

Snap judgements, emotion, and learning about politics

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July 29, 2022

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Introduction

“All perceiving is also thinking, all reasoning is also intuition, all observation is also invention” - Rudolf Arnheim

Imagine we are at the airport and we see a bright red hat with white lettering on it. You have well-trodden neurological paths of what the color red looks like, what a hat looks like, and what a hat with white lettering looks like. You are accessing associative memory to not just imagine what each of these pieces of information look like in isolation, but you likely have seen these features in combination before. So rather than just seeing these details, you likely are filling in other gaps too by relying on memory.

Memories are easier to retrieve if they are recent, contiguous (associated with other pieces of information), similar to the information that made them “hot”, are reinforced, and have primacy over other pieces of information ([Kahana, Diamond and Aka 2022](#)). What this means is that the visual information of a red hat with white lettering likely spark memories by which you’ve recently seen a hat with similar features.

Given that you are reading a prospectus for a political scientist’s dissertation, the contextual state you are in may have prompted you to imagine this hat as being related to politics in some way as opposed to belonging to an Arsenal F.C. fan. Because of its similarity with the “Make America Great Again” hat which have become a characteristic symbol of the Republican party in the post-Trump era, this information may have sparked your brain to access such a memory of what a MAGA hat looks like.

An important contextual feature of memory is the affective state by which you

associate with it. Memories are enhanced when they are “tagged” with affective information ([Kensinger and Fields 2022](#)). When converting perceived visual information to a memory, emotion moderates the encoding, consolidation, and retrieval stages ([Kensinger and Fields 2022](#)). This means that when you process the visual information of a red hat with white lettering, and you access memories which suggest that it should be a hat representing support for Donald Trump, you retrieve memories that are associated with and trigger a strong autonomic physiological reaction. In response, your brain will contact your limbic system to appraise that particular physiological response and to label it based on memories that associate physiological responses with an affective state ([Valentino et al. 2011](#)).

The link between affective state and physiological response encourages a corresponding behavioral response ([Valentino et al. 2011](#)). If you connect that the hat belongs to a Trump supporter, you may have a physiological reaction of feeling queasy, an increase in heart rate, and your hands may feel clammy. As these reactions are characteristic of disgust, you may feel an urge to avoid such a person.

It may be the case that when you board your plane, this person may be in the seat next to you. You realize that despite this urge for you to avoid them, you nonetheless will likely have to exchange a few niceties at the very least. So long as you avoid talking about politics, you might be able to escape without feeling any worse by managing to avoid getting in a disagreement with someone ([Mutz 2006](#); [Carlson and Settle 2022](#)). Despite your best intentions, they begin talking to you, and they jump right into talking about baseball, your favorite sport! The conversation ends up being an engaging one. Your initial intentions of avoiding them are changing. Your initial negative evaluation of that person dissipates and may even turn into a positive one. This is likely short-lived however ([Santoro and](#)

[Broockman 2022](#)). This is because the memories associating a negative affective state with a Trump supporter are stronger than a brief conversation with one about a common interest, so that memory is crowded out and eventually purged as time goes on ([Kahana, Diamond and Aka 2022](#)).

The means by which this process occurs is of significant interest to those who examine the psychological foundations of learning and memory. While political psychologists have a rich literature on information processing and memory, much of it is conceptualized as a slower and more conscious process. This dissertation proposes a snap-judgement model of politically-relevant visual information to explain how individuals may pre-consciously detect, process, and appraise such information.

The snap-judgement model asserts that it is visual information such as color and shapes that individuals rely on first to process politically-relevant information. From an evolutionary perspective, humans are attuned and adept at detecting and finding meaning from images. From a neurological perspective, processing visual information is much faster as it occurs simultaneously in different parts of the brain as opposed to text which takes a more linear path ([Vogel, Dickson and Lehman 1986](#)). Some estimates suggest that visual information can take as little as 13 milliseconds to be perceived ([Potter et al. 2014](#)). Visual information is not just processed quicker, but it tends to have potency.

Visual information contains powerful meaning via affect. Visual information such as color contain important affective associations ([Cimbalo, Beck and Sendziak 1978](#)). Memory associated with affect pass through the limbic system which mean that they are often easily and quickly encoded, easier to consolidate by placing it in an associative memory network, and will be easier to retrieve later ([Kensinger](#)

and Fields 2022).

Political symbology is common in politics and performs a significant role in shaping attitudes and behaviors. Strong partisans use yard signs as an expressive act which often succeed at generating valenced reactions from their neighbors (Makse, Minkoff and Sokhey 2019). Even in seemingly non-political ways, observing stereotyped cultural differences between Republicans and Democrats act as accurate visual cues (such as the modal car in the driveway) of any given neighborhood to make assumptions about the partisan composition of those who live there (Hetherington and Weiler 2018). Evidence suggest that Republicans like the “Republican red” more than they like the “Democrat blue” (Schloss and Palmer 2014).

Connecting the literature on affective memory to existing work in political science on visual information yields the snap-judgement model. Going back to the example of the “MAGA hat” exercise, the “laws” of recency, contiguity, and repetition (Kahana, Diamond and Aka 2022) would suggest that a simple prompt of red hat with white lettering would evoke a particular image. “MAGA hats” are a new but very prominent symbol representing the political views of the Trump-era Republican party. This means that it is easier to recall a “MAGA hat” than a hat with similar characteristics you may have seen years ago. With repetition, the connection is strengthened so that now, you are more likely to assume that I am describing a MAGA hat. As this visual information is encoded, so is the context. This means that when retrieving visual memories of a red hat with white lettering, contiguous neurological networks consolidating other visual information are retrieved as well. This means with memories of red hats with white lettering, you are more likely to recall other contextual information, e.g., the wearer of the hat

and the meaning of the political views of those owning such a hat. As individuals have affective reactions to either congruent or incongruent political views (Iyengar and Westwood 2015; Druckman and Levendusky 2019), these memories should also be higher priority in that encoding, consolidation, and retrieval should be easier than other neutral visual information (Kensinger and Fields 2022).

The snap-judgement model additionally expands upon extant theories of political information processing. The two leading theories of political information processing are Zaller’s (1992) memory-based model and Taber and Lodge’s (2006) online model. Both models present John Q. Public as a bayesian updater. The memory-based model presents JQP as one with a very weak prior that is amendable to change with new political information. The online model suggests that JQP heavily relies on their priors and will largely ignore new information that is not congruent with the prior. These models are agnostic to the type of information their models apply to. In their studies, the processing of such information is measured as conscious. Though, Taber and Lodge (2006) suggest that the making prior attitudes “hot” within about 800 milliseconds, it is still unclear what role snap judgements play.

Fitting the snap-judgement model into the online model of information processing, it would suggest that these almost immediate appraisals should help one determine how one engages their attention. Information that activates retrieval for a particular memory tends to encourage attention when the associated affect is positive (Kensinger and Fields 2022). This explains the tendency for individuals to perform poorly at recalling arguments by outpartisans (Lodge, Steenbergen and Brau 1995).

Furthermore, it highlights a subsystem of information processing. Once an

individual forms a snap-judgement, if their priors will take over and the affective reaction will activate a particular behavioral response. However, when incorrect appraisals or an intervening factor that attenuates the cognitive disengagement occurs, it may act as a valuable learning lesson that might have an opposite effect. As affective tagging of information can occur later ([Kensinger and Fields 2022](#)), a positive experience, despite a negative snap-judgement, may weaken the association of a visual object with a negative affective response. Some evidence suggests that such a mechanism is plausible ([Santoro and Broockman 2022](#)). As evidence suggests these depolarizing effects tend to be short term ([Santoro and Broockman 2022](#)), the snap-judgement model suggests that this is due to the case that such interactions are not often reinforced so those memories are purged and the dampening effects are removed (see [Kahana, Diamond and Aka 2022](#)). It may be the case, however, that these are not all too common as individuals tend to avoid engaging with an object representing ideologically incongruent positions (see [Mutz 2006](#); [Klar and Krupnikov 2016](#)).

[Figure 1](#) presents a summary of the snap-judgement model. This dissertation sets out to examine whether such a model exists. It will examine snap-judgements as prompted by a number of different types of visual information. The first empirical chapter will examine the speed at which individuals process such individual information by examining their attention to information like color on political yard signs. The second empirical chapter will step back to examine more complex visual information by asking participants to form snap judgements of a neighborhood with varying characteristics. The final empirical chapter will examine the implications of such a model on informal political discussions as they are often seen as a valuable opportunity to reduce affective polarization and to encourage

democratic norms ([Levendusky and Stecula 2021](#); [Santoro and Broockman 2022](#)).

Outline

Chapter 1

1.1 Lay out expectations

- Color is a simple piece of visual information and so processing time should not take long
- Color has strong affective associations and is considered a key part to memories and help with memory enhancement
- Color conveys partisanship quite strongly and has political significance
- yard signs do not need to contain political information to get an affective response, but they could simply be something that people have gut reactions to based on color, partisanship, and valence interacting with both of those features

1.2 Do people associate particular colors with partisanship?

1.3 Do people have valenced reactions to colors in apolitical and political contexts? What is stronger?

1.4 If flashed an image of a yard sign, do they detect a message or color?

1.5 Once flashed an image of a yard sign, if they only pick up on color, what are their expectations of the candidate with such a yard sign? Do they have valenced reactions to it?

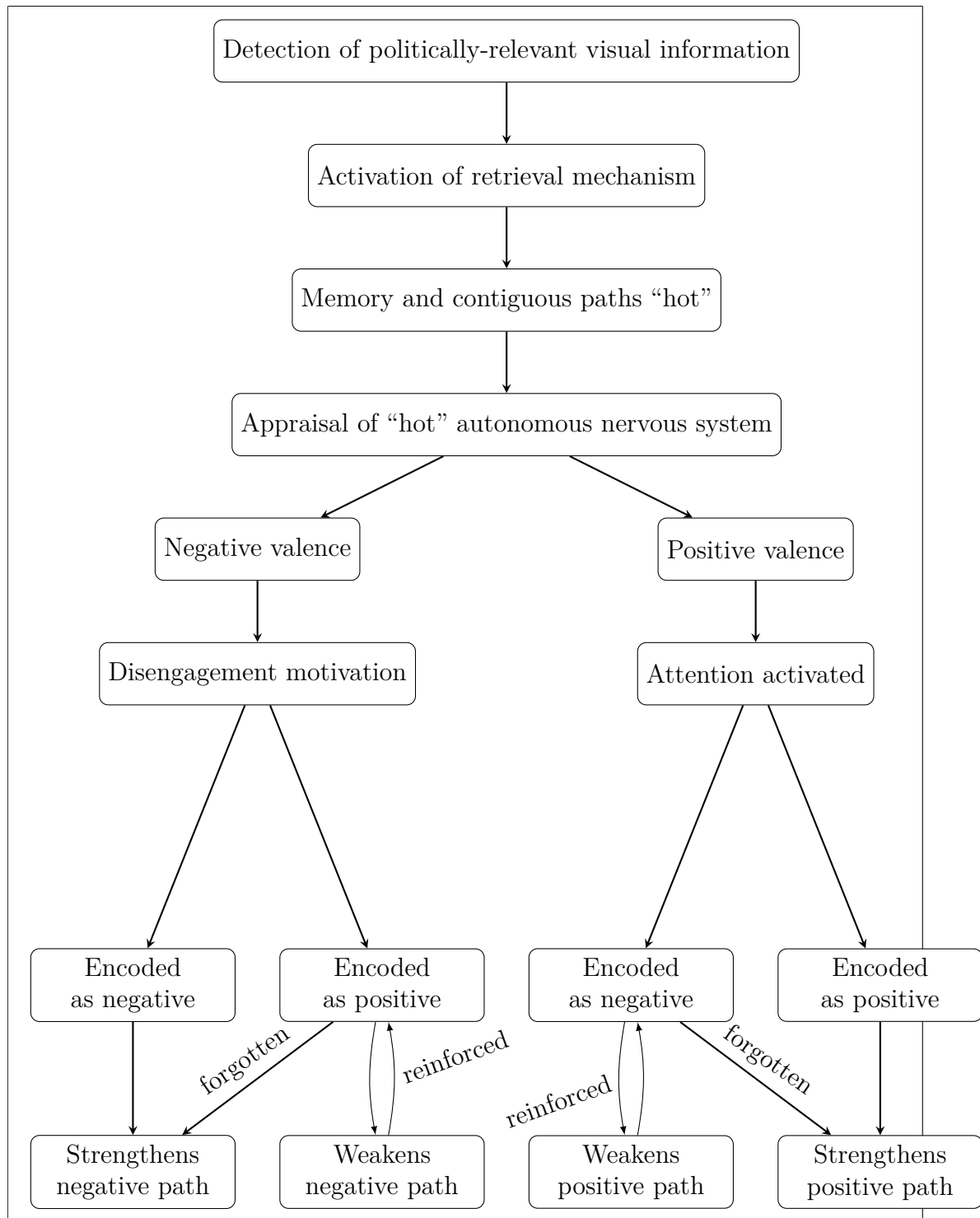


Figure 1: Snap-judgement model of politically-relevant visual information

- 1.6 What are their perceptions of the neighborhood if this yard sign is in a public space? Are there ways to mediate this? How long do these effects last?
- 1.7 What are their perceptions of the person if this yard sign is in front of their house? Are there ways to mediate this? How long do these effects last?
- 1.8 Conclusions and implications: what it means for the model, what it means for campaigns, and what it means for polarization.

Chapter 2

2.1 Lay out expectations

- Visual information tends to be a lot more complicated than just seeing a yard sign in isolation.
- We often can use visual information about the space we are in to help us access memories.
- The spaces we are in have lots of political meaning to them and this can be detected visually.

2.2 Can people pick up on the politics just by looking at a space that they are in?

2.3 What do people focus on when they see these things?

2.4 Do the things that people notice that have political meaning generate strong reactions?

2.5 Based on what they notice and what their reaction is to it, does it influence whether they become more attentive, want to retract?

2.6 If we provide information about the people that are in that space and are involved in shaping that space, can we mediate people's initial reactions? How long do those initial evaluations last? Can we reinforce it to make these mediating effects last longer?

Chapter 3

3.1 Lay out expectations

- The model also has applicability for influencing whether someone engages in a informal political conversation, how the conversation plays out, and what the lasting impacts of the conversation is.

3.2 If we have people have conversations with those that have politically-related attire, what are people's reaction to it, if we let people do what they want, do they engage in the conversation; what do they talk about if they do talk? If we force a conversation to happen, what do they talk about? What is their affective reaction to the prospect of having this conversation in both conditions? Do they express more polarized views afterwards?

3.3 What if we make these visual cues of what the conversation partner is wearing smaller? Do people still pick up on partisan cues like key chains or laptop stickers? What are the effects on motivation to engage in conversation, on the topic of the conversation, and the effects of the conversation afterwards? Are these effects long or short term? If we reinforce them by reminding people of this interaction, do the effects persist?

References

Carlson, Taylor N. and Jaime E. Settle. 2022. *What Goes Without Saying: Navigating Political Discussion in America*. New York: Cambridge University Press.

[3](#)

Cimbalo, Richard S, Karen L Beck and Donna S Sendziak. 1978. “Emotionally toned pictures and color selection for children and college students.” *The Journal of Genetic Psychology* 133(2):303–304. [4](#)

Druckman, James N. and Matthew S. Levendusky. 2019. “What do we measure when we measure affective polarization?” *Public Opinion Quarterly* 83(1):114–122. [6](#)

Hetherington, Marc J. and Jonathan Weiler. 2018. *Prius or pickup? how the answers to four simple questions explain America’s great divide*. New York: Houghton Mifflin Harcourt. [5](#)

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. [6](#)

Kahana, Michael J., Nicholas B. Diamond and Ada Aka. 2022. *Laws of Human Memory*. In *Oxford Handbook of Human Memory*, ed. Henry L. Roediger III and Okyu Uner. New York: Oxford University Press.

URL: https://memory.psych.upenn.edu/Oxford_Handbook_of_Human_Memory

[2](#), [4](#), [5](#), [7](#)

Kensinger, Elizabeth A. and Eric Fields. 2022. *Affective Memory*. In *Oxford*

Handbook of Human Memory, ed. Henry L. Roediger III and Okyu Uner. New York: Oxford University Press.

URL: https://memory.psych.upenn.edu/Oxford_Handbook_of_Human_Memory
[3](#), [4](#), [6](#), [7](#)

Klar, Samara and Yanna Krupnikov. 2016. Independent Politics: How American Disdain for Parties Leads to Political Inaction. New York: Cambridge University Press. [7](#)

Levendusky, Matthew S. and Dominik A. Stecula. 2021. We Need to Talk: How Cross-Party Dialogue Reduces Affective Polarization. New York: Cambridge University Press. [8](#)

Lodge, Milton, Marco R Steenbergen and Shawn Brau. 1995. “The Responsive Voter: Campaign Information and the Dynamics of Candidate Evaluation.” American Political Science Review 89(2):309–326. [6](#)

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. [5](#)

Mutz, Diana C. 2006. Hearing the Other Side: Deliberative versus Participatory Democracy. New York: Cambridge University Press. [3](#), [7](#)

Potter, Mary C., Brad Wyble, Carl Erick Hagmann and Emily S. McCourt. 2014. “Detecting meaning in RSVP at 13 ms per picture.” Attention, Perception, & Psychophysics 76:270–279. [4](#)

- Santoro, Erik and David E. Broockman. 2022. “The promise and pitfalls of cross-partisan conversations for reducing affective polarization: Evidence from randomized experiments.” *Science Advances* 8. [3](#), [7](#), [8](#)
- Schloss, Karen B and Stephen E Palmer. 2014. “The politics of color: Preferences for Republican red versus Democratic blue.” *Psychonomic bulletin & review* 21(6):1481–1488. [5](#)
- Taber, Charles S and Milton Lodge. 2006. “Motivated Skepticism in the Evaluation of Political Beliefs.” *American Journal of Political Science* 50(3):755–769. [6](#)
- Valentino, Nicholas A., Ted Brader, Eric W. Groenendyk, Krysha Gregorowicz and Vincent L. Hutchings. 2011. “Election Night’s Alright for Fighting: The Role of Emotions in Political Participation.” *The Journal of Politics* 73(1):156–170. [3](#)
- Vogel, Douglas Rudy, Gary W. Dickson and John A. Lehman. 1986. “Persuasion and the role of visual presentation support: The UM/3M study.”
URL: <https://brendans-island.com/blogsources/20170523-Documents/20170603-8611.pdf> [4](#)
- Zaller, John R. 1992. *The Nature and Origins of Mass Opinion*. New York: Cambridge University Press. [6](#)