



Visualizing the Evolution of Discourse in Cannabis Ballot Initiatives

Socius: Sociological Research for a Dynamic World
 Volume 9: 1–3
 © The Author(s) 2023
 Article reuse guidelines:
sagepub.com/journals-permissions
 DOI: 10.1177/23780231231205195
srd.sagepub.com



Burrel Vann, Jr.¹

Abstract

The past decade has seen numerous efforts to enact cannabis policy reform at the state level. This visualization captures discursive shifts in statewide ballot initiatives devoted to legalizing cannabis for recreational use between 2012 and 2022. The topics discussed in ballot initiatives exhibited substantial variability over time, with discussions of drug use consequences and legislative processes becoming more dominant in later years. The evolution of discourse in ballot initiatives has important implications for our understanding of the impact of language on support for policy change.

Keywords

cannabis, discourse, text networks, legislation, evolution

Statewide ballot initiatives have become the common mechanism for cannabis policy reform (Anguelov and McCarthy 2018; Pacula and Smart 2017), with varying levels of success. In studying initiatives, however, it is important to investigate the impact of ballot language and how this language has evolved over time.

Despite research highlighting the evolution of discourse about marijuana in news media (Dufton 2017; Mosher and Akins 2019; Newhart and Dolphin 2019), few studies have investigated discourse in legislation or initiatives. Given the frequency with which ballot initiatives are used in direct democratic states, there will likely be continued interest in the effects of ballot language on policy change in American society. How stable have the topics in cannabis ballot initiatives been over time, and, how much impact could these topics have on policy outcomes?

I rely on text data from cannabis legalization ballot initiatives between 2004 and 2022, which come from Ballotpedia (2022) (confirmed using the secretary of state Web site for each state). In this visualization, I take advantage of computational techniques, specifically text networks (Bail 2016), to map the discursive field of cannabis initiatives.¹ The text network graph (Figure A1 in the Appendix) depicts words (nodes) from states (edges), clustered into distinct topics

¹The community detection algorithm (in the *textnets* package in R) relies on level 2 clustering to organize topics. Because of this, I exclude years in which only one state had a cannabis initiative on the ballot.

across the discursive field. These words ultimately cohere into seven latent topics: legislative processes, consequences of using cannabis, regulating revenue, legal restrictions on possession, restrictions on manufacturing, spatial/land issues, and all other miscellaneous concerns.

A closer reading of the words within each cluster suggests latent topics. Figure 1 depicts changes in attention to each topic (in terms of percentage of text covered by the words within each topic) between 2012 and 2022.² Overall, we see that in earlier years, words denoting restrictions on manufacturing were most prevalent. Yet in recent years, the amount of space devoted to this topic has dramatically decreased. Moreover, language related to restrictions on possession, spatial issues, and miscellaneous topics remained relatively stable until 2022. Conversely, language regarding regulating revenue has experienced a drastic increase—taking up a small percentage of attention in legislation until 2018 and constituting more than one

²Years in which only one state had a cannabis initiative on the ballot were excluded from the analysis. Here, the turquoise cluster of topics is removed but has overlap with words that cohere in the “legislative processes” topic.

¹San Diego State University, San Diego, CA, USA

Corresponding Author:

Burrel Vann Jr., San Diego State University, School of Public Affairs, 5500 Campanile Drive, AH-4117, San Diego, CA 92182, USA
 Email: bvannjr@sdsu.edu



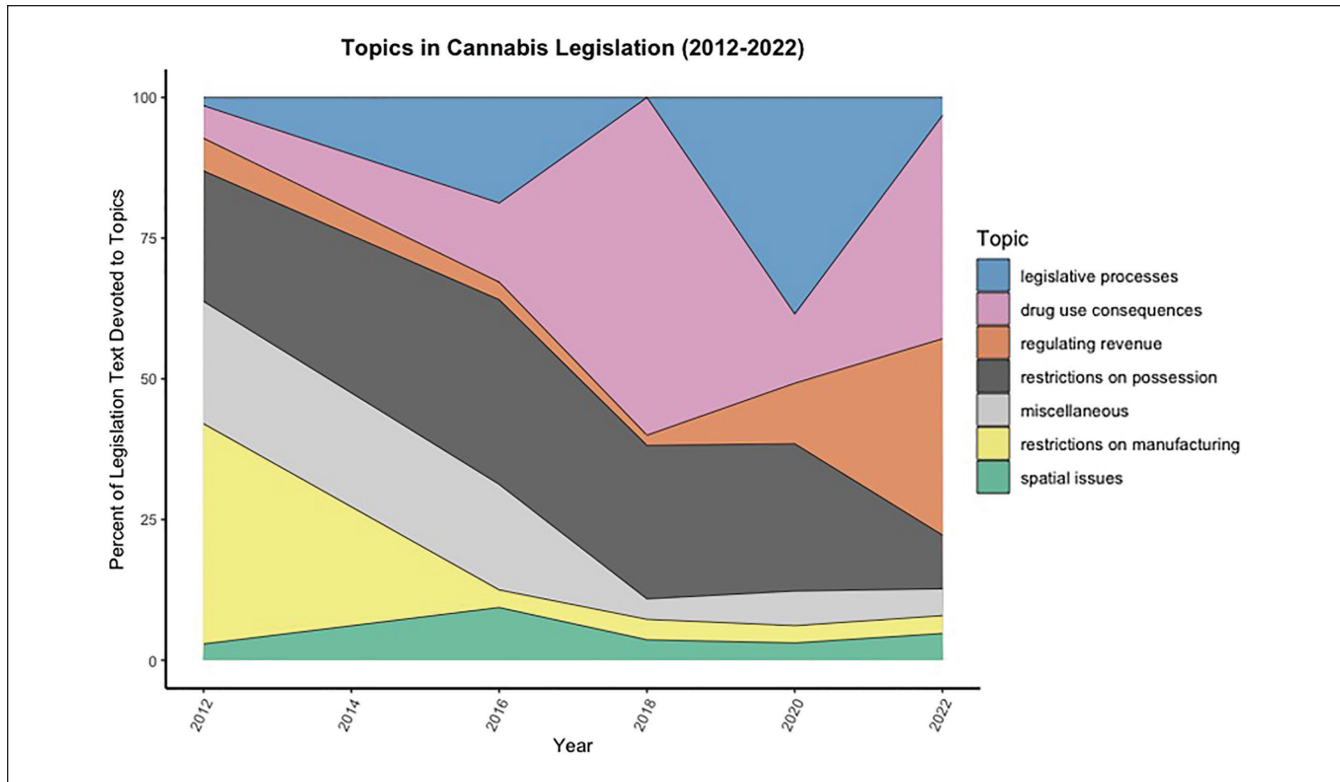


Figure 1. Percentage of discourse in cannabis legalization initiatives devoted to topics, 2012 to 2022.

Source: Data are from Ballotpedia.

Note: The percentage is shown on the left. Colors represent distinct topics: legislative processes (cerulean), drug use consequences (pink), regulating revenue (orange), restrictions on possession (black), miscellaneous (gray), restrictions on manufacturing (yellow), and spatial issues (green).

quarter of coverage in 2022—whereas discussion of legislative processes and the consequences of drug use has experienced variable attention (both growth and decline) over time. This suggests that topical engagement on recent cannabis ballot initiatives is variable rather than stable.

This visualization demonstrates that ballot initiatives to legalize the recreational use of cannabis exhibit considerable variation related to the discourse used. Although a great deal of attention has been given to the importance of fiscal or economic arguments or frames on policy change in other arenas (see Gottschalk 2015 for examples related to criminal justice reform), we see that these arguments do not dominate in the case of cannabis legislation. Rather, states exhibit substantial variability in the frames deployed in ballot initiatives to reform cannabis policy. Such trends highlight the need to

investigate how alternative frames might also contribute to policy change.

The patterns depicted in this visualization illuminate a potential relevant factor—discursive shifts—for the success or failure of ballot initiatives and policy reform. The variability in attention to topics, however, highlights the difficulty in drawing conclusions related to the discursive field of cannabis legalization initiatives. What is more, certain topics might be increasingly relevant for some states (at certain periods) over others.

Finally, the degree of fluctuation in cannabis initiatives across a 10-year period, these results might be indicative of additional discursive shifts (e.g., in news or media) that may also have implications the ways in which the cannabis issue is discussed, perceived, and ultimately voted on.

Appendix

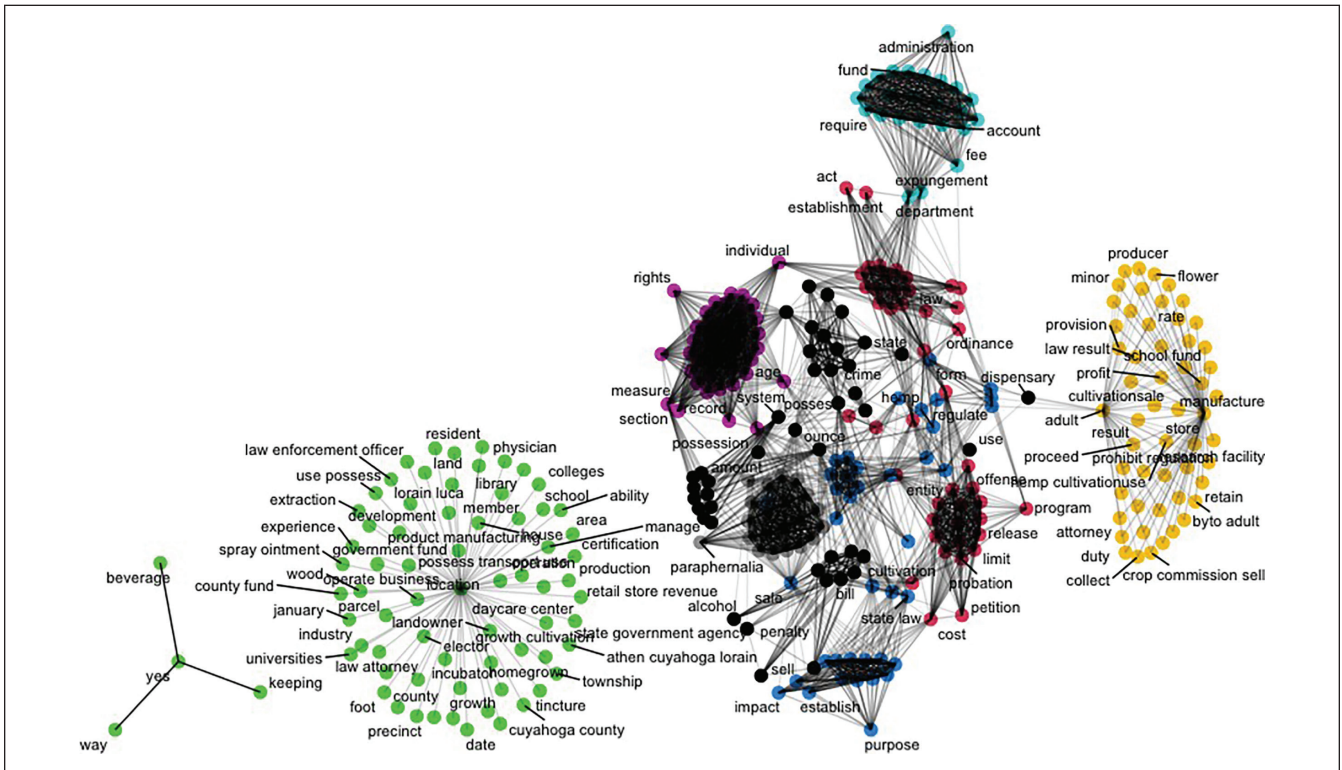


Figure A1. Text network of discourse in all statewide cannabis legalization ballot initiatives, 2004 to 2022.

Note: Colors indicate topical clustering (using the Louvain clustering algorithm in the textnets package in R). Close reading of the clusters resulted in seven distinct topical areas (across eight colored clusters).

ORCID iD

Burrell Vann Jr.  <https://orcid.org/0000-0003-3066-5815>

References

- Anguelov, Nikolay, and Michael P. McCarthy. 2018. *From Criminalizing to Decriminalizing Marijuana: The Politics of Social Control*. Lanham, MD: Lexington.
- Bail, Christopher Andrew. 2016. "Combining Natural Language Processing and Network Analysis to Examine How Advocacy Organizations Stimulate Conversation on Social Media." *Proceedings of the National Academy of Sciences* 113:11823–28.
- Ballotpedia. 2022. "Marijuana on the Ballot." Retrieved October 20, 2023. https://ballotpedia.org/Marijuana_on_the_ballot#tab=By_year.
- Dufton, Emily. 2017. *Grass Roots: The Rise and Fall and Rise of Marijuana in America*. New York: Basic Books.
- Gottschalk, Marie. 2015. *Caught: The Prison State and the Lockdown of American Politics*. Princeton, NJ: Princeton University Press.
- Mosher, Clayton J., and Scott Akins. 2019. *In the Weeds: Demonization, Legalization, and the Evolution of U.S. Marijuana Policy*. Philadelphia: Temple University Press.
- Newhart, Michelle, and William Dolphin. 2019. *The Medicalization of Marijuana: Legitimacy, Stigma, and the Patient Experience*. New York: Routledge.
- Pacula, Rosalie Liccardo, and Rosanna Smart. 2017. "Medical Marijuana and Marijuana Legalization." *Annual Review of Clinical Psychology* 13:397–419.

Author Biography

Burrell Vann Jr. is an assistant professor in the School of Public Affairs at San Diego State University. His research tackles questions central to political and cultural change. His current projects investigate social structural influences on policy change, the evolution of media discourse about marijuana, the effect of framing on policy support, and developing novel measures of direct democracy.