

Monday, August 21, 2023

For replication, go to: https://github.com/DamonCharlesRoberts/book_project/chapter_4.

How does visual information influence attitudes and behaviors about groups of people?

Damon C. Roberts 

University of Colorado Boulder

damon.roberts-1@colorado.edu

ABSTRACT Previous chapters of this project demonstrate that the colors red and blue convey information about the partisan affiliation of another individual, and that this information influences a number of attitudes and behaviors. This chapter's goal is to add to these findings in a couple of directions: (1) do these findings generalize to shaping the attitudes and behaviors directed towards groups of people and (2) do these results contribute to the growing literature about the effects of polarization on seemingly non-political attitudes and behaviors?

Introduction

The previous chapters demonstrated that the colors red and blue conveyed information about the partisanship of politicians and about potential discussion partners. The previous chapters also demonstrated that these effects on attitudes also influenced behaviors such as a willingness to vote for the candidate as well as willingness to have a conversation with another about politics. The previous chapter also demonstrated two other pieces to the story: (1) that the group-based information conveyed by the colors red and blue are dependent on the context, and (2) that the snap-judgments people form based on this simple visual information can shape attitudes and behaviors even when provided with more clear and explicit information about the partisan affiliation of another person.

In this chapter, I try to accomplish a few goals. First, I want to expand on the previous chapters by examining whether snap-judgments are used to evaluate groups of people. Second, I want to expand on the previous chapters by examining whether the previous findings extend to non-political objects. That is, this chapter seeks to further push my testing of the boundary conditions of the snap-judgment model. The third goal is that this chapter might address an important, but still yet to be solved, puzzle with the literature of partisan sorting that I discuss with more detail in the next section.

To achieve these three goals, the chapter builds upon a growing set of work suggesting that the politicultural differences between Democrats and Republicans are shaping seemingly non-political attitudes and behaviors such as one's choice in which neighborhood to live in. I argue in this chapter that the prevalence of red and blue cars in the driveways of houses in a neighborhood shift people's perceptions of the partisan composition of the neighborhood,

and as a result, will make people less willing to move to that neighborhood when they perceive they'd be in the political minority of that neighborhood. While these snap-judgments influence attitude expression toward reported willingness to move to a neighborhood, subsequent information such as job opportunities, performance of schools, average wages to cost of living ratio, and other information limits the efficacy of these initial judgments. This seems to provide one mechanism explaining why partisan sorting is not observationally as extreme as we might expect given extensions of the literature on affective polarization and experimental and self-reported survey evidence.

The implications of such findings corroborate existing work that suggests that there are an increasing number of cultural signals that people use to guess the partisanship of not just other individuals but groups of people, and that as a result partisanship and polarization are bleeding into our non-political decision-making. The implications of the argument advanced in the chapter build upon these existing findings by providing one causal mechanism as to the connection between cultural cues conveyed visually and the cognitive processing of such information. The chapter not only generalizes findings from the previous chapters to groups of people and to non-political attitudes and behaviors, but it contributes to a literature suggesting that political polarization is pervasive and is approaching universal.

Politicocultural differences and their effects

While political polarization certainly reflects a growing gap and consolidation of two camps of policy preferences and attitudes (DellaPosta 2020; Lüders, Carpentras, and Quayle 2023), it manifests as something more consequential for our every-day experiences. Political polar-

ization has come to reflect social groups that distinguish “us” versus “them” with increasingly fewer and fewer non-political social groups that are not wrapped up in our partisan group (Mason 2018). That is, we are not only holding fewer and fewer cross-cutting attitudes that moderate our political viewpoints (Lüders, Carpentras, and Quayle 2023), but we also have fewer and fewer cross-cutting social groups that encourage interaction and experiences with perspectives of out-partisans (Mason 2018). The consequence of such phenomena is that we are becoming increasingly willing to harbor strong negative feelings towards those of the other political party and strong positive affectations to members of our political party (Iyengar, Sood, and Lelkes 2012; Iyengar and Westwood 2015).

The consequences of this affective polarization encourages discomfort being around those who identify with the other political party and finding comfort around those that share the same partisanship. In fact, some evidence suggests that it is even more sinister than comfort but rather predicts lower empathy for outpartisans (Allamong and Peterson 2021), as well as an increased willingness to describe outpartisans as subhuman (Martherus et al. 2021). Racists commonly use dehumanizing language to describe racial minorities (Utych 2018).

Evidence of this discomfort and its manifestations with out-partisans is piling up. For example, Carlson and Settle (2022) demonstrates that individuals perceive that they may incur social costs with friends and neighbors by engaging in a conversation with those they disagree with and expressing that disagreement, and avoid such situations as a result. Other work corroborate this finding by suggesting that individuals will be less likely to share the social media posts of political viewpoints they agree with if they perceive that they are in the political minority of those that would see that sharing of the post (Van Der Does et al. 2022). As a result of this tendency to speak out as a political minority in front of a group of people,

individuals have fewer outpartisans in their group of folks they regularly discuss politics with (Butters and Hare 2022).

Building on this set of evidence, a growing area of the literature suggests that we are able to make inferences about the partisanship about other individuals, but we are able to do this for groups of people through the increasing political-cultural distinctions between Republicans and Democrats. Hetherington and Weiler (2018) demonstrates that Republicans and Democrats are not just different in their policy preferences but rather that they live in different places and have different lifestyles. Others have replicated and built upon this work by suggesting that while there are many different types of lifestyles that Republicans and Democrats can take on, there is increasingly clear distinction between Republicans and Democrat archetypes (Rogers 2022). These political-cultural distinctions are clear enough that we train a computer to make accurate guesses (upwards of 80%) of the partisanship by using only images of the cars in a particular neighborhood (Gebru et al. 2017).

Though not inherently or necessarily political, our communities often collectively act in political ways. For example, some evidence suggests despite variation between counties' partisan composition and lockdowns discouraging people from leaving their homes during the COVID-19 pandemic, those living in Republican counties spent more time away from home than those living in Democratic counties (Roberts and Utych 2021). Further, we see a place-based identity for rural individuals that predict partisanship (Cramer 2016; see also Lyons and Utych 2021) and characteristics like expression of anti-intellectual attitudes (Lunz Trujillo 2022). While place-based identities could be separate or informative of partisan identities, some literature argues that partisanship may actually inform which community we choose to make ours.

The consequences of the fewer cross-cutting social groups and increasingly homogenous cultural preferences of Republicans and Democrats manifest as dramatic differences in preferences about the communities that we are part of. Gimpel and Hui (2015) demonstrates that describing a neighborhood with explicit and implicit information (e.g., racial composition) about the partisan composition influences whether one expresses a desire or not to move and live there. Further work corroborates this finding by providing evidence from a number of studies which demonstrate that not only do people associate particular characteristics of a neighborhood such as the prevalence of churches with Republicans and hybrid cars with Democrats, but also that these features attract copartisans and repulse outpartisans (Motyl, Prims, and Iyer 2020).

Some work suggests, however, that these expressed preferences to live near copartisans do not carryover to migration patterns (see Iyengar, Sood, and Lelkes 2012). In fact, there is some evidence suggesting that controlling for everything else but current rates of political sorting, we would have less political homogeneity than we had in 2008 (Martin and Webster 2020). Further, evidence by Martin and Webster (2020) suggests that people switch their party registration after moving as opposed to moving to be more aligned with their party registration.

The literature on partisan sorting seems to conclude that people express a desire to sort into neighborhoods with partisans, but these attitudes do not turn into observable behaviors. The remainder of the chapter provides one explanation for this puzzle by demonstrating how the snap-judgment model may be at play. Much like the literature on the attitude expression of partisan sorting, the snap-judgment model heavily relies on the ways in which seemingly non-political information comes to be associated with one partisan group or another. The

model also demonstrates how these snap-judgments are capable of having initial impacts on attitude expression, but its effects weaken in light of explicit and countervailing information.

Snap-judgments explaining the puzzle of political sorting

As discussed thus far in the chapter, non-political objects are often associated with particular partisan leanings. For example, the modal car in a neighborhood conveys the partisan composition of the whole neighborhood (Hetherington and Weiler 2018; Gebru et al. 2017). In the same spirit as the rest of this book, we do not need to necessarily distinguish between whether someone drives a hybrid sedan and a Ford pickup truck. Information giving insight into one's partisanship may even be as subtle as their color choice in car. For a reader who thinks "hypothesizing about car color choice and partisanship is a reach", I agree. As stated at the outset of the chapter, the goal of the chapter is to extend past applications of the snap-judgment model to explicitly partisan objects such as yard signs as we did in Chapter 2 and to really challenge the model by looking at non-political objects that many never associate with partisanship.

Recall the snap-judgment model as depicted in Figure 1. The model suggests that so long as politics is salient, the colors red and blue should act as a symbolic association with Republicans and Democrats, respectively. This association will trigger a pre-conscious and potent process that involves an activation of an affective state depending on one's prior experiences with Republicans and Democrats. If, when viewing those colors, activates memories of Republicans and Democrats that are negative, then your affective state will have a negative valence. If those activated memories are positive, then your affective state will have

a positive valance. You will associate your affective state with the object that started the process due to the object's association with memories and their associations to Republicans and Democrats. This snap-judgment that you form will not only influence your expressed attitudes toward that object, but will influence motivations to engage more with the object or to avoid it. With new information, we can refine which memories we use to evaluate the object and can therefore form a response that is better informed. However, the snap-judgment persists and will have influences on which memories connected to that new information we are accessing. Therefore, the snap-judgment still has effects on our attitude expression and behaviors even with new information.

Extending the literature on partisanship as a superordinate social identity and affective polarization, we should expect that the partisan composition of a neighborhood would matter to people. In examining yard signs, Makse, Minkoff, and Sokhey (2019) demonstrate that people dislike having neighbors that do not share the same partisan affiliation as them. The motivation this comes from a desire to be in the majority of those around you with the same political views (see Van Der Does et al. 2022). While this appears to be something important to people, information about the partisan composition of a neighborhood might be inaccessible to most. Therefore, we are motivated to rely on heuristics to help with this (Motyl, Prims, and Iyer 2020). One useful and efficient heuristic to convey partisanship is the use of color as other chapters have demonstrated. If we are concerned about the partisanship of our neighbors, we may rely on information such as the color of our potential neighbors' cars to infer their partisanship.

To most of us, we likely do not trust the color of a car as a basis to infer partisanship as other forms of information such as whether a potential neighbor is displaying a political

yard sign. However, political yard signs usually only show up every couple of years during the election season and are displayed by those who tend to be highly politically active – so, they are not universally displayed (Makse, Minkoff, and Sokhey 2019). Additionally, other decisions such as the color of the house are determined by Homeowners Associations (HOAs). The choices of car colors are less constrained by other external factors. So, we may reasonably assume that if we see a neighborhood with a significant number of red cars, we may assume that the local sports team color must be red. However, if we are searching for cues toward the partisan composition of the neighborhood, we may then assume that the neighborhood has a large number of Republicans, whether that is accurate or not. Once we have used that association between the colors red and blue with partisan affiliation, we will form a snap-judgment of our neighbors based on the color of their cars when absent other information. That impression will then elicit a positive or negative attitude toward the neighbors and neighborhood as well as encourage a congruent behavioral reaction such as wanting to avoid the neighborhood or an affinity toward it. This impression and behavioral reaction forms pre-consciously and is quickly adjusted with new information from other sources of information. However, the impression constrains what memories are accessible and therefore constrains the attitude expression and behavioral motivations toward objects even when we collect more information that either fits with or goes against our initial impression.

There are many characteristics of a neighborhood besides car color that can better convey information about the partisanship of a neighborhood such as whether it is mixed use, in an urban or rural setting, whether there are Black Lives Matter flags, and whether the cars tend to be pickup trucks or sedans. However, the role of color is to act as a form of pre-conscious impression formation. While all of these alternative, and better, cues towards partisanship

may be present, they are more complicated forms of visual information that will require more laborious processing before attitude formation. The point of the snap-judgment model is to illustrate how extremely simple visual information, such as color, shapes our thinking due to the cognitive processes that underlie impression formation and the effects of impressions after particular neurological paths are made “hot”.

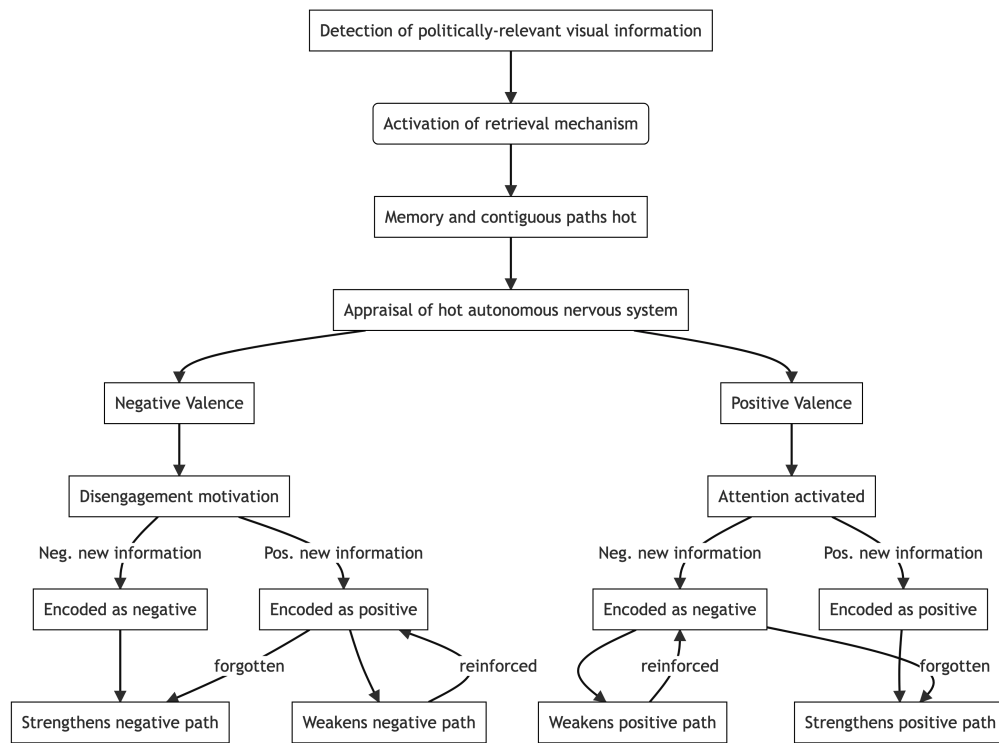


Figure 1: Snap-judgment model of politically-relevant visual information

Experimental test

Applying the snap-judgment model to an individual’s choice to move to a neighborhood yields the following hypotheses: with all else equal, Republicans that see that the modal color of car is Red are more likely to report wanting to move to the neighborhood than if the modal car color were blue (H_1); with all else equal, Democrats that see the modal color of Blue are more likely to report wanting to move to the neighborhood than if the modal car color were red (H_2); once we include more information about a neighborhood’s partisan composition, then the strength of their desire to live in a neighborhood will increase if congruent with their partisan affiliation (H_3) and will weaken if incongruent with their partisan affiliation (H_4).

To test these hypotheses, I conduct an experiment involving a fictional real estate posting. The treatment involves randomly assigning participants to view one of two versions of a fictional real estate posting. The characteristics of the neighborhood are exactly the same between the two conditions except for the “favorite car” in the neighborhood. In the first condition the “favorite car” is a red SUV. In the second condition, the “favorite car” is the same make and model of SUV as in the first condition, but blue. Participants are then given a scale from 0-10 to rate the neighborhood and are presented with a Likert scale to indicate, “How much would [they] like to live in this neighborhood?” Once the participants have responded to these questions, they are then given a “second page” describing the neighborhood. The information subjects sees depends on which of two conditions they are randomly assigned into. In one condition, the information indicates that the neighborhood is “40 minutes from the nearest metro area” and “60% voted for the Republican candidate

in the latest congressional election.” The second condition presents the same information but instead describes the neighborhood as “10 minutes from the nearest metro area” and “60% voted for the Democratic candidate in the latest congressional election.” With this new information, I ask participants “With this new information, please update your rating of the neighborhood” on the 0-10 scale and are again presented with a Likert scale to indicate, “How much would [they] like to live in this neighborhood?”

References

- Allaire, J.J., Charles Teague, Carlos Scheidegger, and Yihui Xie. 2022. *Quarto*. <https://doi.org/10.5281/zenodo.5960048>. <https://github.com/quarto-dev/quarto-cli>.
- Allamong, Maxwell B., and David A.M. Peterson. 2021. “Screw Those Guys: Polarization, Empathy, and Attitudes About Out-Partisans.” *Political Psychology* 42 (3). <https://doi.org/10.1111/pops.12701>.
- Butters, Ross, and Christopher Hare. 2022. “Polarized Networks? New Evidence on American Voters’ Political Discussion Networks.” *Political Behavior* 44:1079–1103. <https://doi.org/10.1007/s11109-020-090647-w>.
- Carlson, Taylor N., and Jaime E. Settle. 2022. *What Goes Without Saying: Navigating Political Discussion in America*. New York: Cambridge University Press.
- Cramer, Katherine J. 2016. *The Politics of Resentment: Rural Consciousness in Wisconsin and the Rise of Scott Walker*. Google-Books-ID: Rg2ZCwAAQBAJ. University of Chicago Press, March 23, 2016.
- DellaPosta, Daniel. 2020. “Pluralistic Collapse: The “Oil Spill” Model of Mass Opinion Polarization.” *American Sociological Review* 85, no. 3 (June): 507–536. Accessed August 10, 2023. <https://doi.org/10.1177/0003122420922989>. <http://journals.sagepub.com/doi/10.1177/0003122420922989>.
- Gebru, Timnit, Jonathan Krause, Yilun Wang, Duyun Chen, Jia Deng, Erez Lieberman Aiden, and Li Fei-Fei. 2017. “Using deep learning and Google Street View to estimate the demographic makeup of neighborhoods across the United States.” *Proceedings of the National Academy of Sciences* 114 (50): 13108–13113. <https://doi.org/10.1073/pnas.1700035114>.
- Gimpel, James G., and Iris S. Hui. 2015. “Seeking politically compatible neighbors? The role of neighborhood partisan composition in residential sorting.” *Political Geography* 48 (September): 130–142. Accessed August 15, 2023. <https://doi.org/10.1016/j.polgeo.2014.11.003>. <https://linkinghub.elsevier.com/retrieve/pii/S0962629815000049>.
- Hetherington, Marc, and Jonathan Weiler. 2018. *Prius or pickup?: How the answers to four simple questions explain America’s great divide*. New York: Houghton Mifflin.

- Iyengar, Shanto, Gaurav Sood, and Yphtach Lelkes. 2012. "Affect, not ideology: A social identity perspective on polarization." *Public Opinion Quarterly* 76 (3): 405–431. <https://doi.org/10.1093/poq/nfs038>.
- Iyengar, Shanto, and Sean J. Westwood. 2015. "Fear and Loathing across Party Lines: New Evidence on Group Polarization." *American Journal of Political Science* 59 (3): 690–707. <https://doi.org/10.1111/ajps.12152>.
- Lüders, Adrian, Dino Carpentras, and Michael Quayle. 2023. "Attitude networks as intergroup realities: Using network-modelling to research attitude-identity relationships in polarized political contexts." *British Journal of Social Psychology* (July 11, 2023): bjso.12665. Accessed July 20, 2023. <https://doi.org/10.1111/bjso.12665>. <https://bpspsychub.onlinelibrary.wiley.com/doi/10.1111/bjso.12665>.
- Lunz Trujillo, Kristin. 2022. "Rural Identity as a Contributing Factor to Anti-Intellectualism in the U.S." *Political Behavior* 44, no. 3 (September): 1509–1532. Accessed July 6, 2023. <https://doi.org/10.1007/s11109-022-09770-w>. <https://link.springer.com/10.1007/s11109-022-09770-w>.
- Lyons, Jeffrey, and Stephen M Utych. 2021. "You're Not From Here !: The Consequences of Urban and Rural Identities." *Political Behavior*, no. 123456789, <https://doi.org/10.1007/s11109-021-09680-3>.
- Makse, Todd, Scott L. Minkoff, and Anand E. Sokhey. 2019. *Politics on Display: yard signs and the politicization of social spaces*. New York: Oxford University Press.
- Martherus, James L., Andres G. Martinez, Paul K. Piff, and Alexander G. Theodoridis. 2021. "Party Animals? Extreme Partisan Polarization and Dehumanization." *Political Behavior* 43, no. 2 (June): 517–540. Accessed August 10, 2023. <https://doi.org/10.1007/s11109-019-09559-4>. <https://link.springer.com/10.1007/s11109-019-09559-4>.
- Martin, Gregory J., and Steven W. Webster. 2020. "Does residential sorting explain geographic polarization?" *Political Science Research and Methods* 8, no. 2 (April): 215–231. Accessed August 15, 2023. <https://doi.org/10.1017/psrm.2018.44>. https://www.cambridge.org/core/product/identifier/S2049847018000444/type/journal_article.
- Mason, Lilliana. 2018. *Uncivil Agreement*. Chicago, IL: University of Chicago Press.
- Motyl, Matt, J P Prims, and Ravi Iyer. 2020. "How Ambient Cues Facilitate Political Segregation." *Personality and Social Psychology Bulletin*.

- Roberts, Damon C., and Stephen M. Utych. 2021. "Polarized social distancing: Residents of Republican-majority counties spend more time away from home during the COVID-19 crisis." *Eprint*: <https://onlinelibrary.wiley.com/doi/pdf/10.1111/ssqu.13101>, *Social Science Quarterly* 102 (6): 2516–2527. Accessed August 15, 2023. <https://doi.org/10.1111/ssqu.13101>. <https://onlinelibrary.wiley.com/doi/abs/10.1111/ssqu.13101>.
- Rogers, Nick. 2022. "Politicultural Sorting: Mapping Ideological Differences in American Leisure and Consumption." *American Politics Research* 50, no. 2 (March): 227–241. Accessed August 11, 2023. <https://doi.org/10.1177/1532673X211041143>. <http://journals.sagepub.com/doi/10.1177/1532673X211041143>.
- Utych, Stephen M. 2018. "How Dehumanization Influences Attitudes toward Immigrants." *Political Research Quarterly* 71 (2): 440–452. <https://doi.org/10.1177/1065912917744897>.
- Van Der Does, Tamara, Mirta Galesic, Zackary Okun Dunivin, and Paul E. Smaldino. 2022. "Strategic identity signaling in heterogeneous networks." *Proceedings of the National Academy of Sciences* 119, no. 10 (March 8, 2022): e2117898119. Accessed August 14, 2023. <https://doi.org/10.1073/pnas.2117898119>. <https://pnas.org/doi/full/10.1073/pnas.2117898119>.