



Local news at a distance: psychological distance and the formation of news deserts

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Abstract

Introduction. News deserts, geographic areas with little local news or news organisations, pose challenges to democratic processes. However, individuals' attention to news may vary depending on how much they care about local matters. As an initial exploration of these dynamics, this paper proposes a framework that links news deserts to psychological distance through Construal Level Theory (CLT).

Method. This study conducts (a) the literature review focused on news deserts and CLT and (b) case studies of city co-mentions in news to develop the framework that considers both symbolic and physical aspects of local news.

Analysis. City co-mention network analysis illustrates how news can reduce psychological distance by make them feel close, whereas news deserts expand distance, rendering issues more abstract.

Results. News deserts emerge not only from the absence of news organisations but also from a *psychological void*, in which weak or missing linkages isolate places and diminish residents' engagement with them. Our case study of crime and sports news demonstrates contrasting effects of psychological distance on news attention.

Conclusion. Linking news deserts to psychological distance opens new research opportunities: measuring psychological distance, reconceptualising news deserts psychologically, and connecting news to audience perceptions.

Introduction

News deserts, geographical areas with little or no local news, pose significant challenges to civic engagement and democratic life (Abernathy, 2023). Local news not only documents events but also shapes how people perceive space and place by connecting geographic locations through stories, shaping public perceptions of location, influence community identity, and affect how citizens interpret the social, political, cultural dynamics of their communities (Hu et al., 2017).

Spatial representations of news, however, are not only physical. They are also psychological and temporal, shaped by cultural, cognitive, and symbolic associations (Rentfrow & Jokela, 2016; Ho, 2021). Information science research shows how places are encoded in information infrastructures, shaping how they are accessed and understood (Su et al., 2018; Purves et al., 2019; Söderström, 2023). Previous studies in information science have treated news deserts as a problem of information deserts (i.e., material pre-conditions of information inequality), which can be mapped across geographic, thematic, temporal, and other dimensions to reveal patterns of underreporting, geographic bias, and thematic concentration (Lee & Butler, 2019; Wang et al., 2025a).

While such approaches help identify where news deserts exist, this paper shifts the focus toward conceptualising how news deserts are experienced and shaped by individuals. This shift is motivated by the fact that people's perceptions of news from a particular location and time can vary significantly depending on their values and contexts (e.g., perceptions of news about a crime in an adjacent city may differ from those about a farmer's market in the same city). Building on these insights, we position psychological distance as a key factor shaping and transforming news deserts, enabling information science to link structural informational inequalities to human experiences of relevance and engagement.

We argue that news does not only encode geographic closeness but also constructs conceptual and thematic proximity. Instead of viewing local news coverage as a collection of separate, isolated, location-based reports, we conceptualise local news as a mechanism that symbolically connects places through shared stories and narratives. News stories frequently mention multiple cities together because they share events, similar patterns, or broader concerns. These co-mentions create links between places that can shape and change perceived proximity, relevance, and local identity. By using city co-mention networks, constructed from cities that co-appear within the same news articles, from an Alabama news outlet, we illustrate how news deserts can be understood and how places can be positioned relative to one another within the local information ecology. We develop this framework by applying Construal-Level Theory (CLT)'s dimensions of psychological distance to our observations of how places appear together in news coverage.

Background

News deserts as information problems

The concept of news deserts emerged from concerns about the decline of local journalism, such as a decreasing number of local newspaper organisations (Abernathy, 2023). Prior research in information science has framed news deserts as a form of information desert, a condition where the provision of local information is insufficient to support civic life and community engagement (Lee & Butler, 2019; Wang et al., 2025a, Wang et al., 2025b). This framing emphasises the structural nature of news provision beyond the mere absence of news and news organisations, highlighting geographic biases, patterns of underreporting, and thematic concentration in local news. While such approaches help explain and theorise news deserts in relation to other community characteristics, it remains unclear how disparities in news creation and consumption across local communities interact with individuals' perceptions of different types of news and their associated geographies.

Psychological distance and construal-level theory

The concept of psychological distance provides a means to bridging the structural aspects of local news (or local information) with human perception. It refers to the subjective sense of how close or far an event, object, or issue feels from one's immediate experience (Trope & Liberman, 2010). Anchored in '*here and now*,' psychological distance is theorised across four primary dimensions (Figure 1): temporal (time), spatial (place), social (relationship), and hypothetical (likelihood of occurrence) (Trope & Liberman, 2010; Elder, Schlosser, Poor, & Xu, 2017). Thus, the closer an event is to one's direct experience, the lower its psychological distance, and the more intensely it is likely to be felt. Likewise, a bigger psychological distance most likely has weaker emotional responses.

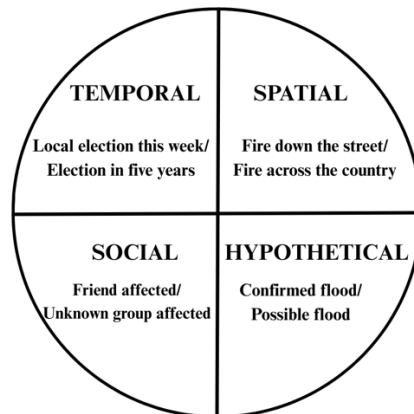


Figure 1. The four dimensions of psychological distance and examples.

Construal-level theory, proposed by Trope & Liberman (2010), explains how psychological distance shapes people's cognition, and affect. According to CLT, high psychological distance is associated with high-level construal, in which individuals represent events abstractly and focus on superordinate features (e.g., thinking of an activity as 'having fun'). Low psychological distance, by contrast, is linked to low-level construal, where individuals represent events concretely and focus on detailed, context-specific features (e.g., '*playing outside*'). In other words, psychologically distant events are interpreted through generalised and abstract thinking, while proximal events are construed concretely and vividly (Trope & Liberman, 2010).

Psychological distance also shapes the types of emotions people experience. Basic emotions such as fear, sadness, and anger are typically associated with low distance, while self-conscious emotions, such as hope, shame, or pride, tend to be associated with higher distance (Williams, Stein, & Galguera, 2014). For example, '*shame*' is considered more abstract than '*guilt*,' because shame arises from a broad failure to align with moral ideals, whereas guilt stems from a specific and concrete behavioral violation (Tan & Hsu, 2023; Hamilton et al., 2014). These patterns suggest that psychological distance not only affects how people think about events but also the intensity and type of emotional responses they generate.

Psychological distance also affects civic attitudes: at low distance, evaluations are grounded in local context and influenced by discussion partners, whereas at higher distance, they rely more on abstract ideological values (Ledgerwood et al., 2008). In the context of news deserts, the absence of local news may push important issues into greater psychological distance, making them feel less personal and more likely to be processed through ideological frames. CLT further shows that people are most responsive to cues that are close to the self, *here and now* (Trope & Liberman, 2010). Even minimal proximity cues, such as naming neighborhoods or highlighting local officials, can significantly increase perceived relevance (Williams, Stein, & Galguera, 2014). Local outlets may provide such concrete anchors, but their absence could shift information toward abstraction (e.g., '*governance*' or '*city planning*'), weakening emotional salience and civic engagement.

Relating news deserts to psychological distance

In the context of news deserts, psychological distance may not only shape people's emotional responses to news but also be shaped by the thematic framing of news coverage. News does more than encode geographic proximity; it constructs relationships across topics such as politics, economics, and sports. For example, two cities may be represented as close in sports coverage due to frequent reporting on football rivalries, while appearing distant in economic coverage if their economies are weakly linked. In this way, thematic co-mentions in local news may create a contextual layer of psychological distance that operates alongside spatial proximity.

This suggests that, by examining psychological distance between cities, it is possible to construct not only a geographic but also a conceptual landscape of places as they are represented in news. In other words, the concept of news deserts can be extended to include areas characterised by high psychological distance, such as cities that are rarely co-mentioned with others, mentioned only within narrow domains, or represented in abstract terms without concrete social or temporal anchors. Such informational isolation means these communities are more likely to be construed abstractly, experienced as less relevant, and engaged with less urgently. Applying the CLT lens, it is possible to understand how the absence of local news expands psychological distance. Local news may reduce spatial, temporal, and social distance by situating events in nearby places, among familiar communities, and in a particular moment. In contrast, news deserts push community issues into higher psychological distance, making them appear abstract, less urgent, and less emotionally engaging.

A case study

To further test the application of psychological distance in news desert research, we conducted a preliminary case study using a dataset of 31,004 news articles published between 2012 and 2024 by WVUA23, a major local news operation located in Tuscaloosa, Alabama.

Data

City names were extracted from news articles with GPT-4o, a large language model, achieving an F1 score of 0.96 on a 100-article validation sample. We geocoded the cities with the Google Places API and assigned topical labels using a classifier trained on the New York Times Annotated Corpus (Rubinovitz, 2017). The 342 fine-grained topics were then consolidated into 18 broader categories (e.g., sports, crime, politics) following the IPTC media taxonomy (IPTC, 2025). To capture psychological distance between cities, we constructed weighted co-mention networks in which nodes represent cities and edges indicate the frequency of their co-appearance in the same article of different news categories. The underlying assumption is that more frequent co-mentions indicate greater perceived proximity and thus shorter psychological distance.

To differentiate types of spatial relationships, we developed a framework with four types of relationships (Wang et al., 2025b): (1) *common impacts* (events affecting multiple places, such as hurricanes), (2) *strategic relations* (mutual benefits or agreements, such as economic partnerships), (3) *sequential dynamics* (events unfolding across locations, such as political travel), and (4) *direct influence* (actions in one city causing consequences in another). Using this framework, we constructed four additional weighted networks: undirected for types 1 and 2 and directed for types 3 and 4. For instance, a shooting report generated a type 3 (sequential dynamic) link from Tuscaloosa to Northport, reflecting the suspect's movement from the crime scene to the site of

arrest. From our dataset, we identified more than 79,000 place mentions. The overall network includes 160 Alabama cities linked by 237 edges, reflecting a sparse structure (density = 0.02).

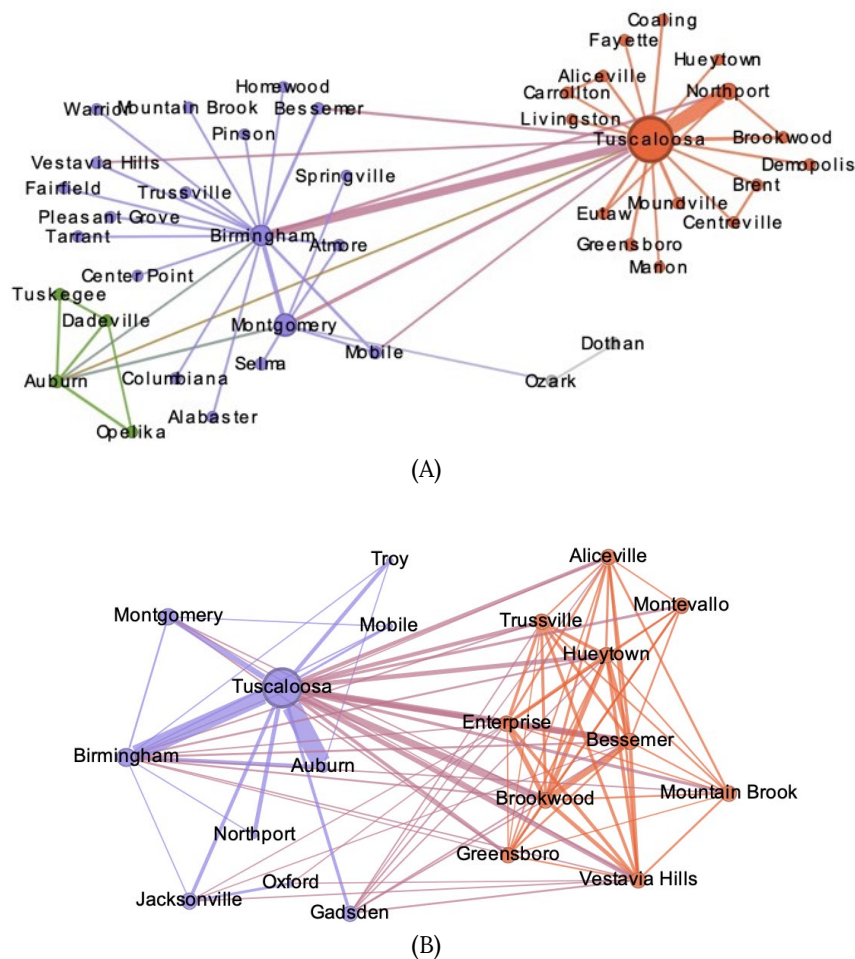


Figure 2. City co-mention networks: (A) crime coverage and (B) sports coverage. Panel A shows only edges with weights of 5 or higher, while Panel B shows only nodes with degree ≥ 20 and edges with weights of 4 or higher. Networks are clustered using a community detection algorithm based on modularity optimisation (Blondel et al., 2008).

Category patterns and psychological distance between cities

We found that co-mention patterns varied by category, shaping different forms of psychological distance. Tuscaloosa, the city where the news outlet's headquarter is located, held the highest overall degree, but other hubs emerged in specific categories. For example, in crime news, Birmingham emerged as the central hub (Figure 2A). It was connected to 35 other cities and had the highest closeness score, even though Tuscaloosa generated more crime stories overall. This pattern suggests that crime reporting often links Birmingham to other cities, either because incidents unfold across jurisdictions (e.g., suspects moving between cities) or because law enforcement activities connect Birmingham with other cities. From a psychological distance perspective, these repeated cross-city linkages reduce psychological distance of their readers by situating Birmingham as part of a regional crime network rather than an isolated site of events.

In sports news (Figure 2B), Tuscaloosa emerges as the main hub, connected to 48 other cities and exhibiting the highest closeness centrality. The strongest tie is with Auburn (87 co-mentions), despite the two cities being 157 miles apart. This reflects the intensity of the intrastate college

football rivalry, which repeatedly brings the cities together in news coverage. In terms of psychological distance, the rivalry collapses physical distance by constructing Auburn and Tuscaloosa as proximate in news landscape. Thus, sports reporting shortens psychological distance through symbolic relationships between locations (e.g., competition), making these cities feel closer and more connected to audiences than geography alone would suggest.

Our analyses suggest that news categories add an additional layer of complexity to how construal operates within CLT. In the original CLT framework, low psychological distance is associated with low-level, concrete construals while high psychological distance corresponds to abstract, high-level construals. When applied to psychological distance in news, however, this relationship may be moderated by the type of news category. Certain categories, such as crime, sports, and weather, are inherently concrete because they are anchored in specific events: a particular football game, a storm, or an identifiable victim. Other domains, including politics, economics, or science, often emphasise broader processes and institution or abstract developments. For example, a scientific breakthrough in quantum computing may feel more distant to readers than a shooting in New York City, even if the breakthrough occurs in a laboratory near their home. We do not argue that the construal-distance relationship diminishes when news categories are considered; rather, news categories introduce nuance by enriching how psychological distance can be interpreted and by providing an additional dimension for measuring informational proximity.

Potential research agenda

Building on our conceptual framework, we outline several directions for future research on psychological distance and news deserts. One possible avenue is to develop the measurements of psychological distance between places presented in news. Co-mention frequency can serve as a simple proxy for measuring psychological distance between cities. Future work may incorporate semantic similarity measures, allowing researchers to capture not only how often places are co-mentioned but also how similarly they are described. Incorporating individuals' perceptions of news items will be another important step toward improving measurement accuracy. Our framework also opens the possibility of identifying the psychological dimension of news deserts (or the psychological dynamics of news deserts): locations that may receive coverage yet remain informationally isolated due to weak or absent linkages with other places. This perspective shifts attention from the sheer volume of coverage to the structural position of cities within the local information landscape (Lee & Butler, 2019).

Another avenue for future research is to extend our analysis to include multiple news outlets, which would reveal how overlapping or diverging coverage patterns shape psychological distance in the formation of news deserts (or vice versa). News deserts are most meaningfully understood when the majority of local news outlets are examined. Incorporating additional sources would allow us to assess how co-coverage across outlets reinforces the perceived salience of events and further shortens psychological distance between places.

We also propose extending psychological distance to incorporate directionality. Our four-type framework of spatial linkages provides a foundation for constructing directed psychological distance vectors, where closeness is not necessarily reciprocal. For example, a regional outlet may frequently connect its community to national centers such as Washington, D.C., or New York, but coverage from those centers often does not reciprocate. Such asymmetries may reveal new dimensions of informational proximity in news deserts.

Finally, a critical next step is to test how psychological distance measured in news corresponds to psychological distance as experienced by individuals. This can be assessed through surveys, interviews, or by analysing social media traces that capture how readers talk about and engage with places. Such comparisons would clarify whether patterns of distance constructed in news coverage are internalised, reinforced, or resisted by audiences.

Conclusion

This paper argues that psychological distance provides a valuable framework for rethinking the phenomenon of news deserts. Beyond identifying where coverage is lacking, our approach highlights how the absence or fragmentation of local news expands psychological distance across spatial, temporal, and social dimensions, making community issues feel more abstract, less urgent, and less engaging. By constructing city co-mention networks, we show how news creates not only geographic but also *conceptual* landscapes of informational proximity, where some cities are rendered close and others distant depending on the themes in which they appear. Crime and sports coverage, for example, shorten distance through concrete and event-based reporting, while news categories such as politics often position places more abstractly, extending distance.

For information science, this approach connects the study of structural informational inequalities with factors related to the lived experiences of how communities perceive and engage with information. It reframes news deserts not only as gaps in news supply but also as *experiential deserts*, where the absence of local connections shapes perception, emotion, and civic relevance. Future research focused on measuring psychological distance in news, formalising the concept of psychological aspects of news deserts, comparing them across outlets, and exploring directional and thematic variations will uncover these complex dynamics better. Equally important is linking textual measures of distance to audience perceptions through surveys or social media data, to test how informational structures translate into lived experience.

In this way, psychological distance provides a conceptual bridge between the infrastructures of information and the ways communities encounter and act upon it. Understanding news deserts through this lens opens new pathways for studying how local information is not only produced but also *felt*, with direct implications for civic trust, participation, and democratic life.

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