# AARHUS UNIVERSITY

# Coversheet

**This is the accepted manuscript (post-print version) of the article.**
Contentwise, the post-print version is identical to the final published version, but there may be differences in typography and layout.

**How to cite this publication**
Please cite the final published version:

## Publication metadata

# Dominant Leaders and the Political Psychology of Followership

Michael Bang Petersen[1]* & Lasse Laustsen[2]

[1]Department of Political Science, Aarhus University, Bartholins Alle 7, DK-8000 Aarhus C,

Denmark, e-mail: michael@ps.au.dk

[2] Department of Political Science, Aarhus University, Bartholins Alle 7, DK-8000 Aarhus C,

Denmark, e-mail: ll@ps.au.dk

\* Corresponding author

**Highlights**

- Followers infer leaders' dominance from appearance, behavior and policy positions.

- Preferences for dominant leaders are enhanced in contexts of conflict.

- Preferences for dominant leaders are higher among those with conflict mindsets.

- Aggressive, not submissive, motivations drive preferences for dominant leaders.

- Dominant leaders elicit fear of exploitation and relevant counter-behavior.

**Abstract**

What is the psychology underlying preferences for dominant political leaders? Against earlier theories about authoritarianism and submissiveness, recent research shows that followers strategically promote dominant individuals to leadership positions in order to enhance their ability to aggress against other groups. Thus, recent evidence supports the existence of dedicated mechanisms for generating summary impressions of the dominance of potential leaders from a wealth of cues. Furthermore, research demonstrates how preferences for dominant leaders are heightened in contexts of conflict and among individuals prone to view the social world as conflictual. At the same time, this research shows that followers intuitively fear exploitation from dominant leaders and the political psychology of followership also contains dedicated mechanisms for identifying and counteracting such exploitation.

# 1. Introduction

The specters of the Second World war turned scientific interest towards the psychological origins of support for "strong leaders" with the studies of authoritarianism by Adorno et al. [1] and Milgram [2] as highlights. Today, again, Western democracies are experiencing the rise of political leaders with dominant behaviors and personalities and, again, there is interest in understanding the psychological underpinnings. In this article, we provide an overview of (a) the research that informs this understanding and (b) important unanswered questions.

Our focus is specifically on the structure of the psychological mechanisms that shape preferences for dominant demeanors in political leaders rather than, for example, preferences for particular political positions. Thus, while significant research has been dedicated to understand the recent rise of populist political projects [32, 33], evidence also shows that there has been a rise in broader preferences for "strong leaders" in themselves [3]. As we discuss, the recent scientific consensus about the origins of such preferences is moving significantly beyond the ideas expressed in earlier theories of authoritarianism. Theories of authoritarianism viewed preferences for dominant leaders as part of a stable submissive personality [1]. In this article, in contrast, we integrate recent research and formulate the adaptive followership theory of preferences for dominant leaders, which underscores the flexible and instrumental nature of preferences for dominance in leaders. In the face of particular contexts, most individuals can come to crave a dominant leader.

# 2. Who are Perceived as Dominant?

Dominance can be defined as "the induction of fear, through intimidation and coercion" [4; see also 41, 42]. Research shows that the mind contains dedicated mechanisms for forming impressions of the dominance of others and that dominance constitutes one of the two basic dimensions of person perception with warmth (or valence) as the other major dimension [5; for a related framework see

45*, 46]. When we encounter an individual--including potential and actual leaders--we integrate a host of cues to form a summary trait impression of their dominance and store this summary impression in long-term memory. In an experimental study, for example, respondents took the dominance of a politician into account in decisions, at least, 27 days after impression formation and did so, even if they failed to remember the details that shaped their view of the leader as dominant [6**]. Studies of the impression of political leaders show that dominance is formed on the basis of cues related to their face, their voice, their behavior in non-leadership contexts and their political positions [6**,7**, 34, 35, 43, 49, 50]. Leaders with more masculine faces, with lower pitched voices, with more assertive and self-interested dispositions and with more right-wing policy positions are viewed as more dominant. Support for the normative use of fear and intimidation, for example, in the form of harsher punishments for criminals is thus taken as a sign of dominant personality characteristics.

A core question is the extent to which these cues are, in fact, reliably associated with actual dominant behavior. This question is especially pertinent for the physical cues. Some research suggests that there is indeed a small relationship between facial metrics such as facial width-to-height and aggressive behavior [8, 54]. Other research fails to find such associations [58, 59] and argues that physical cues are utilized as cues of dominance because of incidental similarities with reliable cues such as the morphological similarity between a masculine face and an angry facial expression [9*]. Irrespective of the resolution of this debate, physical cues to dominance has been shown to influence even actual election results with dominant-looking candidates on the right-wing receiving higher vote shares [10; see also 36]. Given this, an avenue for future research is to examine whether physical cues play a greater role in modern political followership decisions compared to more ecologically valid contexts (i.e. traditional or small-scale societies) because of the lack of direct familiarity with the personalities of politicians in large-scale societies [51].

## 3. Who Prefers Dominant Leaders?

Following the early research by Adorno and colleagues [1], preferences for dominant leaders were traditionally viewed as part of an authoritarian personality. Consistent with this, recent research in both United States and Western Europe has shown that individuals who self-identify as "conservative" or "right-wing" are more likely to show enhanced preferences for dominance in both political candidates and in leaders outside of politics [7**, 10, 11, 15]; that dominant political candidates on the right-wing receive greater vote shares [10]; and that dominant political candidates are more favored in the internal nomination processes of right- than left-wing political parties [12].

In understanding the psychological basis for these associations, previous explanations focused on the submissiveness of authoritarians. In contrast, recent research views preferences for dominant leaders as self-oriented choices aimed at accomplishing specific goals. In particular, the emerging consensus is that a crucial part of human political psychology involves mechanisms for adaptive followership: Aligning the individual with a leader who under evolutionarily recurrent conditions would be most competent in solving the problems facing the group [13**, 14, 37, 44, 60]. Preferences for dominant leaders, in this view, are specifically elicited when facing problems related to social conflict [15]. Thus, because dominant individuals tend to be more aggressive and have great negotiation capacity [55, 56], they are intuitively viewed as more competent leaders during conflicts against other groups. We refer to this theory as the adaptive followership theory of preferences for dominant leaders.

Based on this theory, when particular political dispositions, such as a conservative or an authoritarian ideology, are associated with preferences for dominant leaders, it primarily reflects the association between these dispositions and conflict-related mindsets [7**, 15]. Thus, conservatives tend to view society more as a place of strive and conflict than liberals [16, 38].

Presently, the evidence for this interpretation of the effect of predispositions on preferences for dominant leaders come mainly from studies that have compared the effects of different constructs. For example, it has been found that social dominance orientation in both United States, Western Europe and Eastern Europe - an individual difference directly related to perceptions of intergroup conflict [52, 53]- is a better predictor of preferences for dominant leaders than direct measures of authoritarianism [7**, 10, 27]. Also, incentivized measures of behavior in conflict situations (the Hawk-Dove Game) shows that individuals with a tendency to escalate conflicts (playing Hawk) have greater preferences for dominant leaders [7**]. Finally, childhood experiences of harsh social environments predicts preferences for dominant leaders in adulthood [48].

## 4. When Are Dominant Leaders Preferred?

A crucial understanding in the authoritarianism-oriented perspective on dominant leaders is that these differences are relatively stable: some people prefer dominant leaders, others do not. Against this view, one of the most important findings in recent research - and the best evidence for the adaptive followership theory - is that preferences for dominant leaders can shift rapidly across all followers, even in individuals not predisposed to prefer dominant leaders. In contexts of social conflict, people show greater preferences for dominant leaders; an effect that has been replicated extensively [6**, 7**, 10, 17-19, 34]. While most studies have demonstrated this effect utilizing between-group conflict scenarios, some evidence also suggest that within-group strive can trigger preferences for dominant leaders [20]. Furthermore, this effect has both been shown in the laboratory and in natural contexts such that, for example, terrorist attacks and economic turmoil increase preferences for dominant political leaders [21, 47]. Such dynamics have also been tied directly to recent political events: feelings of status-threat has been shown to predict Americans' support for Donald Trump [22**].

This context-oriented research also suggests that preferences for dominant leaders are tied to contexts of social conflict specifically and, thus, non-dominant leaders tend to be preferred in neutral contexts (i.e., when respondents are not primed with particular problems) or in contexts when threats are not social in nature (e.g., natural disasters) [6**, 7**, 10, 15, 17-19]. Furthermore, people's preferences for affiliating with dominant individuals in interpersonal relationships remain unaffected and low in contexts of conflict [15]. Thus, contextual levels of conflict regulate leader preferences specifically.

Within research on conflict, it is common to differentiate between offensive and defensive aggression [24]. Until recently, it was unclear whether followers aligned themselves with dominant leaders for offensive or defensive purposes. Earlier theories based on authoritarianism suggested that dominant leaders were sought for protection. The present research, in contrast, suggest that followers promote dominant individuals to leader positions as a tool to accomplish offensive goals. In one study conducted in a real-world conflict setting (during the Russian invasion of Crimea), preferences for dominant leaders were tied to offensive emotions such as anger and hatred, while defensive emotions such as anxiety and fear decreased preferences for dominant leaders among those exposed to the conflict [7**; see also 39*].

While there is substantial and replicable evidence on when preferences for dominant leaders are elicited, a crucial question is how the emergence of dominant leaders impacts group success. Recent research shows that dominance is a viable strategy to success and social influence within the group [4, 41]. In contrast, we know much less about how the dominance of leaders shape the success of the group and no studies has examined whether dominant leaders facilitate group success in conflicts specifically. Adaptive followership theory entails that context-sensitive preferences for dominant leaders evolved because such leaders, under ancestral conditions, were effective in enforcing collective action against the enemy through fear and intimidation [15, for a

similar argument see 40]. But this key assumption within the adaptive followership theory has yet to be tested. Currently, the best evidence comes from research that demonstrates an association between indicators of masculinity and negotiation success [55].

**5. Defending Against Dominant Leaders**

The emergence of dominant political leaders in Western democracies has also given rise to significant public concern among citizens with less strong feelings of threat. Consistent with this observation, facial cues to dominance have been shown to correlate with unethical behavior [57] and people are generally strongly motivated to avoid close affiliations with dominant individuals in interpersonal contexts [15]. This also applies to followers in non-conflict contexts. The traits that make dominant individuals optimal leaders during conflict are the same traits that make them prone to exploitation and, hence, motivates followers to avoid them in peace time. Thus, in both small group contexts and political contexts, followers generally value warmth and trustworthiness in leaders and feel less positively about dominant leaders than other leader types [4; 25; 45*]. For example, one longitudinal study found that even if dominant individuals are able to achieve some influence in non-conflict situation, they tend to lose this influence again over time [61]. Still, there is some ambiguity in the evidence. One study found that more muscular individuals were in general preferred as leaders [23]. Muscularity is a cue to the ability to be dominant in interpersonal situations but not necessarily to motivations to be dominant. Thus, followers might be particularly attuned to avoid dominant motivations outside conflict contexts.

Extending earlier anthropological research on anti-big man behavior in small-scale societies [26], a central claim in recent research is that the people tend to avoid dominant leaders due to fear of exploitation [20] and, upon identification of exploitation, broadcast this information to mobilize against the leader [28]. For example, it has been found that people intuitively prefer

collective decision-making institutions over institutions that vest power in single individuals [29*], have psychological mechanisms that enable them to identify when leaders act in exploitive ways [30*] and express more moral outrage against dominant-looking exploiters [31]. In this way, preferences for dominant leaders involves trading-off being vulnerable to exploitation against the need to have a competent leader to navigate social conflict. Having a dominant leader reflects an acceptance of being exploited in order to win conflicts. At present, however, no studies have directly examined this trade-off.

## 6. Conclusions

Figure 1 provides a stylized overview of the psychological processes that shape preferences for dominant leaders. Starting from the left side, the figure illustrates how humans continuously and automatically keeps track of the dominance of individuals in their environment on the basis of physical, behavioral and normative cues. In general, detection of dominance in an individual impedes followership. However, just as people continuously form summary impressions of individuals in their context, they also continuously form summary impressions of the context itself, especially the level of social conflict. These impressions are formed from internally stored information in the form of political perceptions (related to, e.g., ideology and social dominance orientation) and from contextual information about escalations of within- or between-group conflict. Peoples' summary impression of the conflict moderates the influence of dominance perceptions on followership decisions such that dominance is weighted more positively, the more conflict is faced. At the same time that dominance impressions and conflict impressions in tandem shape followership decisions directly, dominance impressions also have an indirect effect on followership. Thus, as illustrated in the top of Figure 1, dominance impressions also activate mechanisms that monitor the actions of individuals to identify potential exploitation. Importantly, this should especially be the case for powerful individuals in

leadership positions. Upon detection, a set of behaviors are activated, designed to socially constrain the exploitive leader (e.g., by broadcasting the exploitation, expressions of outrage). Part of this behavioral set is also an inhibition of followership.

Based on the adaptive followership theory of preferences for dominant leaders, such preferences do not reflect the docile or submissive personalities of authoritarians. Instead, as Figure 1 illustrates, preferences for dominant leaders are regulated by a sophisticated psychology, which instrumentally promotes dominant individuals to leadership position to accomplish offensive goals in contexts of conflict and, in doing so, make a trade-off between being vulnerable to exploitation and being successful in conflicts.

**Figure 1. An Overview of the Adaptive Followership Theory of Preferences for Dominant Leaders.**
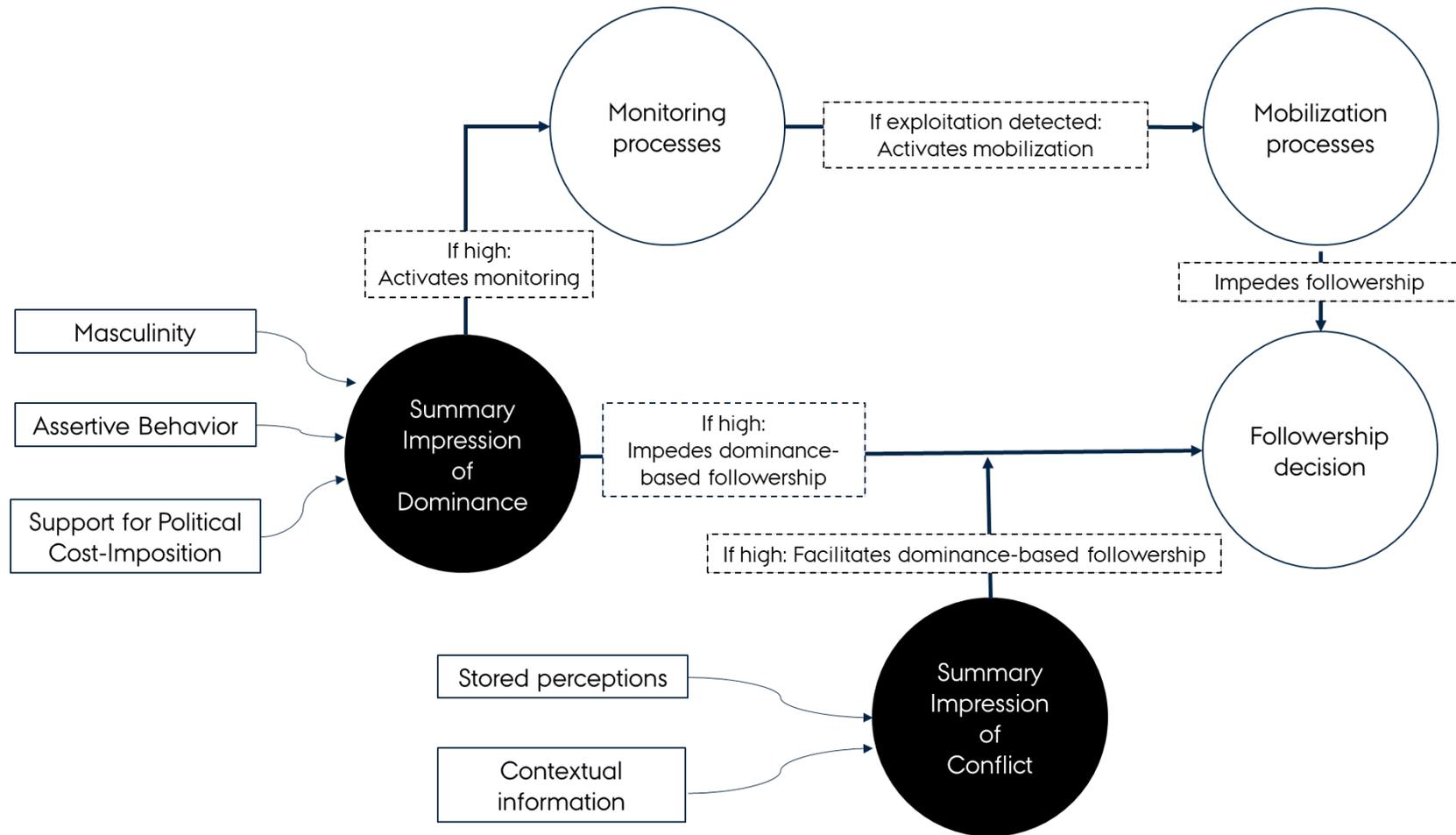


*Notes.* In the figure, solid squares denote cues. Black circles denote summary impressions formed on the basis of cues as indicated by curved lines. White circles denote psychological processes, which interact as indicated by the straight lines. Dotted squares provide short explanations for the interactions between processes.

# References

\* = of special interest

\*\* = of outstanding interest


1.  Adorno, T. W., Frenkel-Brunswik, E., Levinson, D. J., Sanford, R. N., Aron, B. R., Levinson, M. H., & William R.. Morrow. (1950). The authoritarian personality.

2.  Milgram, S. (1963). Behavioral study of obedience. *The Journal of abnormal and social psychology*, *67*(4), 371.

3.  Norris, P. (2016). It's not just Trump. Authoritarian populism is rising across the West. Here's why. *Washington Post*, March *11*.

4.  Cheng, J. T., Tracy, J. L., Foulsham, T., Kingstone, A., & Henrich, J. (2013). Two ways to the top: Evidence that dominance and prestige are distinct yet viable avenues to social rank and influence. *Journal of personality and social psychology*, *104*(1), 103.

5.  Oosterhof, N. N., & Todorov, A. (2008). The functional basis of face evaluation. *Proceedings of the National Academy of Sciences*, *105*(32), 11087-11092.

6.  Laustsen, L. & Petersen, M. B. (2019). Online Tallies and the Context of Politics: How Online Tallies Make Dominant Candidates Appear Competent in Contexts of Conflict. *American Journal of Political Science*, forthcoming.\*\*
Integrates the adaptive followership theory of preferences for dominant leaders with key insights in political science about candidate evaluation. Provides the first within-subject evidence for contextual flexibility in preferences for dominant candidates across a timespan of approx. 30 days. Shows that voters adjust their preference for candidate dominance without necessarily remembering information causing a certain impression of a candidate as low/high in dominance.

7. Laustsen, L., & Petersen, M. B. (2017). Perceived conflict and leader dominance: Individual and contextual factors behind preferences for dominant leaders. *Political Psychology, 38*(6), 1083-1101.**

Reviews the literature on contextual and dispositional factors underlying preferences for dominant leaders. Using various elements of a survey fielded in Ukraine following the Russian invasion of the Crimean peninsula in 2014, the paper shows that followers' preferences for dominant leaders are driven more by offensive rather than defensive emotions and dispositions.

8. Haselhuhn, M. P., Ormiston, M. E., & Wong, E. M. (2015). Men's facial width-to-height ratio predicts aggression: A meta-analysis. *PLoS One*, *10*(4), e0122637.

9. Todorov, A. (2017). *Face value: The irresistible influence of first impressions*. Princeton University Press.*

Comprehensive overview and integration of classic and recent theories and empirical studies on first-hand impressions. Of particular importance to preferences for dominant leaders, the book discusses the validity of dominance impressions arguing that they do not constitute valid cues to domiant and aggressive behavior.

10. Laustsen, L., & Petersen, M. B. (2016). Winning faces vary by ideology: How nonverbal source cues influence election and communication success in politics. *Political Communication*, *33*(2), 188-211.

11. Laustsen, L. (2017). Choosing the right candidate: Observational and experimental evidence that conservatives and liberals prefer powerful and warm candidate personalities, respectively. *Political Behavior*, *39*(4), 883-908.

12. Laustsen, L., & Petersen, M. B. (2018). When the Party Decides: The Effects of Facial Competence and Dominance on Internal Nominations of Political Candidates. *Evolutionary Psychology*, *16*(2), 1474704917732005.

13. Bastardoz, N., & Van Vugt, M. (2019). The nature of followership: Evolutionary analysis and review. *The Leadership Quarterly*, *30*(1), 81-95.\*\*

Provides a very recent and up-to-date review of existing theoretical and empirical work on the leader-follower relation based on evolutionary psychology.

14. Glowacki, L., & von Rueden, C. (2015). Leadership solves collective action problems in small-scale societies. *Philosophical Transactions of the Royal Society B: Biological Sciences*, *370*(1683), 20150010.

15. Laustsen, L., & Petersen, M. B. (2015). Does a competent leader make a good friend? Conflict, ideology and the psychologies of friendship and followership. *Evolution and Human Behavior*, *36*(4), 286-293.

16. Duckitt, J., & Sibley, C. G. (2009). A dual-process motivational model of ideology, politics, and prejudice. *Psychological Inquiry*, *20*(2-3), 98-109.

17. Spisak, B. R., Dekker, P. H., Krüger, M., & Van Vugt, M. (2012). Warriors and peacekeepers: Testing a biosocial implicit leadership hypothesis of intergroup relations using masculine and feminine faces. *PloS one*, *7*(1), e30399.

18. Spisak, B. R., Homan, A. C., Grabo, A., & Van Vugt, M. (2012). Facing the situation: Testing a biosocial contingency model of leadership in intergroup relations using masculine and feminine faces. *The Leadership Quarterly*, *23*(2), 273-280.

19. Little, A. C., Burriss, R. P., Jones, B. C., & Roberts, S. C. (2007). Facial appearance affects voting decisions. *Evolution and Human Behavior*, *28*(1), 18-27.

20. Bøggild, T., & Laustsen, L. (2016). An intra-group perspective on leader preferences: Different risks of exploitation shape preferences for leader facial dominance. *The Leadership Quarterly*, *27*(6), 820-837.

21. Merolla, J. L., & Zechmeister, E. J. (2009). *Democracy at risk: How terrorist threats affect the public*. University of Chicago Press.

22. Mutz, D. C. (2018). Status threat, not economic hardship, explains the 2016 presidential vote. *Proceedings of the National Academy of Sciences*, *115*(19), E4330-E4339.**

In relation to the outcome of the 2016 American Presidential election, the article shows that feelings of status threat rather than economic hardships from losing jobs explain support for Donald Trump. Thus, the article shows how experiencing intergroup conflict (both inside the American society and in relation to external relationships between the US and China) drive followers to prefer more dominant styles of political leadership.

23. Lukaszewski, A. W., Simmons, Z. L., Anderson, C., & Roney, J. R. (2016). The role of physical formidability in human social status allocation. *Journal of Personality and Social Psychology*, *110*(3), 385.

24. Lopez, A. C. (2017). The evolutionary psychology of war: offense and defense in the adapted mind. *Evolutionary psychology*, *15*(4), 1474704917742720.

25. Laustsen, L., & Bor, A. (2017). The relative weight of character traits in political candidate evaluations: Warmth is more important than competence, leadership and integrity. *Electoral Studies*, *49*, 96-107.

26. Boehm, C. (2000). Conflict and the evolution of social control. *Journal of Consciousness Studies*, *7*(1-2), 79-101.

27. Laustsen, L., Petersen, M. B., & Klofstad, C. A. (2015). Vote choice, ideology, and social dominance orientation influence preferences for lower pitched voices in political candidates. *Evolutionary Psychology*, *13*(3), 1474704915600576.

28. Bøggild, T., & Petersen, M. B. (2016). The evolved functions of procedural fairness: An adaptation for politics. In *The evolution of morality* (pp. 247-276). Springer, Cham.

29. DeScioli, P., & Bokemper, S. E. (2019). Intuitive Political Theory: People's Judgments About How Groups Should Decide. *Political Psychology*, *40*(3), 617-636.*

The article investigates basic human intuitions about how decisions should preferable be made in groups. Finding that people intuitively prefer to institutionalize decision-making authority in majority-rule voting rather than in individualistic leadership, the article speaks to humans' basic concerns about exploitation by high status individuals such as leaders.

30. Bøggild, T. (2018). Cheater detection in politics: Evolution and citizens' capacity to hold political leaders accountable. *The Leadership Quarterly*.*

Utilizing a creative experimental protocol ("The Wason Selection Task") the article provides the first evidence that followers utilize evolved psychological machinery for detecting leaders who break social rules and behave self-interestedly. Thus, the article sheds light on the fundamental psychological processes that help followers and voters avoid self-interested, exploitative and dominant leaders.

31. Jensen, N. H., & Petersen, M. B. (2011). To defer or to stand up? How offender formidability affects third party moral outrage. *Evolutionary Psychology*, *9*(1), 147470491100900113.

32. Bakker, B.N., Rooduijn, M., & Schumacher, G. (2016). The psychological roots of populist voting: Evidence from the United States, the Netherlands and Germany. *European Journal of Political Research, 55: 302-320.*

*33.* Mudde, C., & Kaltwasser, C. R. (2017). *Populism: A Very Short Introduction*. Oxford University Press.

34. Tigue, C. C., Borak, D. J., O'Connor, J. J. M., Schandl, C., & Feinberg, D. R. (2012). Voice pitch influences voting behavior. Evolution and Human Behavior, *33*, 210–216.

35. Eriksson, K. (2018). Republicans Value Agency, Democrats Value Communion." Social Psychology Quarterly, *81*(2): 173–84.

36. Samochowiec, J., Wänke, M., & Fiedler, K. (2010). Political ideology at face value. Social Psychological and Personality Science, 1(3), 206–213.

37. von Rueden, C., & van Vugt, M. (2015). Leadership in small-scale societies: Some implications for theory, research, and practice. *The Leadership Quarterly,* 26: 978-990.

38. Hibbing, J. R., Smith, K. B., & Alford, J. R. (2014). Differences in negativity bias underlie variations in political ideology. *Behavioral and Brain Sciences,* 37, 297-350.

39. Marcus, G. E., Valentino, N. A., Vasilopoulos, P., & Foucault, M. (2019). Applying the Theory of Affective Intelligence to Support for Authoritarian Policies and Parties. *Political Psychology,* online accessible from: https://doi.org/10.1111/pops.12571 *

The article integrates work on the role of emotions in political behavior research (building on the Affective Intelligence Theory) with recent work on the rise and support of populist parties and leaders. Results show that the offensive emotion anger (more than the defensive emotion of fear) mobilize support for authoritarian and rightwing populist parties.

40. von Rueden, C., Gurven, M., Kaplan, H. & Stieglitz, J. (2014). Leadership in an Egalitarian Society. *Human Nature.*, 25: 538-566.

41. Maner, J. K., (2017). Dominance and Prestige: A Tale of Two Hierarchies. *Current Directions in Psychological Science*, 26(6): 526-531.

42. Henrich, J., & Gil-White, F. J. (2001). The Evolution of Prestige. Freely conferred deference as a mechanism for enhancing the benefits of cultural transmission. *Evolution and Human Behavior, 22*, 165-196.

43. Clifford, S. (2019). Compassionate Democrats and Tough Republicans: How Ideology Shapes Partisan Stereotypes. *Political Behavior.* online accessible from:

   https://doi.org/10.1007/s11109-019-09542-z

44. Price, M. E., & van Vugt, M. (2014). The Evolution of Leader-Follower Reciprocity: The Theory of Service-for-Prestige. *Frontiers in Human Neuroscience*, 8: 363

45. Fiske, S. T. (2018). Political cognition helps explain social class divides: Two dimensions of candidate impressions, group stereotypes, and meritocracy beliefs. *Cognition*, 188: 108-115.*

The article provides a recent review of the literature on the two-dimensional model of social perceptions and evaluations (warmth/communion and competence/agency) in relation to research in political behavior and political psychology.


46. Fiske, S. T., Cuddy, A. J. C., & Glick, P. (2007). Universal dimensions of social cognition: Warmth and competence. *Trends in Cognitive Sciences*, 11(2): 77-83.

47. Kakkar, H., & Sivanathan, N. (2017). When the appeal of a dominant leader is greater than a prestige leader. *Proceedings of the National Academy of Sciences,* 114(26): 6734-6739.

48. Safra, L., Algan, Y., Tecu, T., Grèzes, J., Baumard, N., & Chevallier, C. (2017). Childhood harshness predicts long-lasting leader preferences. *Evolution and Human Behavior,* 38: 645-651.

49. Hayes, D. (2005). Candidate Qualities through a Partisan Lens: A Theory of Trait Ownership. *American Journal of Political Science,* 49: 908–23

50. Winter, N. J. G. (2010). Masculine Republicans and Feminine Democrats: Gender and American's Explicit and Implicit Images of the Political Parties. *Political Behavior,* 32: 587–618.

51. Li, N. P., van Vugt, M., & Colarelli, S. (2017). The Evolutionary Mismatch Hypothesis: Implications for Psychological Science. *Current Directions in Psychological Science, 27(1)*: 38-44.

52. Sidanius, J., & Pratto, F. (2001). *Social dominance: An intergroup theory of social hierarchy and oppression*. New York, NY: Cambridge University Press.

53. Ho, A., Kteily, N., Pratto, F., Foels, R., Sidanius, J., Sheehy-Skeffington, J., Henkel, K. E., & Stewart, A. L. (2016). The nature of social dominance orientation: Theorizing and measuring preferences for intergroup inequality using the new SDO7scale. *Journal of Personality and Social Psychology,* 109(6), 1003–1028.

54. Geniole, S. N., Denson, T. F., Dixson, B. J., Carré, J. M., & McCormick, C. M. (2015). Evidence from meta-analyses of the facial width-to-height ratio as an evolved cue of threat. *PloS one*, *10*(7), e0132726.

55. Haselhuhn, M. P., Wong, E. M., Ormiston, M. E., Inesi, M. E., & Galinsky, A. D. (2014). Negotiating face-to-face: Men's facial structure predicts negotiation performance. The Leadership Quarterly, 25(5), 835–845. https://doi.org/10.1016/j.leaqua.2013.12.003

56. Wong, E. M., Ormiston, M. E., & Haselhuhn, M. P. (2011). A face only an investor could love CEOs' facial structure predicts their firms' financial performance. Psychological Science, 22(12), 1478–1483.

57. Haselhuhn, M. P., & Wong, E. M. (2012). Bad to the bone: facial structure predicts unethical behaviour. Proceedings of the Royal Society B: Biological Sciences, 279(1728), 571–576.

58. Gómez-Valdés, J., Hünemeier, T., Quinto-Sánchez, M., Paschetta, C., Azevedo, S. de, González, M. F., … González-José, R. (2013). Lack of support for the association between facial shape and aggression: A reappraisal based on a worldwide population genetics perspective. PLOS ONE, 8(1), e52317.

59. Özener, B. (2012). Facial width-to-height ratio in a Turkish population is not sexually dimorphic and is unrelated to aggressive behavior. Evolution and Human Behavior, 33(3), 169–173.

60. de Waal-Andrews, W., & van Vugt, M. (this issue). The triad model of follower needs: Theory and review. *Current Opinion in Psychology*.

61. Redhead, D., Cheng, J. T., Driver, C., Foulsham, T., & O'Gorman, R. (2019). On the dynamics of social hierarchy: A longitudinal investigation of the rise and fall of prestige, dominance, and social rank in naturalistic task groups. Evolution and Human Behavior, 40(2), 222–234.