twitter page for each week the data was collected. Each week, different types of activity occur on the PIL's Twitter profile. Split between Lab tweets and stakeholder tweets. Depending on the PIL, some weeks have more or fewer messages from each tweet type.
2. Weekly tweets by all PILs	Compares the distribution of tweet types for each PIL present in a specific collection week. Shows how the tweet type distribution varies between different PILs within a specific week.
3. Weekly codes for all PILs	Shows the distribution of codes for each PIL present in a specific week and the distribution between different labs within a defined week. A weekly code distribution table was produced.
4. Codes by tweet type	Calculates the distribution of codes in each tweet type for a specific week.

RESULTS

Analysis of Twitter activity illustrates how 42 PILs facilitate the co-experience process with their stakeholder users via message intensity, type, and content. Beginning with the intensity of Twitter activity, as illustrated in Figure 2 (Query type 1), the coding is cumulatively divided by whether tweets originated from the PILs or the stakeholders during the 11-week collection period. The detailed individual-level PIL data can be found in Appendix A.[6] There was an overall average of 104.9 PIL tweets and 1,426.6 stakeholder-based tweets per PIL. As shown in Figure 2, there is a general

trend in which the more messages a PIL publishes on its Twitter profile, the more other users will interact with its retweets, mentions, and mentions in retweets.

Figure 2. Lab tweets versus stakeholder tweets

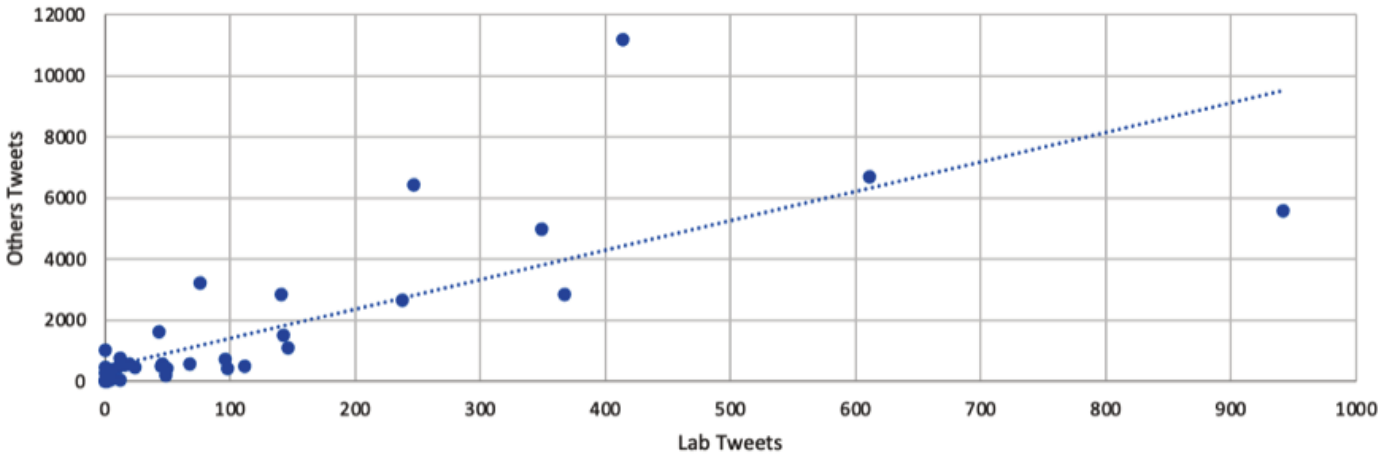
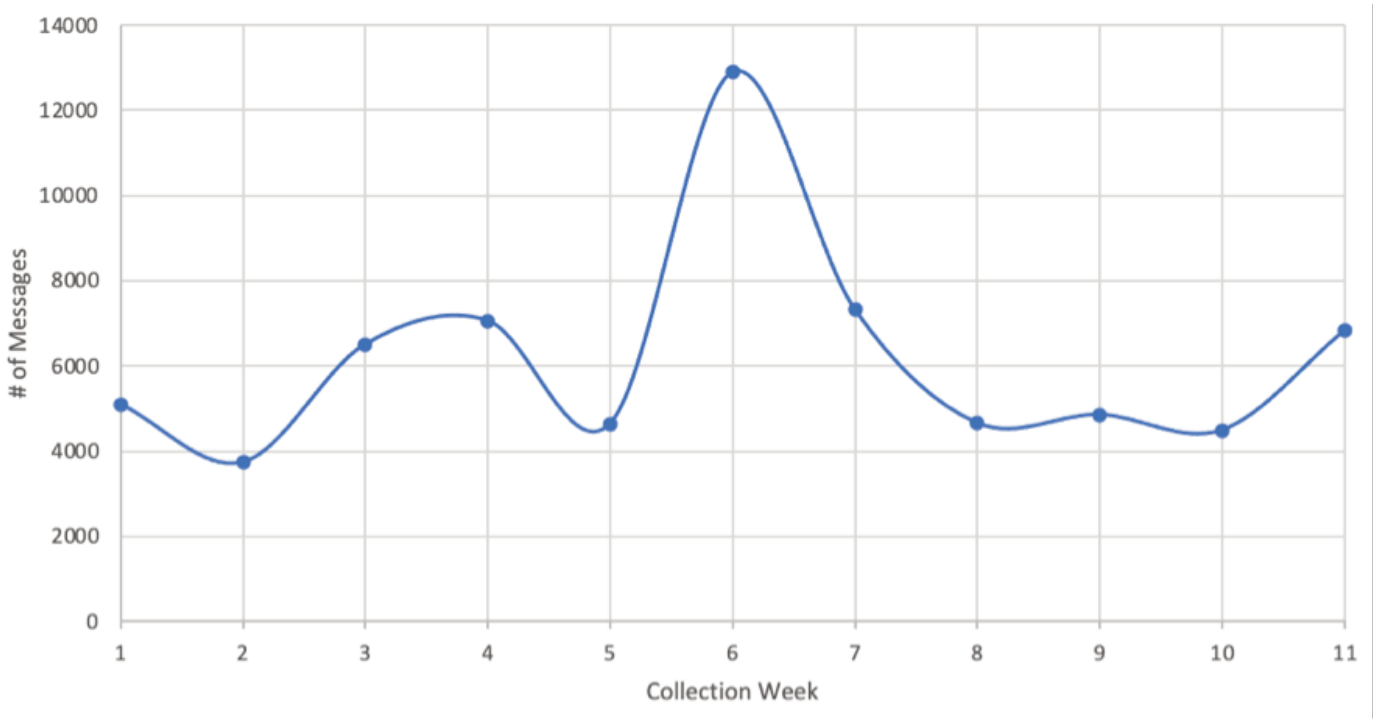


Figure 3 presents each collection week's cumulative weekly tweets (Query 2). Except for Week 6, discussed below, the intensity of message activity remained steady (4000–8000 messages per week).

Figure 3. Total Tweets per week



While the overall intensity of the Twitter activity remained consistent, a two-step cluster analysis of stakeholder Twitter activity identified different variances of intensity levels by PILs. Using SPSS 28.0, five distinct clusters of total tweeting level activities were found (Table 6). The most significant plurality (17) of PILs experienced an average Twitter activity of less than 390 tweets during the

study period. This was followed by 17 PILs, which registered a moderate activity level. The three remaining distinct clusters reported high levels of stakeholder engagement by eight PILs, all non-profit organizations. These results indicate that nonprofit-based PILs were among the most active Twitter users.

Table 6. Stakeholder tweeting activity

Cluster	Stakeholder Tweet range (Total)	Number of labs	Breakdown
1	1–390 tweets	17	The federal government (2) State government (1) Municipal government (6) Not-for-profit (3) University (5)
2	412–1623 tweets	16	Municipal government (4) Not-for-profit (4) University (8)
3	2623–3230 tweets	4	Not-for-profit (2) Municipal government (2)
4	4980–6711 tweets	4	Not-for-profit (4)
5	11,201 tweets	1	Not-for-profit (1)

A critical aspect of the PIL co-experience is the type of interaction of stakeholders with the policy labs and each other. Twitter differentiates these interactions, and the most used tweet types were mentions and mentions in retweets for both PIL and stakeholders, suggesting that discussions have gone beyond the initial tweet or stakeholders have retweeted and engaged others (Figures 4 and 5). The reply to tweet function was infrequently used by the PILs and stakeholders, suggesting the minimal use of direct conversations. The mean scores were compared between the nonprofit-based PILs with the government and university-based PILS using a *t*-test for independent samples for each type of interaction. The authors found *no statistical difference in the scores between the two groups.*

Figure 4. Total PIL tweets per tweet type per week

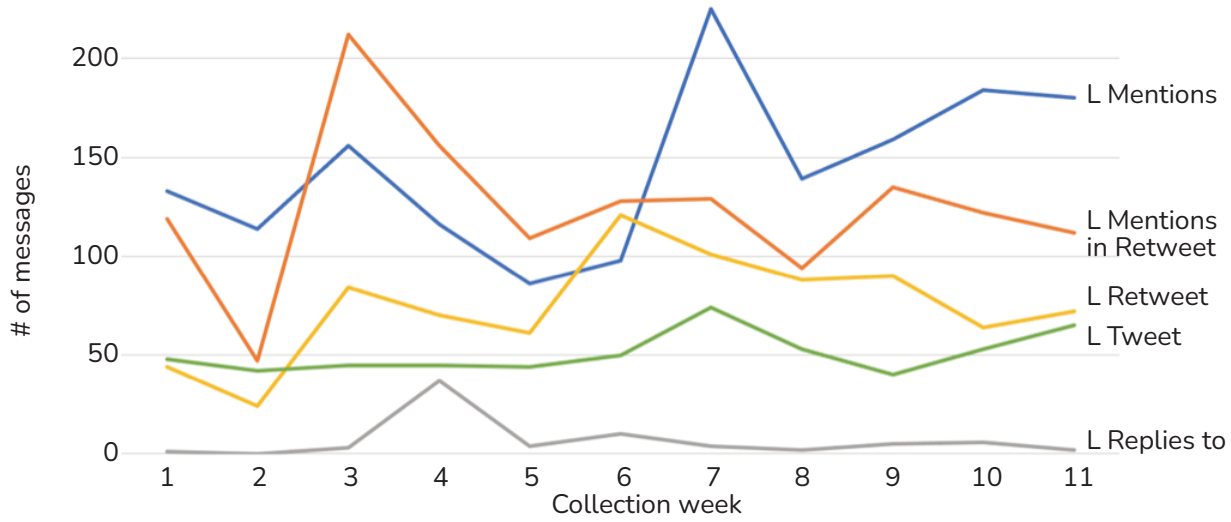
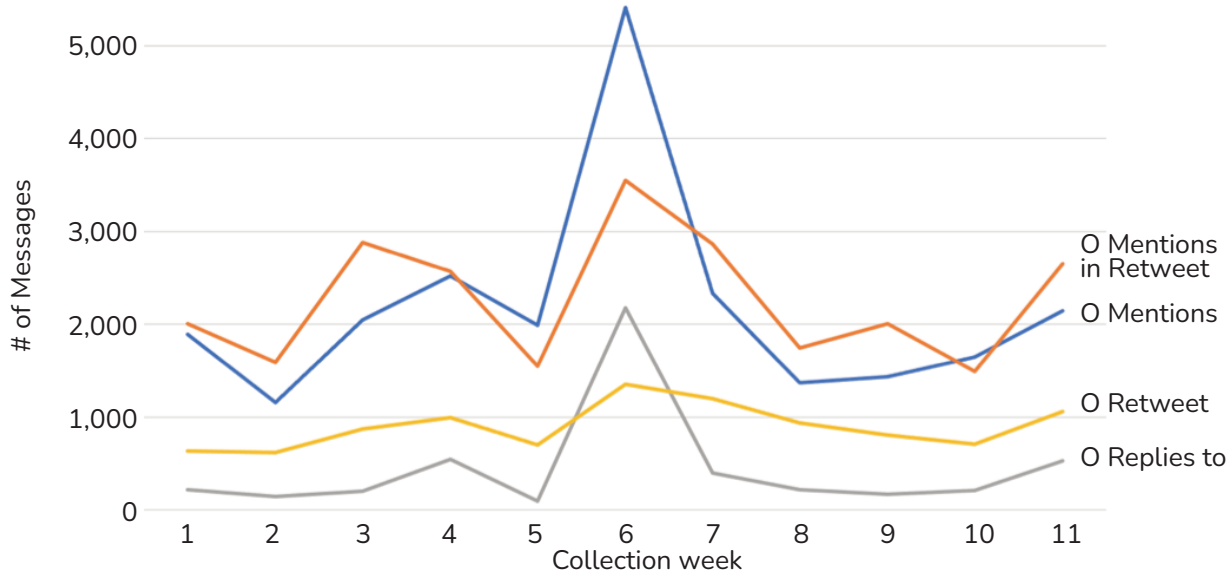


Figure 5. Total stakeholder tweets per tweet type per week



Weekly content codes for cumulative policy innovation labs

The weekly codes for all PILs (Query #3) present the number of times co-experience was present in the content of the tweets.[7] This temporal overview found that the most used codes for action co-experience were tweets about the lab's work or research activity and other shared information (Figure 6). For community-based co-experience (Figure 7), responses and conversations generated by stakeholders were the most frequently mentioned topics. The details of these tweets are discussed below. Of note in Figure 6 is the almost 1000 message peak of stakeholder tweets. This occurred when one lab was repeatedly mentioned in retweets concerning the demands for the resignation of Seattle Mayor Jenny Durkan due to her response to law enforcement's handling of the George Floyd protests in the city's Capitol Hill Autonomous Zone (Baker, 2020). The most consistently discussed information co-experience topics were COVID-19 and technology, followed by

Figure 6. Messages per action code per week

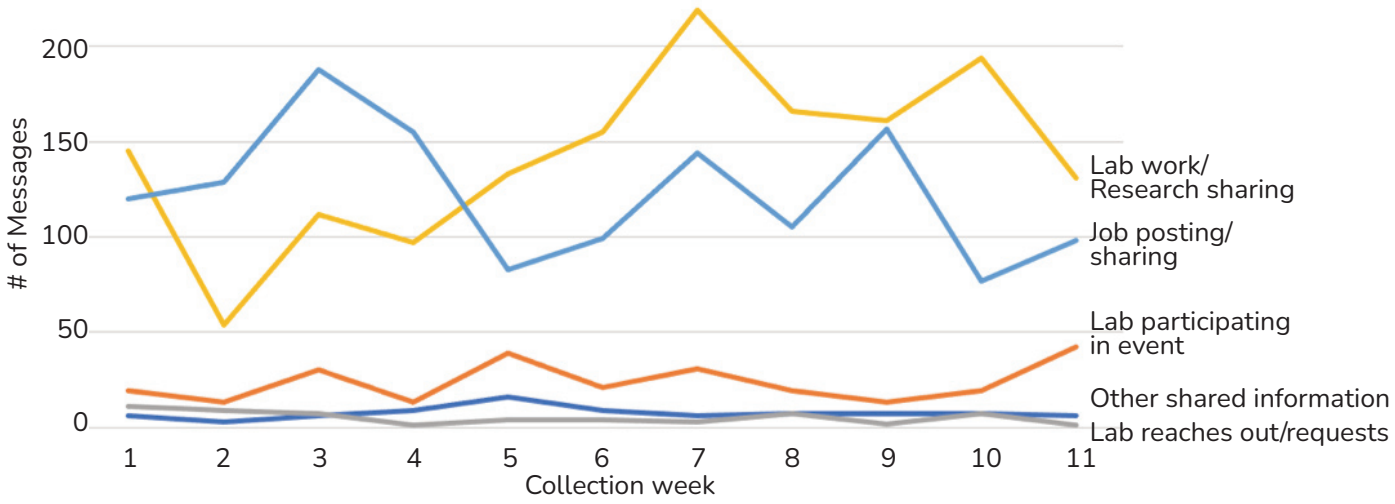
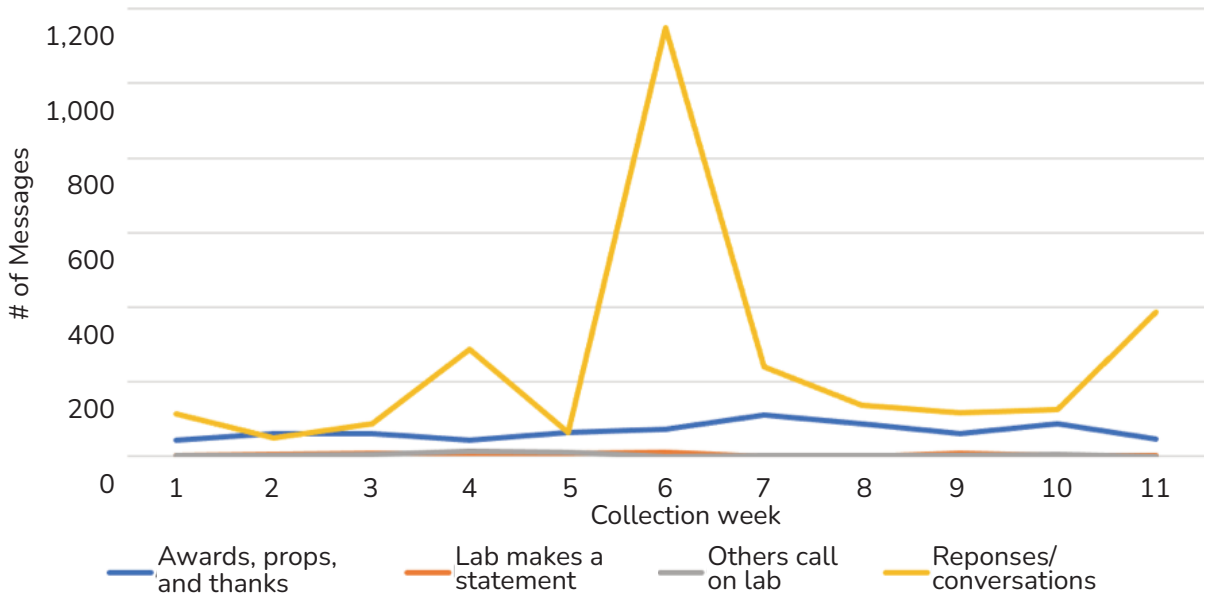
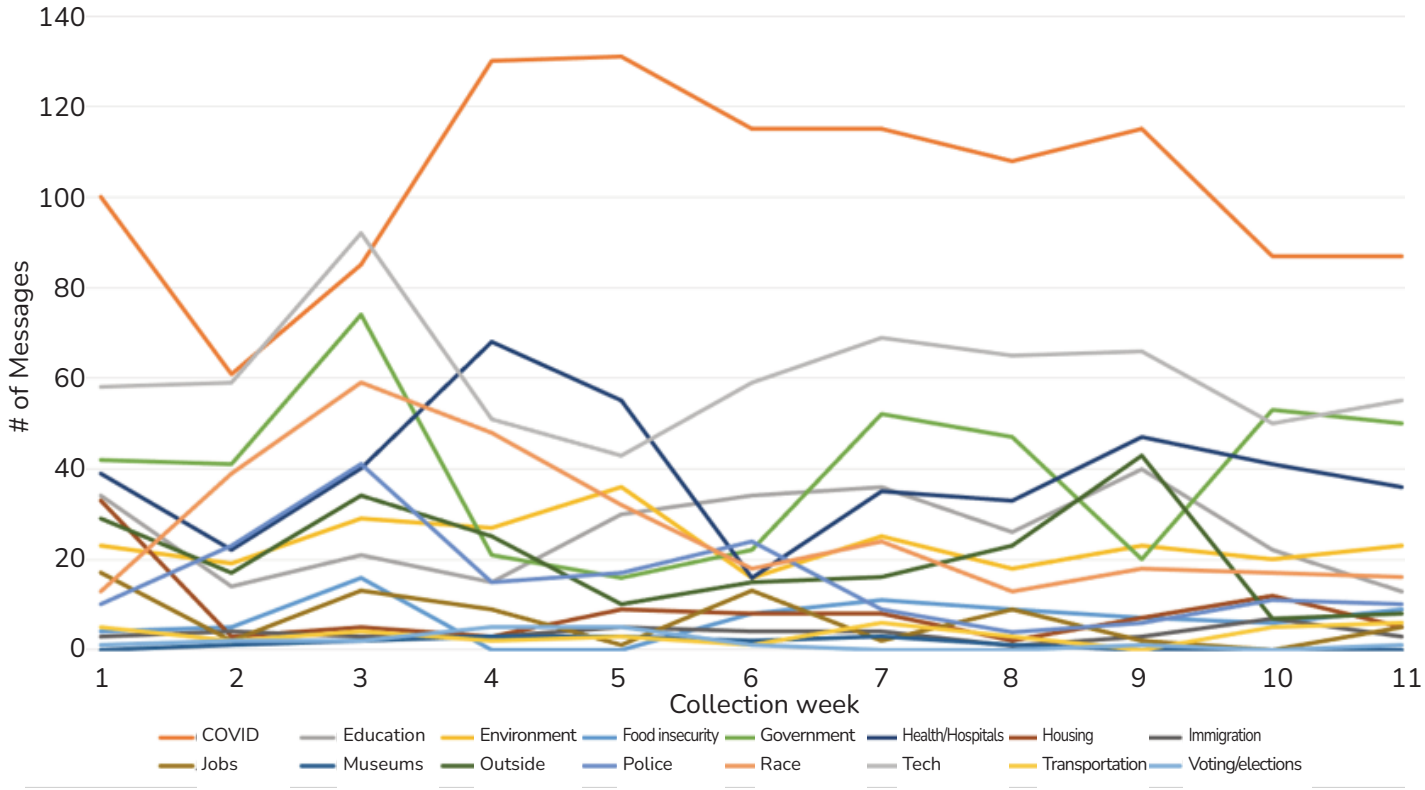


Figure 7. Messages per community code per week



health and government (Figure 8). Most of these discussions lasted the entire collection period. However, race inequality and police brutality were frequently raised at the end of June during the George Floyd demonstrations held across the United States.

Figure 8. Messages per Information Code per week



The aggregate results for the content of the three types of co-experiences by tweet type (Query 4) are identified in Table 7.[8] More detailed tables are listed in Appendix B. There was nearly an equal distribution of total Twitter activity (13,080 unique tweets) between the action (4534), community (4234), and information codes (4313). The two most prevalent action-related tweets were sharing PIL-generated research or information (*n* = 1851) and research and information from stakeholders (*n* = 1832). In both cases, tweets tended to be mentions and mentions in retweets by those who may not have been following the PIL, thus illustrating the PILs long-term influence. Events sponsored by PILs generated stakeholder engagement, especially with many mentioning their events. Job postings generated only a minimal amount of discussion. Most of the community-based tweets (*n* = 2929) were stakeholder responses and conversations. These tweets often amounted to chatter that could not be categorized in the action or information categories.

Table 7. Summary of tweet content

	Lab						Stakeholder					
	Tweet	Retweet	Mention	Mention in Retweet	Reply to	Total lab tweets	Retweet	Mention	Mention in retweet	Reply	Total Stakeholder Tweets	**Total**
Action	71	61	174	103	5	414	955	1500	1618	47	4120	**4534**
Community	8	13	37	24	3	85	248	2716	805	393	4162	**4247**
Information	77	21	132	57	1	288	657	1627	1667	73	4024	**4312**
Total	**156**	**95**	**343**	**184**	**9**	**787**	**1860**	**5843**	**4090**	**513**	**12,306**	**13,093**

While this Twitter activity was not necessarily focused on the PILs' business, it indicates an important sense of community. Very few tweets originated from PILs (*n* = 85), suggesting the importance of stakeholder-led interactions. Tweets acknowledging the work of the PILs were also prevalent. In contrast to the ambiguity of the community tweets, the authors categorized the information-based tweets into distinct categories and, in some cases, sub-categories. Nearly a quarter of the information tweets (*n* = 1029) were about the COVID-19 pandemic and covered issues such as business closings, case numbers, testing, scientific reports, masking, and social distancing. Secondly, there were information tweets about technological issues (e.g., artificial intelligence, algorithms, Big Data, the internet) (*n* = 707), followed by tweets about government (*n* = 443) and healthcare (*n* = 429). Given that the study period occurred during the police murder of George Floyd and the subsequent nationwide protests, there were many information-based tweets about race (*n* = 267) and the police (*n* = 166). As in the case of COVID-19, specific sub-categories were identified. Finally, categories were identified in information-based tweets about the environment, including clean energy and climate change.

DISCUSSION AND IMPLICATIONS FOR PUBLIC VALUE MANAGEMENT

Across the United States, many nonprofit organizations have branded themselves as policy innovation labs with the goal of improving public policy effectiveness, efficiency, and responsiveness by adopting more experimental and iterative approaches. They seek to bridge the gap between policy design and implementation by promoting a more collaborative, agile, and evidence-based approach to policymaking. Recent research found that co-design and, by extension, engaging stakeholders is central to many PILs achieving this goal (Wellstead & Howlett, 2022). Another type of stakeholder engagement recently identified in the public management literature is co-experience. The current analysis of PILs' and their stakeholders' use of Twitter demonstrates how the internet can be a discursive space that "engender[s] and coordinate[s] forms of experimentally and framed deliberation" (Coleman, 2012, p. 149), which can promote multivocal narratives, policy networking, and online deliberation—all central features of co-experience. As such, social media platforms, including Facebook, Twitter, and Instagram, are ideal forums for monitoring stakeholder co-experience (Talip & Narayan, 2020). They are inexpensive to maintain and have the potential to attract many followers. Social media has promised free and open channels between policy experts and affected actors (Healy, 1986).

This research focused on descriptively measuring U.S.-based PILs' Twitter activity during a historical time, namely the height of the COVID-19 pandemic. This research was born out of necessity because social media activity was one of the few channels of communication available to research PIL activity during the height of the pandemic due to lockdowns and travel restrictions for the authors. Still, it provided valuable insights into how these organizations operated and engaged stakeholders using social media.

Being active Twitter users paid off for the 42 active PILs on social media. They attracted stakeholder engagement, which led to co-experience responses. Through Twitter, PILs and their stakeholders engage in dialogue focusing on PILs' activities and provide a platform for stakeholders to share experiences about external events. These organizations employ Twitter to promote co-experience in three ways: intensity, content, and type. Critical to understanding co-experience were criteria initially developed in the nonprofit sector by Saxton and Lovejoy (2012) to map the content of tweets—action, community, and information. Additionally, three types of tweets—retweets, mentions, and mentions in retweets—originating from stakeholders illustrate differences in deliberation. Retweets usually represented a direct response to a PIL's tweet. Mentions indicated that stakeholders were bringing others into the discussion. Finally, mentions-in-retweets were "digital storytelling" that extended outside the PIL's direct Twitter network, often leading to other discussions.

These findings contribute a new perspective to nonprofit social media research by applying the public management concept of co-experience and its role in public value management to studying PILs' more prevalent co-design activities. As outlined in Table 8, these complementary approaches are distinct in their timeline, type of engagement, tools, focus, motive, public value outcome, and policy relevance. The ongoing, open nature of social media engagement via Twitter contributes to a PIL's public value. Those with active Twitter accounts communicate beyond their existing networks and programs to reach and engage potential new audiences by providing a discursive space for stakeholder engagement.

Table 8. Comparison of co-design and co-experience

	Co-design	Co-experience
Timeline	Specific often project-based	Ongoing
Stakeholder engagement	Selective, limited, focus	Open, many, unspecified
Tools	Human-centred design	Social media (e.g., Twitter)
Focus	Organizations Networks	Mini-publics
Motive	Implicit	Externality
Public value outcome	Service delivery and efficiency	Trust & legitimacy Adding value to the public sphere and deliberative capacity
Policy relevance	Policy formulation Program delivery Improved policy design	Agenda setting

Further research is planned to determine the motivations for PIL Twitter use. This will involve engaging two study populations through key informant interviews: those responsible for managing social media accounts in highly active PILs and the managers of PILs with little or no social media activity. In aggregation, the authors found that PILs' content was evenly split between action, community, and information. The study design did not include an analysis of the impact of the co-experience activity; however, a future case study could identify PILs' motivations for each of these strategies and stakeholder impact. Such a future study could ascertain whether PILs know the direct and indirect impacts of their Twitter activity, mainly through mentions and mentions in retweets. Do PILs perceive themselves as promoting deliberative democracy via social media? Informing stakeholders about COVID-19-related issues was an important role played by PILs during the summer of 2020. An important finding was that nonprofit-based PILs were the most active Twitter users, which raises further questions about their motivation for engaging in social media activity. Replicating this research would identify if PILs continue to inform stakeholders about other pressing issues. Another critical issue for PILs active on Twitter was Elon Musk's October 2022 acquisition of the company and renaming of it to "X" in July 2023. In response, many users closed their accounts, curtailed their activity, or migrated to similar platforms such as BlueSky or Mastodon. However, eight in 10 active adult Twitter users (between January 1 and April 14, 2022) remain active users (Chapekis & Smith, 2023). Subsequent analysis found that Twitter/X activity in the United States remains higher in 2024 than during the pandemic, with 126 million active users representing 42.3 percent of all internet users. Central to this analysis was the importance of the high repost-to-post ratio (Global Statistics, 2024). According to Kidambi (2024), these ratios have been higher than in past years. Crucially, Fiesler (2023) found that users migrating to other platforms will likely face content loss, fragmented communities, broken social networks, and shifted community norms. Thus, despite what are unsettling changes to some, the rebranded X will remain, for the foreseeable future, the platform where users can engage with nonprofit organizations.

These findings provide a starting point for developing hypotheses about the inactivity of PILs with minimal or no social media presence. Further research may find that social media activity is a valu-

able indicator of differentiating self-identifying PILs that may function more like think tanks, consulting organizations, or research institutes than genuine PILs.

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NOTES

1. The platform changed ownership in July 2023, and is now known as "X." Given that this study predates its change in ownership and renaming, the authors refer to this social media platform as "Twitter" throughout this article.
2. Further coding details are provided in Appendix A and provide detailed distribution of messages that are present in the action, community, and information codes. The files represent each individual collection week for a specific PIL. For example, there were a total of 82 job posting messages, which occurred throughout the entire study, and these were present in 54 files of PIL collection weeks.
3. If there were repetitions of the same message, which often happened due to multiple Twitter users retweeting the same message, the first occurrence was coded. If there was a duplicate message in more than one collection week, the message was not coded again in all weeks it was present.
4. The data was collected by Wellstead and the coding was undertaken by Schmidt and Wellstead to ensure intercoder reliability.
5. Queries are a set of search functions in NVIVO that allow the user to cross-reference their data using different attributes of the data set and allow for multiple analyses to be run on the same data set with different sets of attributes or smaller sections of the data.
6. During the data collection period, six PILs did not tweet. However, they did have a presence from the stakeholder Twitter activity (retweets, mentions, and mentions in a retweet) on their Twitter profiles.
7. Appendix A shares the data for each unique code.
8. The data for each individual code is available in Appendix A.

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APPENDIX A
TOTAL NUMBERS OF TWEETS

Lab	1-Jun	9-Jun	16-Jun	23-Jun	30-Jun	7-Jul	14-Jul	21-Jul	28-Jul	5-Aug	13-Aug	Lab total
Beta NYC	28	286	1204	293	407	263	122	36	68	65	109	2,881
CA Policy Lab	79	22	139	36	15	46	88	101				526
CIERP Fletcher	57	57	40	9	7	7	210	51	45	100	44	627
CITRIS Policy Lab	5		38	25	53	36	67	116	6	42	74	462
Civic Impact jhu	13	69	9	13	89	119	469					781
CO Health Inst	30	49	74	52	54							259
Duke CPIGH	24	101	143	80	95	155	71	131	251	154	25	1,230
Global Dev Lab	88	225	217	272	444	185	379	249	335	279	798	3,471
Gov Lab PH	48											48
Green Harvard	12	19	50	8	12	9	67	125	196	62	19	579
HHSCTO office	130	57	123	245	183	14	95	182	206	196	228	1,659
Immigration Lab	147	8	48	76	3	36		2	6	20	182	528
Innovate RI	237	58	111	54	74	80						614
LA Innovates	2			4								6
Lab OPM	5							2	9	8		24
MIT CoLab	95	9	50	102	130	91	345			18		840
Nebraska OCIO			110	45	11	31	39	16				252
NRPA news	378	303	1236	290	375	631	1052	897	959	429	239	6,789
NYC CTO	337	305	284	1251	1146	1554	577	80	565	116	122	6,337
NYC Opportuity	121	15	125	81	36	43	107					528
Policy Lab CHOP	338	101		1983			469	790	663	731	254	5,329
Policy Sciences							121					121
Public Policy Lab	13	2	36		36	159	124	12	12			394
Research LSU	25							5				30
Results 4 America	168	126	582	319	212	684	981	419	412	456	2543	6,902
Rutgers EOAS	25	79	102	33	25	60	63	72	72	16	47	594
SACOG	48	4	20	1	17	36	6	14	19	53	5	223
SF Human Services	865	226	86	169	57	288	216	187	183	606	109	2,992
SF MOCI			13	5								18
SILC at CU	168	163	41	2	71	20						465
Sun Foundation	128	188	119	217	17	12	116	127	84	49	609	1,666
sustain ILLINOIS	16	39	63	81	107	21	11	2	1	140	74	555
sustainable pdx	8			7								15
Tech Policy Lab	56	4	8	1	7	2	10	10	3	86	271	458
the gov lab	1087	876	965	1	545	459	415	569	542	469	585	6,513
The Lab DC	9	15	4	1				3	13	74	2	121
Tigers Go Green	34	25										59
Uchi Urban Labs	32	83	136	43	162	111	89	103	78	61	116	1,014
UMN Sustain			6	1				11	21	16	42	97
What Works Cities	128	222	330	341	349	7749	1023	426	112	603	333	11,616
Youth Policy Lab	116		17									133
Week total	5,100	3,736	6,529	6,141	4,739	12,901	7,332	4,738	4,861	4,849	6,830	67,756

APPENDIX B

Table 1. Detailed summary of action-based tweets

	Lab						Stakeholder					
Action Code	Tweet	Retweet	Mention	Mention in Retweet	Reply to	Total Lab Tweets	Retweet	Mention	Mention in Retweet	Reply	Total Stake-holder Tweets	Total
Job posting/sharing	2	1	2	10	0	15	68	82	46	4	200	**215**
Lab participates in an event	8	7	12	12	0	39	119	227	192	0	538	**577**
Lab says a statement	2	0	2	1	1	6	20	12	20	0	52	**58**
Lab work/research sharing	18	43	90	38	4	193	386	969	815	28	1658	**1851**
Other shared action-related information	41	10	68	42	0	161	362	750	545	15	1672	**1833**
Total	**71**	**61**	**174**	**103**	**5**	**414**	**955**	**1500**	**1618**	**47**	**4120**	**4534**

Table 2. Detailed summary of community-based tweets

	Lab						Stakeholder					
Community Code	Tweet	Retweet	Mention	Mention in Retweet	Reply to	Lab Total	Retweet	Mention	Mention in Retweet	Reply	Stake-holder Total	Total
Awards, props, and thanks	4	11	28	20	1	64	172	596	286	47	1101	**1165**
Lab says a statement	3	1	3	2	1	10	28	14	18	1	61	**71**
Others call on lab	0	0	0	0	0	0	4	30	33	15	82	**82**
Responses/conversations	1	1	6	2	1	11	44	2076	468	330	2918	**2929**
Total	**8**	**13**	**37**	**24**	**3**	**85**	**248**	**2716**	**805**	**393**	**4162**	**4247**

Table 3. Detailed summary of information-based tweets

	Lab						Stakeholder					
Information Code	Tweet	Retweet	Mention	Mention in Retweet	Reply to	Total Lab	Retweet	Mention	Mention in Retweet	Reply	Stake-holder Total	Total
COVID	11	7	27	16	0	61	143	381	441	11	976	**1037**
Businesses/activities	0	2	3	0	0	5	5	44	38	0	87	**92**
Cases/testing	3	0	3	0	0	6	19	52	66	3	140	**146**
Data/science/information	1	1	7	7	0	16	38	77	108	1	224	**240**
Masks/social distancing	1	0	4	0	0	5	15	51	42	1	109	**114**
Medical aspects	1	1	0	0	0	2	6	16	26	1	49	**51**
Regulations/policy	2	1	2	0	0	5	12	26	33	2	73	**78**
Societal issues/recovery	3	2	8	9	0	22	48	115	128	3	294	**316**
Development	8	1	6	3	0	18	25	26	25	8	84	**102**
Education	2	1	9	3	0	15	40	80	144	2	266	**281**
Education	1	1	3	2	0	7	21	28	48	1	98	**105**
COVID (in person)	0	0	3	0	0	3	6	23	60	0	89	**92**
Extracurriculars	0	0	2	0	0	2	3	5	10	0	18	**20**
Remote learning	0	0	1	1	0	2	2	12	8	0	22	**24**
Reopening schools	1	0	0	0	0	1	8	12	18	1	39	**40**

Table 3. (continued)

	Lab						Stakeholder					
Information Code	Tweet	Retweet	Mention	Mention in Retweet	Reply to	Total Lab	Retweet	Mention	Mention in Retweet	Reply	Stake-holder Total	Total
Environment	17	1	18	4	1	41	43	70	87	17	217	**258**
Environment	11	1	11	2	1	26	26	58	59	11	154	**180**
Clean energy	2	0	2	1	0	5	3	4	6	2	15	**20**
Climate change	4	0	5	1	0	10	14	8	22	4	48	**58**
Food insecurity	1	0	2	0	0	3	30	18	23	1	72	**75**
Government	3	1	17	4	0	25	60	153	202	3	418	**443**
Health/hospitals	5	3	16	5	0	29	75	173	147	5	400	**429**
Housing*	0	0	3	0	0	3	5	52	31	0	88	**91**
Immigration	0	0	0	1	0	1	6	13	21	0	40	**41**
Jobs	1	2	1	2	0	6	12	37	15	1	65	**71**
Museums*	0	0	3	1	0	4	0	6	5	0	11	**15**
Outside	0	0	0	2	0	2	1	23	20	0	44	**46**
Parks	1	0	2	1	0	4	30	99	46	1	176	**180**
Police	1	1	2	2	0	6	14	93	52	1	160	**166**
Police	0	0	0	0	0	0	8	39	28	0	75	**75**

Table 3. (continued)

	Lab						Stakeholder					
Information Code	Tweet	Retweet	Mention	Mention in Retweet	Reply to	Total Lab	Retweet	Mention	Mention in Retweet	Reply	Stake-holder Total	Total
Crimes/prison	0	0	2	0	0	2	0	19	10	0	29	**31**
Defund the police	0	0	0	2	0	2	3	19	7	0	29	**31**
Gun violence	0	1	0	0	0	1	1	5	2	0	8	**9**
Police violence	1	0	0	0	0	1	2	11	5	1	19	**20**
Race	6	2	6	5	0	19	57	94	91	6	248	**267**
Race	1	0	2	0	0	3	14	14	21	1	50	**53**
Black Lives Matter	0	0	1	1	0	2	9	23	18	0	50	**52**
Equity actions	5	2	3	4	0	14	34	57	52	5	148	**162**
Research	0	0	1	1	0	2	6	15	18	0	39	**41**
Technology	18	2	19	7	0	46	102	273	272	14	661	**707**
Technology (general)	8	0	9	2	0	19	31	97	107	8	243	**262**
Data	10	2	10	4	0	26	70	162	149	6	387	**413**
Internet	0	0	0	1	0	1	1	14	16	0	31	**32**
Transportation	2	0	0	0	0	2	7	14	14	2	37	**39**
Voting/elections	1	0	0	0	0	1	1	7	13	1	22	**23**
Total	**77**	**21**	**132**	**57**	**1**	**288**	**657**	**1627**	**1667**	**73**	**4024**	**4312**