

Original Article

Is the Political Animal Politically Ignorant? Applying Evolutionary Psychology to the Study of Political Attitudes

Michael Bang Petersen, Department of Political Science and Government, Aarhus University, Aarhus, Denmark. Email: michael@ps.au.dk (Corresponding author).

Lene Aarøe, Department of Political Science and Government, Aarhus University, Aarhus, Denmark.

Abstract: As evidenced by research in evolutionary psychology, humans have evolved sophisticated psychological mechanisms tailored to solve enduring adaptive problems of social life. Many of these social problems are political in nature and relate to the distribution of costs and benefits within and between groups. In that sense, evolutionary psychology suggests that humans are, by nature, political animals. By implication, a straightforward application of evolutionary psychology to the study of public opinion seems to entail that modern individuals find politics intrinsically interesting. Yet, as documented by more than fifty years of research in political science, people lack knowledge of basic features of the political process and the ability to form consistent political attitudes. By reviewing and integrating research in evolutionary psychology and public opinion, we describe (1) why modern mass politics often fail to activate evolved mechanisms and (2) the conditions in which these mechanisms are in fact triggered.

Keywords: political attitudes, political science, social cognition, media effects, decoupled cognition, political sophistication

Introduction

Politics is not only a feature of all known human societies, but of all social primates (Brown, 1991; de Waal, 1996). Evidence indicates that political conflict predates the emergence of *Homo sapiens*, and has most likely been a persistent characteristic of our evolutionary lineage for millions of years (Boehm, 2000; Wrangham and Peterson, 1996). The political challenges of small-scale social interaction posed enduring problems for our hunter-gatherer ancestors and, most likely, selected for sophisticated psychological mechanisms designed to navigate them (Petersen, 2011). In this sense, Aristotle's famous dictum, "man is, by nature, a political animal," has been vindicated (Hatemi and McDermott, 2011).

A biologically informed approach is increasingly guiding how psychologists (Haidt, 2012; Sidanius and Kurzban, 2003) and political scientists (Alford and Hibbing, 2004; Hatemi and McDermott, 2011; Petersen, 2012; Fowler and Schreiber, 2008) study modern political attitudes and behaviors. An underlying argument is that the existence of evolved political cognition makes opinion formation on modern political issues easy and effortless. At the same time, however, a long line of research in political science has concluded that most people find politics complicated and difficult to understand. During the 2008 US presidential election, for example, 69 percent of the American electorate agreed that “sometimes, politics and government seem so complicated that a person like me can't really understand what's going on” (ANES 2008). It seems that the political animal is, by self-profession, politically ignorant.

In this article, we address this puzzle (i.e., why the human political animal is politically ignorant). By reviewing and integrating insights from evolutionary psychology and political science, we describe (1) why modern mass politics often fail to activate evolved mechanisms for social and political decision-making and (2) the conditions in which these mechanisms are in fact triggered.

A Public of Political Animals

As group-living animals, ancestral humans' fitness crucially hinged on their ability to navigate social life. Converging lines of evidence from archaeology (e.g., Alperson-Afil et al., 2009), studies of non-human primates (e.g., Wrangham and Peterson 1996; de Waal, 1996), and anthropology (Brown, 1991) suggest that problems relating to the formation of coalitions, the facilitation of cooperation and gains-in-trade within and between groups, the punishment of exploiters, negotiation of status and hierarchical differences have all constituted important adaptive problems with deep roots in our evolutionary history (for an overview, see Buss, 2005).

From a problem-solving perspective, social life is constituted by a multitude of separate problems each posing its own sets of challenges and requiring its own set of solutions. Choosing a competent leader in times of war requires, for example, different cognitive processes than choosing a trustworthy cooperative partner. As demonstrated in the cognitive sciences, distinct problems are most adaptively solved by distinct decision-rules that take the particularities of the specific problem into account (Tooby and Cosmides, 1992; Gigerenzer et al., 1999). Given that processes of natural selection drive biological design towards greater optimization, this suggests that the evolutionarily recurrent problems of social life have selected for a multitude of narrow decision-rules tailored to particular classes of social problems.

Some of the social problems that humans evolved to process and solve are related to political conflicts. According to the most widely adopted scholarly definition, politics is an overarching term for the set of activities whereby individuals and coalitions seek to influence the recognized allocation of scarce resources within societies (Easton, 1953). On this definition, political conflicts are of two kinds. First, political conflicts are conflicts over the power to make political decisions—that is, the power to influence who gets what without having to resort to physical aggression. Although political power can be exercised

under implicit threats of aggression, political power in its purest form is when an individual gets other people to do something they would not otherwise do because they find it to be in their own interest to act in accordance with that individual's interests. When people have to resort to physical aggression, it signifies the breakdown of political power. Conflicts over political power, then, are intrinsically linked to status competitions. Second, political conflicts are conflicts over the *content* of political decisions and, hence, involve attempts to tweak allocations into greater alignment with one's preferences. Such conflicts are based on assessments of how different allocation schemes influence the welfare of the self and significant others.

Given this understanding of politics, evidence from evolutionary psychology suggests that humans are political animals, ready to engage and capable of engaging in conflicts that are political. Research has demonstrated that humans universally compete (both as individuals and through the formation of coalitions) for status positions (Sidanius and Pratt, 2001), that these positions as leaders are not merely equated with dominance (cf. Henrich and Gil-White, 2001), that adaptations exist for following leaders that are best suited for tackling the problems confronting the group (Little et al., 2007, 2012; Spisak et al., 2012), and that the discretion of leaders are recognized in the sense that individuals can view decisions from legitimate leaders as justified even if they entail negative outcomes for the self (Hibbing and Alford, 2004). Furthermore, evolutionary psychologists have uncovered a suite of cognitive mechanisms designed to evaluate allocations of costs and benefits within and between groups from the perspective of the self. Extensive research has shown that humans have an intuitive sense of what allocations of resources are fair (Cosmides and Tooby, 2005), who deserves to reap benefits from collective enterprises (Price et al., 2002), who constitutes the ingroup that is relevant to consider as targets of help (Yamagishi and Mifune, 2004), what should be done with those taking more than their share (Petersen, Sell et al., 2012) and so forth. Whereas the first set of findings suggests that humans have evolved cognitive mechanisms for seeking political power and for adaptively following the politically powerful, this second set of findings reveals an evolved basis for political judgments or attitudes, i.e., mechanisms for judging a particular allocation as good or bad from the perspective of the self.

As is increasingly argued among both evolutionary psychologists and political scientists (Alford and Hibbing, 2004; Haidt, 2012; Sidanius and Kurzban, 2003; Hatemi and McDermott, 2011; Petersen, 2012; Fowler and Schreiber, 2008), the existence of these mechanisms are of key importance in understanding how individuals form attitudes on modern political issues. A large range of prominent modern political issues have direct parallels to ancestral social life. At their core, modern issues such as social welfare, race relations, and criminal justice reflect evolutionarily recurrent problems such as whether to share with needy individuals, how to treat outgroups, and how to deter and reconcile with exploiters.

Recent research in fact suggests that the exact same mechanisms used to make decisions about these broader social problems are active during political attitude formation on modern issues. Table 1 provides an overview of this research; it describes how different modern political issues (the first column) have been argued to match the input conditions for mechanisms designed to process specific adaptive problems (the second column) as

well as illustrative key findings from this research (the third column) (for a more thorough review, see Petersen, 2011). Supporting the view of humans as political animals, the findings summarized in Table 1 suggest that the mechanisms making up our evolved social cognition is applicable to at least a central set of mass political issues. As can also be seen, most issues are processed by a number of cognitive mechanisms relating to a range of adaptive problems. In this sense, modern individuals seemingly have a tool box available with a range of cognitive tools for facilitating the formation of political attitudes and the execution of political decisions.

The Political Animal as Politically Ignorant

From the above discussion, an immediate prediction springs to mind: If humans are indeed political animals, they should think of modern politics as engaging and easy. Surprisingly, however, research suggests that this is not the case. Hence, a core topic for political science researchers has been the political interest, knowledge and sophistication of the public: Do people know much about politics? Do they care about politics? Can they make up their minds on political substance? As we will outline in more detail below, the short answer to these questions is, “no”. As emphasized by Kinder (1998a, p. 784) most individuals are “awash in ignorance” of politics.

To act politically in modern democratic society, one needs to know the basic operations of the political system, the key institutions and actors as well as the content of policies (Delli Carpini and Keeter, 1996). Yet, fifty years of research in political science demonstrates that most people only have very limited knowledge about specific policies and are uninformed about political institutions and political actors such as parties and elected officials (e.g., Berelson, 1952; Campbell et al., 1960; Delli Carpini and Keeter, 1996; Downs, 1957; Kinder, 1998b, p. 169). In the 1950’s, for example, two out of three citizens only held moderate or no interest in politics (Berelson et al., 1954, p. 306). Over the years, not much has changed: In the fall of 1992 only 59 percent Americans knew that the Democrats held the majority of the seats in the House of Representatives despite the fact that the Democratic Party had held the control of the House for more than 40 years (Kinder, 1998b, p. 169). Likewise, in 1995 twice as many Americans incorrectly believed that the federal government spend more money on foreign aid than on Medicare (Kinder, 1998b, 169). While humans seem to have an evolved sense of power and leadership, many simply do not pick up the relevant facts necessary for understanding who has political power or for striving for that power themselves in the context of modern democratic politics. As Ferejohn (1990, p. 3) sums up: “Nothing strikes the student of public opinion and democracy more forcefully than the paucity of information most people possess about politics.”

Table 1. Overview of key research on the evolutionary psychology of political attitudes and behavior

Modern Political Issue	Adaptive Problem (Issue is Processed by Mechanisms for...)	Illustrative Finding
Candidate Choice	Followership	Feminine political candidates are preferred in times of peace, masculine candidates are preferred in times of war (Little et al., 2007, 2012)
	Kin Nepotism	Political candidates that share physical features with an individual are preferred by that individual (Bailenson et al., 2008)
	Status Competition	Males' testosterone levels respond to election results such that males supporting the losing candidate experience a drop in testosterone (Stanton et al., 2009)
	Social Control	Individuals are more likely to accept decisions from individuals in positions of power if they have been granted rather than sought power (Hibbing and Alford, 2004)
Criminal Justice Issues	Punishment	People across very different cultures judge the relative seriousness of different crimes similarly and match the severity of the punishment to the seriousness of the crime (Robinson et al., 2007)
	Reconciliation	The social value of criminals determine whether third parties want to punish or rehabilitate them (Petersen, Sell et al., 2012)
Ethnic Relations Issues	Social Exchange	Ethnic homogeneity is a major cause of high levels of redistribution within societies (Alesina and Glaeser, 2004)
	Coalitional Psychology	Racial groups are processed by mechanisms designed for processing coalitions (Kurzban et al., 2001)
	Pathogen Avoidance	Pathogen load increases outgroup prejudice across countries (Thornhill et al., 2009)
	Sexual Coercion	Female outgroup prejudice is driven by fear of sexual coercion (Navarrete et al., 2010)
Social Welfare Issues	Social Exchange	Social welfare recipients are evaluated using mechanisms designed for cheater-detection (Petersen, Sznycer et al., 2012; Petersen, 2012)
	War of Attrition	Physically stronger males are more supportive of inequality (Price et al., 2010)
Reproductive issues	Mating	Attitudes on drug policy are more strongly influenced by mating strategy than by political ideology (Kurzban et al., 2011)
War	War of Attrition	Physically stronger males are more supportive of solving international conflicts using aggression (Sell et al., 2009)
	Competition for Mates	A surplus of young males increase the severity of wars (Mesquida and Weiner, 1999)

Notes: The first column lists different modern political issues that have been investigated from an evolutionary psychological perspective. The second column lists the domains of adaptive problems that have selected for the cognitive mechanisms that guide attitudes and behavior on the relevant political issues. The third column provides illustrative key findings from this research. The list of studies serves illustration purposes and, hence, is not exhaustive.

Whether or not people have their facts straight, they could hold passionate (but uninformed) opinions about modern political issues. Here, the evidence is more mixed. In general, most people find it difficult to make political decisions. They often only hold weak or no preferences in relation to policy (Popkin, 1991) and, if they do hold preferences, these are often internally inconsistent (Converse, 1964; Zaller, 1992). At the same time, however, it is important to differentiate between different types of issues. While research on this is limited, political scientists have argued that certain issues are “easier” to form opinions about and vote on the basis of than others (Carmines and Stimson, 1980). In a European context, Slothuus (2005) compared eight different issues and showed that whereas questions about attitudes on immigration, social welfare and criminal justice elicit very few “don’t know” responses, questions about economic policies and the European Union elicit a much higher rate. If we compare these observations to the findings in Table 1, this clearly suggests that the more a modern political issue carries recognizable similarities to basic adaptive problems, the easier it is for people to form opinions (see also Haidt, 2012). Some issues such as macro-economic policies and intergovernmental regulation emerge exclusively in the context of modern society and humans have few if any evolved cognitive mechanisms for processing such issues. Importantly, however, this conclusion needs to be qualified. Whereas people only infrequently report that they don’t have an opinion on issues such as social welfare, abortion, and criminal justice, researchers still often observe that the opinions reported are highly inconsistent and temporally unstable (for social welfare, see Zaller and Feldman, 1992; for criminal justice, see Cullen et al., 2000; for abortion, see Alvarez and Brehm, 2002). This is important because it implies that individuals are ambivalent and have contradictory considerations even on “hot button” political issues that tap into evolved cognitive mechanisms.

Mismatches between Ancestral Social Life and Modern Politics

How can the conclusion that humans evolved as political animals be reconciled with these observations of political ignorance? According to the mismatch hypothesis, many seemingly irrational behaviors emerge from differences between modern and ancestral environments that cause cognitive mechanisms to misfire (Hagen and Hammerstein, 2006). This, we argue, is exactly the case in relation to mass politics. While many mass political issues resemble evolutionarily recurrent adaptive problems, there are at the same time a range of differences between now and then that causes mismatches between the available cognitive mechanisms and the cognitive demands involved in forming political attitudes (Petersen, 2011).

Humans evolved as hunters and gatherers in small-scale groups of 25 to 200 individuals, without any codified institutions (Kelly, 1995; Dunbar, 1998). Consequently, humans’ evolved social cognition is designed to be operative within small-scale social environments and, accordingly, to produce outputs on the basis of cues and information residing in such environments. Modern states, in contrast, comprise millions of people, are complex webs of formal, codified institutions, and make use of advanced technology. This creates two types of mismatches relevant to political attitude formation:

The first type relates to mismatches between the *problems* of modern politics and ancestral social living, which means that for many modern political issues, there are no relevant cognitive mechanisms for generating interest and producing clear inferences. For example, complicated formalized procedural rules for decision-making in parliament are cultural artefacts that (at least, to the outsider) might not fit the input conditions of any evolved cognitive mechanism. Similarly, the existence of macro-economic regulation is closely tied to the emergence of mass society and will seem “non-intuitive” to the evolved small-scale oriented mind. Such mismatches could explain both the general lack of knowledge about modern democratic institutions and the difficulties in forming opinions on a range of “hard” political issues.

The second type of mismatch, in contrast, is about *contextual* differences between the way similar political problems are posed ancestrally and today. This type of mismatch, we argue, causes modern people to have difficulties in forming opinions even on those issues that otherwise fit evolved cognitive mechanisms (cf. the last paragraph of the preceding section). Outlining this type of mismatch requires the establishment of a number of key points.

First, it is important to acknowledge that, because many social problems are exceptionally complex, their solution requires facultative decision rules. In cooperation problems, for example, simulation studies demonstrate that unilateral strategies such as “always cooperate” and “always defect” are inferior to contingent strategies such as “tit-for-tat” that adjust decisions to the decisions of the partner (e.g., Axelrod, 1984). Rather than global preferences such as “always cooperate”, “always shun outgroups”, “always punish”, evolution has selected for psychological mechanisms that produce different preferences depending on the circumstances facing the individual (Tooby and Cosmides, 1992). The mind of the political animal, then, is a collection of mechanisms designed to navigate social life by extracting myriads of cues and information about ecological and social contingencies.

Second, in the small-scale world of our ancestors, the relevant cues for social decision-making would be cues residing in face-to-face interaction. These include intimate knowledge about targets of decisions (Lieberman and Linke, 2007), the presence of bystanders (Haley and Fessler, 2005), facial expressions (Scharlemann et al., 2001), physical characteristics of self and other (Sell et al., 2009; Jensen and Petersen, 2011), and directions of eye gaze (Kurzban, 2001). That is, to operate and produce clear inferences, human social cognition requires the availability of intimate social cues.

Third, while the availability of general information is abundant in modern society, intimate social information about co-citizens of this kind is lacking. In modern society, each citizen only knows and ever meets a tiny fraction of his or her co-citizens and the far largest part is constituted by anonymous strangers. This has often been noted by political scientists – as reflected in quotes such as “our opinions cover a bigger space, a longer reach of time, a greater number of things, than we can directly observe” (Lippmann, 1922, p. 49) and “citizens in large societies are dependent on unseen and usually unknown others for most of their information about the larger world in which they live” (Zaller, 1992, p. 6). This lack of vivid social cues is attenuated because the vastness of modern political systems imposes a certain structure on modern political debates. While social decisions in small-

scale environments are often targeted at specific others, modern politics is about establishing general rules applying across specific cases (Stone, 1988). Ultimately, the problems confronting people are not whether a specific criminal should be punished, whether a specific welfare recipient should be helped, or whether a specific immigrant should be allowed entry. Rather, the key issues are how to treat all criminals, all welfare recipients, and all immigrants. People, in essence, are required to think and respond in terms of whole categories of faceless individuals, whereas social cognition is designed to extract massive information about the specific others directly in front of us.

In tandem, these observations imply that while individuals enter mass politics with sophisticated evolved mechanisms for political cognition, the lack of cues that fit the input conditions of the underlying mechanisms will necessarily impede their operations. In line with this, research has demonstrated how social cognition is inhibited when deprived of intimate social cues. For example, studies using fMRI have shown how activity in brain regions related to emotional processing are down-regulated when vivid personal cues are unavailable (e.g., de Quervain et al., 2004; Sanfey et al., 2003) and, outside the laboratory, research on group efficiency has shown that social and emotional coordination in groups is inhibited when groups do not interact face-to-face (Baltes et al., 2002). In order for social cognition to produce clear political inferences even on issues that resemble ancestral social problems, modern individuals, in other words, need to compensate for a lack of direct, intimate, and vivid social cues in mass politics.

When and How Mass Politics Engage the Political Animal

We now review a selection of external inputs and internal processes facilitating people's use of evolved cognitive mechanisms when reasoning about mass political issues. This discussion is not meant as an exhaustive review of all possible strategies but a case by case illustration of how people may acquire vivid social cues or compensate for the lack thereof through 1) externally provided media stories and 2) internal psychological processes allowing them to mentally simulate the absent cues.

The mass media is an obvious external source of vivid social cues (e.g., Iyengar and Kinder, 1987), which can facilitate the use of evolved cognitive mechanisms during political attitude formation. Mass media may, for example, supply relevant cues by covering political issues using particularly vivid story formats. Of special relevance is the often used media strategy of illustrating (i.e., framing) general and technical political issues using specific persons and their personal histories. Here, the audience is directly provided with relevant intimate, social cues that resemble the kinds of cues social cognition evolved to process and these cues come to frame the more general issue. A series of studies have investigated the psychological effects of such episodic framing and have provided evidence that episodic frames allow individuals to utilize more basic moral and emotional decision-making mechanisms when forming opinions on the relevant issues (Aarøe, 2011; Gross, 2008). When issues are framed in terms of general statistical and abstract information, in contrast, these emotional reactions are impeded.

Not just the format of media stories but also their specific content can facilitate people's utilization of evolved cognitive mechanisms by providing cues that fit the input

conditions of specific issue-relevant mechanisms. Social welfare issues, for example, resemble more general social problems related to sharing. In situations involving sharing, elaborate experiments have shown that individuals possess specialized psychological mechanisms designed to identify “cheaters” (Cosmides and Tooby, 2005) and that these mechanisms discriminate between cheaters and non-cheaters on the basis of their displayed efforts to accrue and exchange resources (Cosmides and Tooby, 2005; Cosmides, Barrett, and Tooby, 2010; Petersen, 2012). A series of studies have shown how these mechanisms designed for general cheater-detection can come to structure modern social welfare attitudes when individuals are directly provided with cues to the effort of social welfare recipients in, for example, media stories. Such cues influence opinions such that people become less supportive of welfare in the face of lazy welfare recipients (Slothuus, 2007), make individuals intuitively represent modern welfare as small-scale sharing situations (Petersen, 2012), activate emotions of anger and compassion that come to guide welfare opinions (Petersen, Sznycer et al., 2012) and help individuals lacking political knowledge and sophistication, effortlessly make up their minds on the otherwise complicated issue of social welfare (Petersen et al., 2011).

Another illustration of how the mass media supply vivid cues that tap into evolved social cognition is a recent study of how loss aversion and ingroup bias influence the persuasiveness of political arguments (Arceneaux, 2012). Across disparate decision-making situations and cultures, individuals tend to give priority to avoid losses rather than pursuing gains and display deep suspicion of outsiders while privileging their ingroup members (Arceneaux, 2012), biases which plausibly reflect adaptive error-management (Haselton and Buss, 2003). Arceneaux (2012) demonstrated that political arguments that directly target and activate these biases are more persuasive and prompt individuals to change their opinions on important issues such as health regulation and government spending. The persuasiveness of such arguments holds up even when challenged by more rationalistic (and less-bias congruent) arguments.

While the mass media may constitute one important *external* source of the kind of vivid social cues to which our evolved political cognition responds, cognitive scientists also increasingly emphasize *internal* psychological processes as central compensatory strategies which individuals use when making decisions in sparse information contexts. An important aspect of these processes is often referred to as decoupled cognition (e.g., Cosmides and Tooby, 2000; Boyer, 2001). As emphasized by Buss (2005, p. 62) decoupled cognition permits offline cognition where individuals rely on intense mental simulations and imagery in interaction with domain specific mechanisms to imagine solutions to social problems, problems of tool use or other recurrent problems. This suggests that when vivid social cues are absent, people can utilize relevant evolved mechanisms by engaging in decoupled cognition to imagine what they cannot see, and feed these internally generated representations and beliefs into mechanisms for small-scale political decision-making (Petersen and Aarøe, 2012). In line with this, differences in the personality trait, Openness to Experience, which is related to abilities to mentally simulate, predict a variety of measures of political engagement such that open people are more likely to be politically engaged (Gerber et al., 2011; Mondak and Halperin, 2008; Mondak et al., 2010). Likewise, measuring physiological responding based on electrodermal activity (EDA), a recent study

demonstrated that individuals with high general EDA responsiveness to external stimuli (i.e., people who extract more affective meaning from their environment) are also more likely to be politically involved (and, in fact, that EDA responsiveness seems in particular to compensate for otherwise low levels of involvement among individuals with little education) (Gruszczyński et al., 2012). Other strands of research have focused on stereotypes as a particular kind of decoupled cognition and shown how stereotypes about criminals that fit the input conditions of evolved psychological mechanisms for counter-exploitation cause individuals to have attitudes about criminal justice that are internally consistent (Petersen, 2009) and infused with affect (Petersen, 2010). Finally, focusing on the case of social welfare, a series of studies have directly provided evidence that individual differences in imaginative capacity affect individuals' use of evolved cognitive mechanisms to form political attitudes. Specifically, people high in imagination more easily form social welfare attitudes because they hold more vivid stereotypes of welfare recipients that subsequently allow for a stronger activation of cheater-detection mechanisms during attitude formation (Petersen and Aarøe, 2012).

Within the political science literature, factual political knowledge (e.g., Zaller, 1992) has in particular been emphasized as a source of internal information that people can utilize during opinion formation. While most people only have limited political knowledge, there are substantial individual differences in the level of knowledge that people have available and some individuals have quite high levels of political knowledge (Delli Carpini and Keeter, 1996). Research has consistently shown that political knowledge enables individuals' to make more internally consistent political choices and to do so with greater ease (e.g., Barker, 2005; Sniderman et al., 1991). The classical interpretation of this is that knowledge about basic political facts enables individuals to reason more deeply and thoroughly about politics. Yet, recent studies suggest that political knowledge rather provides another kind of path through which individuals can utilize evolved mechanisms for small-scale political decisions in the context of mass politics (Schreiber, 2007). For example, when thinking about politics, people with high political knowledge have been shown to have greater activation in the brain's default state network – a neutral circuitry that has specifically been linked to social cognition (Fowler and Schreiber, 2008). Rather than just providing the basis for deep reflection, factual political knowledge also seems to provide a reservoir of information that can serve as triggers for social intuitions and help individuals see the policy implications of those intuitions.

Conclusion

Humans are political animals in the sense that they, during normal development, build a suit of sophisticated psychological mechanisms designed to, first, strategically seek and recognize political power and, second, form and evaluate decisions about the allocations of costs and benefits within and between groups. The problems these mechanisms evolved to navigate carry similarities to modern political issues such as democratic elections, social welfare, criminal justice, race relations and redistribution and, hence, seem to be readily utilizable for political choice on modern issues. Yet, as we have reviewed here, political science has produced ample evidence that people find it inherently

difficult to form political opinions and they lack substantive political knowledge. In traditional political science, researchers have generally attributed this state of affairs to a lack of political sophistication or even plain empty-headedness among the public (e.g. Converse, 1964; Zaller, 1992). In contrast, we have argued that an explanation focusing on the mismatches between ancestral social life and modern mass politics is able to synthesize the available observations across disciplines much more coherently. In particular, we have argued that researchers need to focus on the lack of information in modern mass politics that fits evolved political cognition. Such a perspective is able to integrate the likely existence of an evolved psychology for political decision-making with the findings from political science on the political ignorance of many individuals.

Because human political cognition evolved to operate within a social ecology of small-scale face-to-face interactions, the operations of political cognition is dependent on reception of vivid, intimate social information. In the impersonal and abstract domain of modern mass politics, such information is not readily available and, hence, makes it difficult to utilize basic evolved systems for social and political judgment. Under specific conditions, however, individuals are able to compensate for this lack of information and link evolved cognition to issues of mass politics. Through external exposure to vivid cues (e.g., specific types of media stories) or by engaging in heavy mental simulation, the political animal is able to process modern mass politics using the suit of evolved cognitive mechanisms.

These observations imply that the emerging field of evolutionary political psychology needs to approach the study of attitudes and behavior on particular political issues with two sets of considerations. First, what adaptive domain (or domains) does the specific political issue resemble, if any? That is, what kinds of cognitive mechanisms are aroused by the threats and challenges involved in a particular political discussion? Second, what kinds of cues are these cognitive mechanisms using to produce judgments and are these cues available in the context of lay persons' decision-making on this particular political issue? The second set of questions, then, requires an analysis of the *context* in which the relevant problems reside within modern politics. Only if a given issue can be psychologically represented as falling within a particular adaptive domain and the relevant cues for producing judgments within that domain are available, should we expect modern individuals to find it easy to form political opinions on the issue. If the latter cues are not available, people might find the issue interesting and important but, at the same time, have difficulties in making up their minds on it.

While evolved intuitions often structure how individuals think about mass politics—and make it appear interesting, engaging, and fun—this does not imply that the resulting judgments are necessarily efficient or adaptive in the context of today. Hence, the information people find intuitively relevant when producing political choices will be information of relevance in ancestral, small-scale social environments, and the political solutions that people will find intuitively correct will be solutions that work within such environments. In the complex mass society of today, reliance on such information or such solutions does not necessarily produce optimal outcomes.

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