

THE COGNITIVE-AFFECTIVE STRUCTURE OF POLITICAL IDEOLOGIES

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INTRODUCTION

Many group conflicts are strongly influenced by ideologies. Political deliberation and discourse are shaped by ideologies such as liberalism, conservatism, communism, fascism, anarchism, environmentalism, and feminism. Each of these is a system of interconnected concepts, beliefs, goals, and attitudes. The aim of this chapter is to explain how such systems operate by drawing on current theories of cognition and emotion. Relevant questions include:

1. What is the mental structure of an ideology? That is, how are its concepts, beliefs, goals, and attitudes related to each other?
2. What role does affect (encompassing emotions, moods, and motivations) play in ideological thinking?
3. What are the mental mechanisms (cognitive and affective) that explain how individuals acquire, retain, and abandon ideologies?
4. What are the social mechanisms involving both cognitive and affective communication that explain how ideologies spread in *groups* of individuals?

This chapter attempts to answer these questions using novel accounts of the structure and development of conceptual systems.

Ideologies construed as emotionally-laden systems of ideas and values are highly relevant to group decision and negotiation. When members of a group face a decision,

they often have to deal with how ideologies held by various group members impede movement toward consensus. Negotiations among group members and between members of different groups can be hindered by misunderstandings and blockages resulting from the possession of conflicting ideologies. Hence identifying ideologies and their effects on conflicts is an important part of negotiation.

At a minimum, negotiators need to recognize and understand the differences between their own ideologies and those of their opponents in order to overcome obstacles and move toward acceptable resolutions. Historical mistakes such as the appeasement of Hitler before the Second World War can result through lack of understanding of the character and intensity of competing ideologies. Although this chapter is primarily concerned with political ideologies, there are other kinds, for example religious ones, that have similar cognitive and affective properties. The term “affect” is used by psychologists to cover emotion, mood, and motivation. The cognitive-affective approach to is consistent with conventional political work on ideology (e.g. Freedman, 1996; Leader Maynard, 2013), but provides much more detail about the underlying psychological processes. Like Haidt (2012), my approach views ideology as enmeshed with morality and emotion.

I will display the structure of ideologies using a new technique called *cognitive-affective mapping*. This technique can be used to portray the cognitive and emotional relations in both left-wing and right-wing ideologies. To show the full structure of more specific ideologies, however, we need to expand the technique to allow multimodal representations such as pictures and sounds in addition to verbal concepts. This chapter will present multimodal cognitive-affective maps of Nazi and anarchist ideologies.

Cognitive maps, also known as concept maps or mind maps, have long been used to depict systems of mental representations (e.g. Axelrod 1976, Novak 1998, Sowa 1999), but are inadequate to show the emotional and non-verbal character of ideologies.

Cognitive-affective maps are useful for showing the structure of ideologies, but do not address the questions of how they are acquired, retained, and abandoned by individuals and groups. Fortunately, the maps are based on a theory of emotional coherence that can explain why people are attracted to various ideologies. A case can be made that emotional coherence is the main mental mechanism governing people's acquisition and retention of ideologies, producing such less-than-rational processes as motivated inference and fear-driven inference. Moreover, the psychological theory of emotional coherence meshes well with social mechanisms of cognitive and emotional transfer that can explain how ideologies spread through groups of individuals.

THE STRUCTURE OF IDEOLOGIES

The conceptual structure of ideologies can be conveniently displayed using the new method of *cognitive-affective maps* (Thagard, 2010b, 2011, 2012a, 2012b, forthcoming-a, forthcoming-b; Findlay and Thagard, forthcoming; Homer-Dixon et al. 2013; Homer-Dixon et al. 2014). After a brief introduction to this technique, this section presents cognitive-affective maps (CAMs for short) of left-wing and right-wing ideologies.

A cognitive-affective map is a visual representation of the emotional values of a group of interconnected concepts. It employs the following conventions:

1. Ovals represent emotionally positive (pleasurable) elements.
2. Hexagons represent emotionally negative (painful) elements.

3. Rectangles represent elements that are neutral or carry both positive and negative aspects.
4. The thickness of the lines in the shape represents the relative strength of the positive or negative value associated with it.
5. Solid lines represent the relations between elements that are mutually supportive.
6. Dashed lines represent the relations between elements that are incompatible with each other.
7. The thickness of the lines in the connection represents the strength of the positive or negative relation.

When color is available, CAMs conventionally represent positive elements by green ovals, negative ones by red hexagons, and neutral ones by yellow rectangles. Figure 1 schematizes this kind of representation.

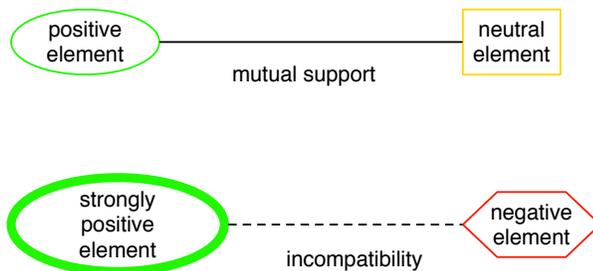


Figure 1. Schema for a cognitive-affective map. Use of color is optional depending on the medium used.

A CAM can be drawn by following these steps:

1. Identify the main concepts, beliefs, goals, and emotions of the person being modeled.
2. Identify these elements as emotionally positive or negative, and accordingly represent them by ovals or hexagons.

3. Identify relations between elements that are either complementary (solid lines) or conflicting (dashed lines).
4. Show the resulting map to other people to see if it captures their understandings of the person and situation.

We can now apply this technique to ideologies.

Figure 2 shows a highly simplified account of a kind of right-wing ideology that is currently popular in many countries, for example in the Republican Party in the United States and in the Conservative parties of the United Kingdom and Canada. The most important positive concept is *freedom*, which is accordingly shown with a thick oval. Freedom shows favorable associations (indicated by solid lines) with other positively valued concepts such as capitalism and private property. These positive values conflict with negative ones such as government regulation, taxation, and non-traditional lifestyles, whose emotional disfavor is shown by hexagons. I have portrayed the concept *government* using a neutral rectangle, indicating the ambivalence of conservatives: they dislike government for taxation and regulation, but appreciate it for its contribution to economic growth and military defense (not shown).

In contrast, figure 3, provides a highly-simplified account of left-wing ideology that is espoused by progressive parties such as the Labor Party in the United Kingdom, the New Democratic Party in Canada, and many European social democratic parties. In the United States, related views occur among the more liberal members of the Democratic Party. In figure 3, the central and most positive concept is *equality*, with links to other emotionally valued concepts such as social welfare and health care. In contrast to the conservative picture in figure 2, *government* is viewed favorably, whereas

capitalism is shown as neutral reflecting ambivalence about its positive contributions to economic growth and negative effects on equality.

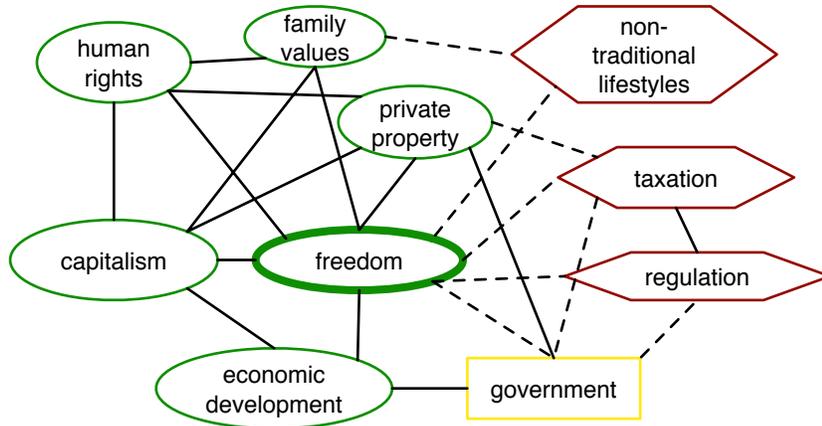


Figure 2. Fragment of the conceptual structure of right-wing (conservative) ideology. Ovals represent emotionally positive concepts, hexagons represent emotionally negative concepts, and rectangles represent emotionally neutral or ambivalent concepts.

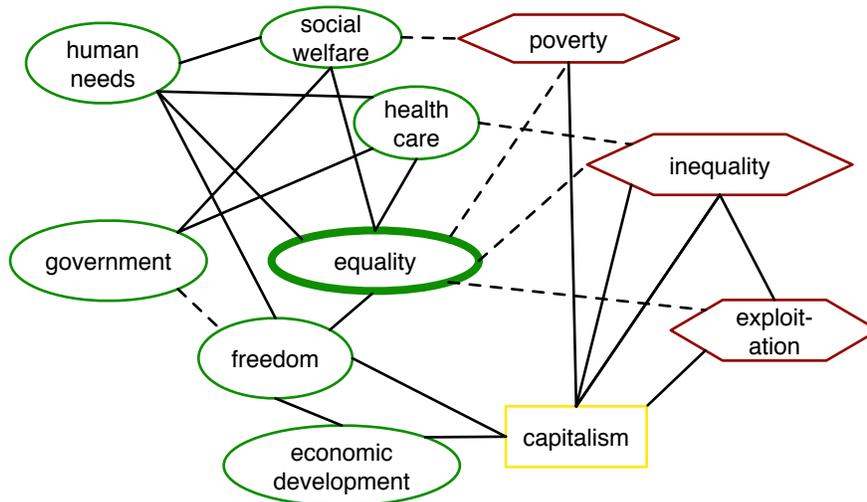


Figure 3. Fragment of the conceptual structure of left-wing (progressive) ideology. Mapping conventions are the same as in figure 2.

The technique of cognitive-affecting mapping is not just a drawing technique, but reflects a theory of emotional coherence that has been used to explain a wide range of phenomena including decision making, trust, and biased decision making (Thagard 2000, 2003, 2006). On this view, people's decisions and other judgments arise from a process of balancing different elements based on their emotional values, or *valences*. The theory of emotional coherence can be summarized in three principles:

1. Elements have positive or negative valences.
2. Elements can have positive or negative emotional connections to other elements.
3. The valence of an element is determined by the valences and acceptability of all the elements to which it is connected.

This theory is implemented in a computational model called "HOTCO" for "hot coherence," in which units (artificial neurons) have valences as well as activations. Positive emotional connections are implemented by mutual excitatory links between units, and negative emotional connections are implemented by mutual inhibitory links between units. The valence of a unit u_j is the sum of the results of multiplying, for all units u_i to which it is linked, the activation of u_i times the valence of u_i , times the weight of the link between u_i and u_j .

The computational model HOTCO (hot coherence) shows precisely how this process can work in neural networks corresponding to cognitive-affective maps:

1. Every node in a CAM can be represented by a unit (artificial neuron) in a neural network.
2. Positive (oval) nodes in a CAM have a corresponding HOTCO unit with positive valence.

3. Negative (hexagon) nodes in a CAM have a corresponding HOTCO unit with negative valence.
4. Complementary connections (solid lines) in a CAM have corresponding excitatory links between the HOTCO units that represent the connected nodes in the CAM.
5. Conflicting connections (dashed lines) in a CAM have corresponding inhibitory links between the HOTCO units that represent the connected nodes in the CAM.

Once they are set up in this way, the HOTCO networks have a major advantage over the CAM diagrams: they come with a set of algorithms for spreading valences and activation among the units to make complex computations, including determinations of emotional coherence. Having concepts represented by single neurons is clearly not neurologically realistic, but HOTCO networks can be implemented in a much more neurologically realistic fashion using distributed representations of concepts in large populations of neurons (Thagard and Aubie, 2008; Thagard, 2010b; Thagard, 2012a). A later section shows how emotional coherence can provide a mechanism to explain why people adopt ideologies.

There are other ways of visualizing emotions besides CAMs. For example, posts on the social network Twitter are displayed on a grid with the dimensions of pleasant vs. unpleasant and active vs. inactive (http://www.csc.ncsu.edu/faculty/healey/tweet_viz/).

ANARCHISM

The right and left ideologies shown in figure 2 and 3 are quite general, but cognitive-affective mapping can also be used to delineate more specific ideologies. Figure 4 presents a map of an ideology that has become remarkably popular among

radical young people since the 1999 Seattle protests concerning globalization (Graeber, 2009; Marshall, 2010). The anarchist CAM depicts a core set of values including equality and solidarity that are used to support several kinds of practical activities, including highly democratic decision making by “spokescouncils” that operate by consensus rather than by voting or hierarchical direction. The anarchist values and practices conflict with negative values and institutions such as authority, capitalism, and especially the state, and the conflict is used to justify direct actions that confront governments.

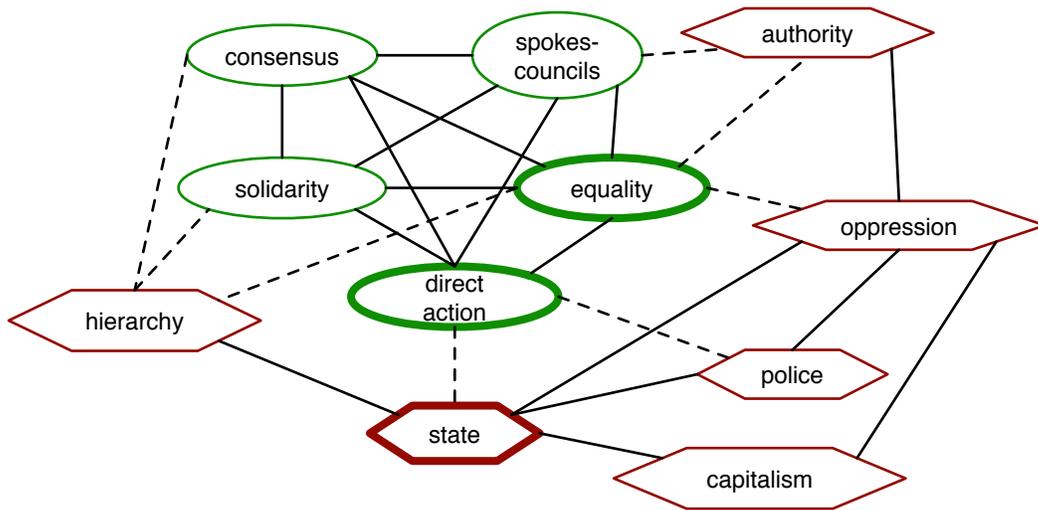


Figure 4. Fragment of the conceptual structure of contemporary anarchism. Mapping conventions are the same as in figure 2.

The anarchist ideology shown in figure 4 had a large influence on the Occupy movement that produced major demonstrations in New York City and hundreds of other cities in 2011. Figure 5 shows displays the emotional values of the most important concepts behind the initial Occupy Wall Street action, which incorporated identification with ordinary people (the 99 per cent) as opposed to the wealthy elite (the 1 per cent).

The analysis in figure 5 was largely derived from a book produced by participants while the occupation was still in progress (Writers for the 99%, 2011).

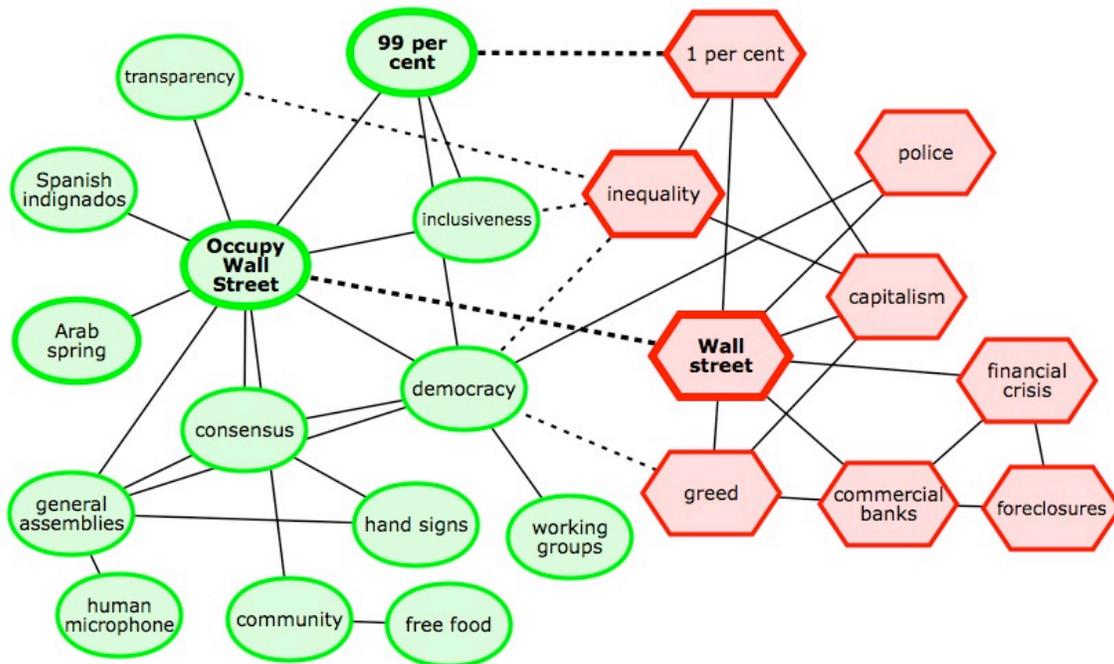


Figure 5. Cognitive-affective map of the Occupy Wall Street movement of 2011. This uses the same conventions as earlier figures, but looks different because it is drawn using the free tool Empathica (<http://cogsci.uwaterloo.ca/empathica.html>).

RIGHT WING SOCIAL MOVEMENTS

CAMS can also be useful in describing and explaining the rise of right-wing social movements such as the Swedish Democrats, the Danish People’s Party, the National Front in France, the neo-Nazi Golden Dawn in Greece, and the Tea Party Movement in the United States. Figures 6 and 7 display CAMs that show mental representations without and with the nationalist solution. The maps below apply to European movements, but not so well to the Tea Party which is more libertarian. Figure

6 displays some of the concerns of citizens that make people worried about their current political situation, and figure 7 shows how a right-wing party can provide an emotionally appealing solution to the negative emotions shown in figure 6. These figures include the specific emotions of anger, fear, hope, and pride, which are beyond the scope of the HOTCO model which only deals with positive and negative valences. Later neural network models of emotion, however, can explain the generation of specific emotions (Thagard and Aubie, 2008; Thagard and Schröder, forthcoming).

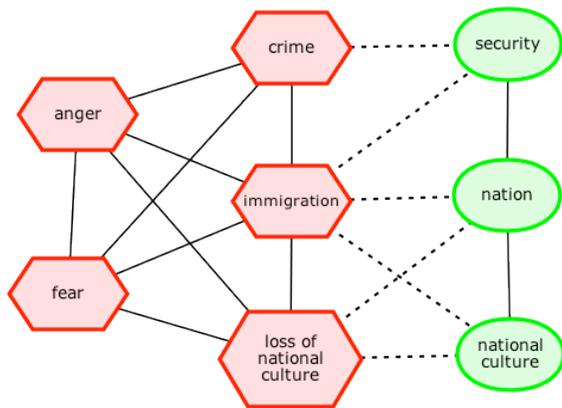


Figure 6. Cognitive-affective map of fear and anger arising from right-wing concerns about immigration and crime.

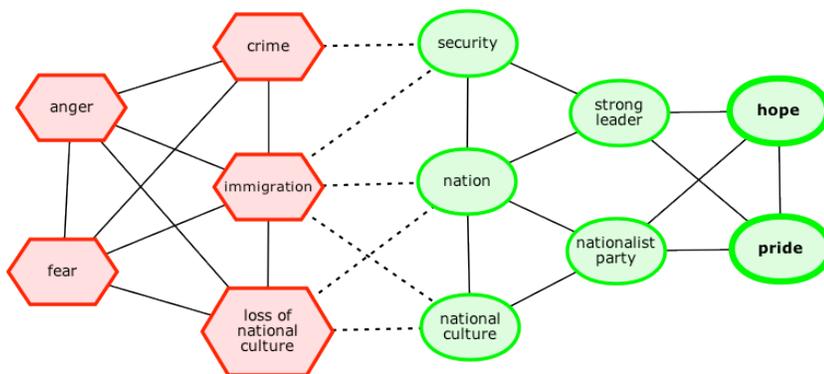


Figure 7. Cognitive-affective map of hope and pride arising from the right-wing prospects of a nationalist party and leader.

EXPLAINING ATROCITIES

In 1994, the Hutu majority in Rwanda slaughtered more than 500,000 members of the Tutsi minority. One of the factors contributing to this action was the explicit development of a Hutu ideology. The role that ideologies play in the causal explanation of atrocities is case-specific, but in general ideologies lead to plans that lead to actions. Figure 8 is a sketch of the causes of the Rwanda massacre, based primarily on Melvern (2004). The cognitive-affective structure of the Hutu ideology is depicted in the CAM shown in figure 9.

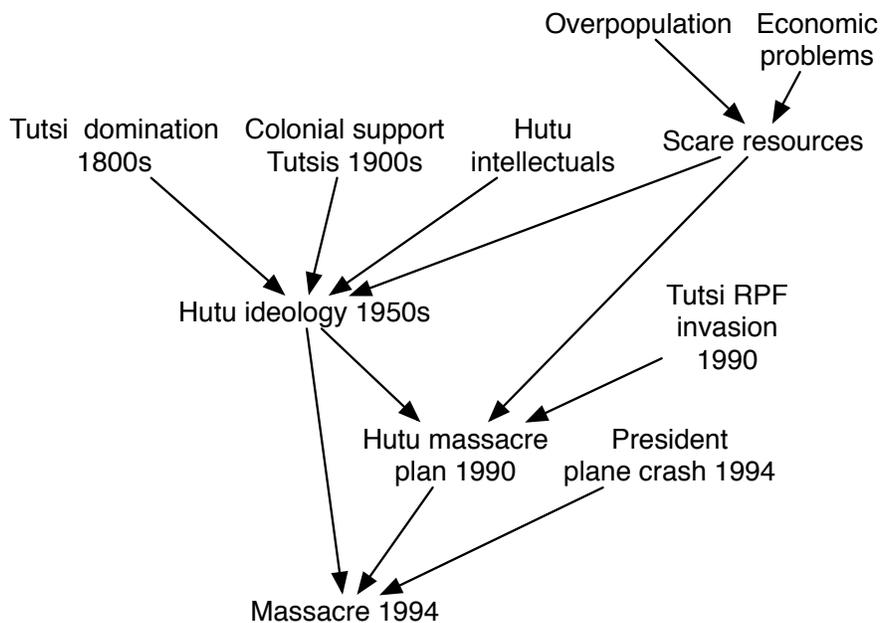


Figure 8. Hutu ideology as one of the causes of the 1994 massacre.

Arrows indicate causality.

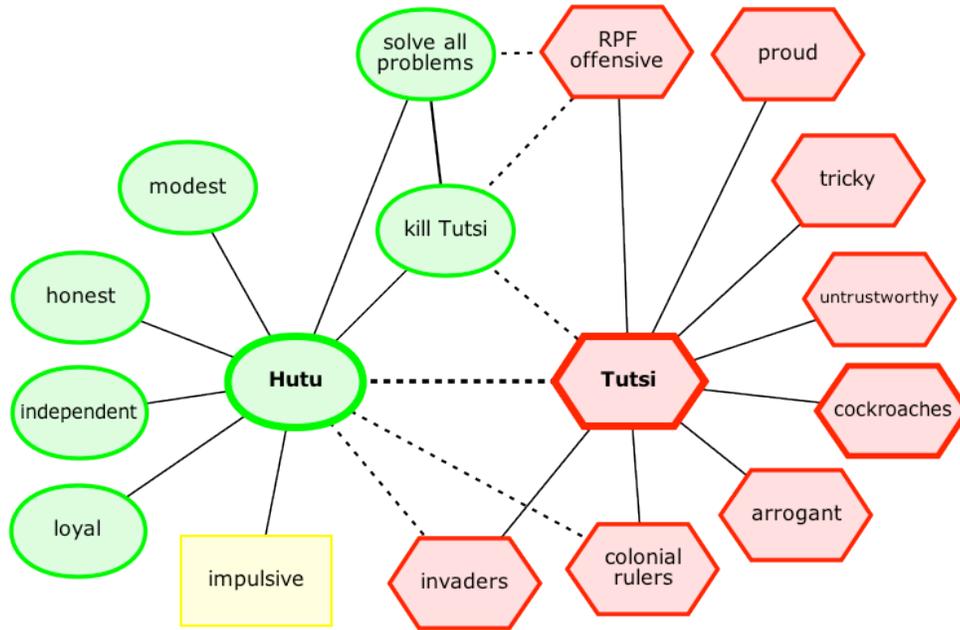


Figure 9. CAM of Hutu ideology, based primarily on Melvern (2004).

Figure 9 could valuably be supplemented by representation of specific emotions, such as the pride associated with the green concepts, and various negative emotions associated with the red concepts: fear, anger, contempt, disgust. These emotions in turn can be linked to actions, such as killing Tutsis. Ideologies and plans are adopted because they fit with the beliefs and goals of the people exposed to them. The social mechanisms by which ideologies and plans spread through groups of individuals are described below.

MULTIMODAL COGNITIVE-AFFECTIVE MAPS

All of the cognitive-affective maps shown so far, as well as those in previous papers, employ verbal concepts such as *equality* and *freedom*. This section extends the technique of cognitive-affective mapping to include nonverbal representations such as visual images, sounds, and gestures. Like verbal concepts, these representations have emotional associations that can be indicated using the same conventions (ovals,

hexagons, links) as the CAMs already portrayed, but they add to the understanding of ideologies important but neglected cognitive and emotional aspects.

It would be easy to draw a CAM of Nazi ideology using verbal concepts such as *Deutschland*, *national socialism*, *Führer*, and so on. Figure 10, however, shows how such a map could be supplemented by powerful nonverbal representations that contribute to the emotional coherence of an ideology. The visual images in figure 10 include Hitler's portrait, which displays strength and determination in contrast to the old and weak Hindenberg who led Germany before Hitler came to power. Hitler is positively associated with the ancient swastika that was adopted by the Nazi party in 1920, and with the Heil Hitler (sieg heil) gesture, which is also a visual image that has an associated sound. The main image shown in figure 10 as incompatible with Nazi symbols depicts an ugly Jew as a gold-loving communist; this image comes from the cover of a 1937 Nazi pamphlet. Finally, the musical note is a placeholder for a collection of songs that were important to the Nazi movement, such as the Horst Wessel song, the German anthem proclaiming "Deutschland Uber Alles", military marches, and Hitler's beloved Wagnerian operas. It is notable that some of the main nonverbal elements of Nazi ideology – the swastika, the Heil Hitler gesture, and the Horst Wessel song – are still illegal in Germany.

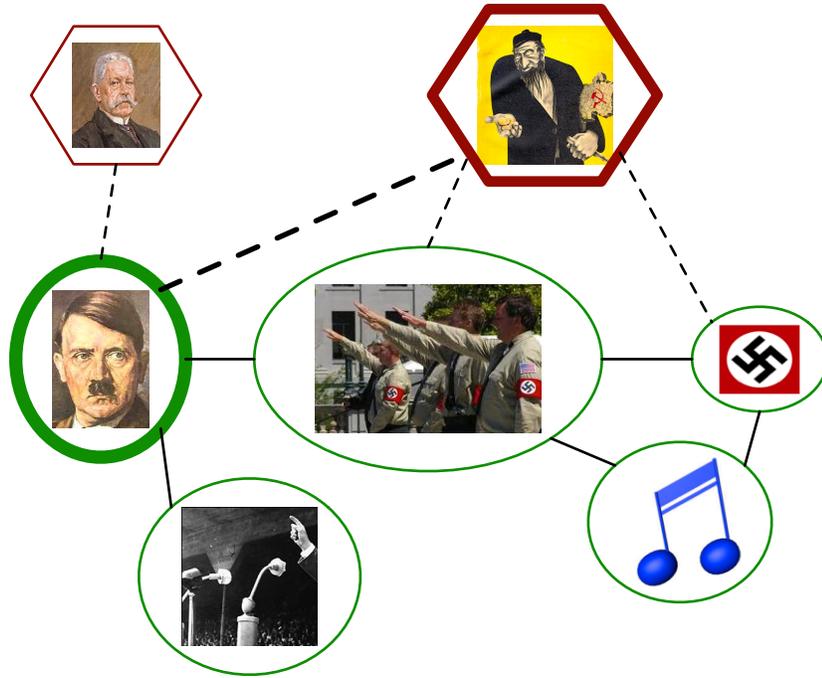


Figure 10. Multimodal cognitive-affective map of Nazi ideology. The mapping conventions are the same as in figure 2, but the elements include visual images, gestures, and sounds.

The rather loose right and left ideologies shown in figures 2 and 3 are too vague and general to have nonverbal symbols associated with them, but all more specific ideologies such as variants of fascism and communism have nonverbal representations that are emotionally important. For example, communism has visual images such as the hammer and sickle and the portrait of Stalin that was ubiquitous in the Soviet Union under his rule. Communism has also had associated songs such as the Internationale and radical folk songs, and the associated gesture of the raised fist. Figure 11 shows some of the visual and auditory images associated with anarchism, including the black (anti-state) flag, the circle-A symbol, the physical activities of the Black Bloc (here shown at the

Toronto G20 protests in 2010), and anti-state punk rock music. Contrasting images and values include the police.

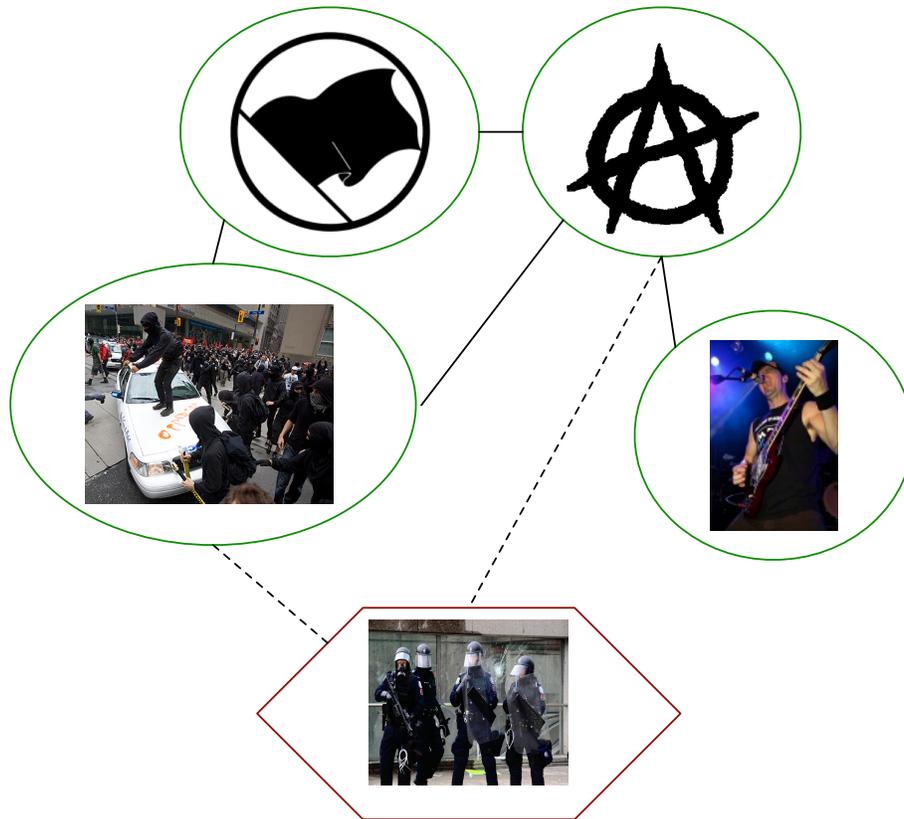


Figure 11. Multimodal cognitive-affective map of parts of anarchist ideology. The mapping conventions are the same as in figure 2, but the elements include visual images, gestures, and sounds.

Nationalisms are also ideologies, and they usually come with a set of nonverbal symbols. For example, pro-American views are associated with visual images such as the stars-and-stripes flag, songs such as The Star-Spangled Banner and God Bless America, gestures such as the hand-on-chest during the pledge of allegiance, and even foods such as apple pie. Religious ideologies can also be represented by cognitive-affective maps that are multimodal as well as verbal. For instance, the Roman Catholic

Church has a wealth of visual and auditory symbols, including cathedrals, crosses, the Pope's hat, prayers, and hymns. In sum, it seems that most ideologies have emotionally important nonverbal representations, and these can be captured in a natural, multimodal expansion of cognitive-affective maps.

The cognitive-affective maps presented so far have been useful for sketching important parts of ideologies, particularly concepts and emotional attitudes. They are not so effective at portraying other important parts, namely beliefs and goals. A full account of the psychological and social origins of ideologies will require a more general cognitive theory that we will now consider.

MENTAL MECHANISMS

In 1920, Hitler's party had fewer than 100 members, but in 1933 the National Socialists received more than 17 million votes (43.9%) in the German federal election (Evans, 2005). How can we explain the rapid spread of Nazi ideology? Explanation should operate both at the individual level, accounting for why individuals such as the philosopher Heidegger became Nazis, and at the social level, accounting for the spread of ideas in groups of people. This section contends that the primary mental mechanism by which individuals come to adopt an ideology is emotional coherence.

According to the theory of emotional coherence, people make decisions and other inferences based on how well competing alternatives fit overall with their beliefs and goals, including the emotional values (valences) that they attach to these representations. Decision making is not a mathematically careful calculation of probabilities and utilities, but rather an emotional assessment of how well opposing actions might accomplish valued goals. For example, an undergraduate student deciding what to do after

graduation might consider several options such as getting a job, going to graduate school, or traveling around the world. These options have different impacts on various goals typical of young adults, such as making money, preparing for an interesting career, and having fun. The priority of these goals for an individual is captured by their emotional valences, which spread to representations of the options which compete for the highest valence. This process can be precisely described using equations for information processing in neural networks, but mathematical details are omitted here. What matters for understanding ideology is that emotional coherence affects not only decisions but also beliefs, by virtue of the phenomenon of motivated inference.

Motivated inference, the tendency to reach conclusions unduly influenced by personal goals, is a well-researched phenomenon in social psychology (Kunda, 1990, 1999; Bastardi, Uhlmann, and Ross, 2011; Redlawsk, Civettini, & Emmerson, 2010). For example, a coffee drinker will be inclined to be skeptical about claims that caffeine has negative health effects, but will tend to be gullible about claims that it has positive health effects. Motivated inference is more complex than mere wishful thinking, in that people do not simply believe whatever makes them happy. Rather, their goals leads them to be selective about how they acquire and evaluate evidence. Emotional coherence easily explains motivated inference: people naturally misinterpret the attractiveness of a conclusion arising from its fit with their goals as attractiveness arising from fit with evidence. For instance, the decision by the O. J. Simpson jury to acquit him of murder charges can be understood as a case of motivated inference arising from the mechanism of emotional coherence (Thagard, 2003).

Emotional coherence can also explain other kinds of inferential distortions that are driven by negative rather than positive emotions. Motivated inference is desire-driven, in that people believe what they want to on the basis of their goals. Another kind of emotional distortion occurs when evaluation of evidence is affected by fears and anxieties. On the face of it, it seems ridiculous that people should adopt beliefs that both lack evidence and make them unhappy, but many instances of this kind of fear-driven inference occur in a wide range of domains, including personal relationships, health, politics, and economics (Thagard and Nussbaum, forthcoming; Elster, 2007, who writes of “countermotivated inference”; Mele, 2001, who writes of “twisted self-deception”).

Fear-driven inference arises from emotional coherence when attempts to rationalize worries away using motivated inference fail: one can swing from irrational exuberance to irrational despair if the negative feelings that arise from considering worrisome outcomes are misinterpreted as evidence supporting the likelihood of those outcomes. In such cases, one’s beliefs cohere with fears for which there is little independent evidence. A famous example is Shakespeare’s Othello, who becomes convinced on the basis of scant evidence that his wife Desdemona is unfaithful to him. But Othello gets caught in a vicious emotional circle in which his fear itself becomes mistaken as evidence that he has something to fear, so that his belief arises from an amplifying feedback loop rather than careful assessment of alternative hypotheses.

A third kind of emotional inference that has not received the attention it deserves is driven by intense anger or rage. Rage-driven inference occurs when people become so angry at what they perceive as wrongs done to them (or to others whom they care about) that they are impelled to take extreme actions that may not be well suited to accomplish

their goals. Radical movements on both the left and right are often driven by anger arising from perceived wrongs, generating zeal to commit extreme acts such as terrorism, attempted revolution, and intense state repression. Rage-driven inference arises from emotional coherence through a chain of connections something like the following: intense anger means that someone has done something very bad, and the anger is itself evidence that they deserve to be punished. It is misleading to characterize the mental process in such verbal terms, making its illogical character all too evident. In the minds of radicals, however, there may be no explicit awareness of the connection between anger and action, so the force of the determination to take extreme measures is concealed. That is not to say that rage-driven inference is always irrational, as sometimes both the anger and the extreme actions that result from it are fully justified, for example in the American civil rights movement of the 1950s and 1960s that included massive civil disobedience. Sometimes ideologies are fully justified by aspects of social and psychological reality.

EMOTIONAL COHERENCE AND IDEOLOGY

The adoption of ideologies is emotionally coherent through the more specific mechanisms of motivated, fear-driven, and rage-driven inference. Consider, for example, the rapid rise during the 1920s and 1930s in support in Germany for Hitler and the Nazi Party. Obviously, there were different factors operating in the millions of Germans who became Hitler supporters, but for many people they included:

- Desire and hope that Hitler could lead Germany out of economic depression and international weakness.

- Fear that, without Hitler, Germany would succumb to communism, which had considerable popular support, and to Jewish influence.
- Anger that Germany had been defeated and humiliated in the Great War.

These emotional components respectively contributed to motivated, fear-driven, and rage-driven inference, all of which combined to make Nazism highly emotionally coherent for many people, including philosophers.

The multimodal cognitive-affective map of Nazism presented in figure 10 captures only part of the multifaceted inference processes that produce adoption of that ideology. Figure 12 provides a richer model of the appeal of Hitler and Nazism to many Germans, showing three of the main sources of emotional reasons to support him. People naturally wanted improvement to the dismal economic situation of Germany in the 1920s and early 1930s, and made the motivated inference that Hitler's peculiar "national socialism" could provide a solution, as it in fact did when military expansion produced a dramatic drop in unemployment. Hitler also gained support by fanning the flames of anti-Semitism and anti-communism. Fear-driven inference served to make people even more afraid of Jews and communists than they already were. Not shown in figure 12 is an additional step of motivated inference in which people are led to believe that they can best manage their enhanced fears about Jews and communists by putting Hitler in charge. Similarly, the rage-based inference that something extreme must be done about Germany's military humiliation feeds into a motivated inference that Hitler is the solution. Many other kinds of potential support for Hitler and the Nazis are not shown in figure 12, for example German nationalism based on cultural traditions involving language, literature, and history. Also not shown in figure 12 are

interconnections between the different kinds of inference: fear of Jews and communists was also exploited by the Nazis through the motivated inference that Hitler would control them.

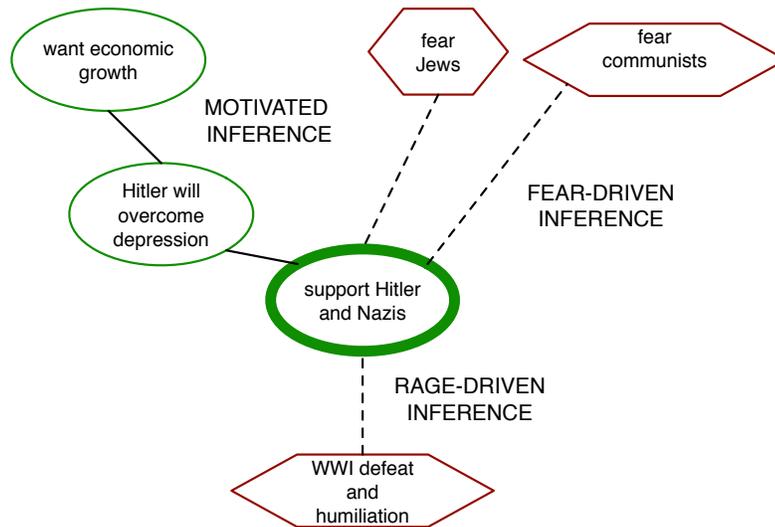


Figure 12. The emotional coherence of the decision to support Hitler and the Nazis, deriving from motivated, fear-driven, and rage-driven inference.

The Nazis, led by Joseph Goebbels, were masters of propaganda, exemplified by Leni Riefenstahl’s 1933 film *The Triumph of the Will* and the appalling 1940 pseudo-documentary *The Eternal Jew*, both available on YouTube. Propaganda provokes a reaction in people building on motivated, fear-driven, and rage-driven inference. Most advertising exploits people’s motivations, using multimodal emotional coherence to convince people that they can be sexier, richer, or healthier merely by purchasing the advertised product.

It would be easy to show that other ideologies, such as various kinds of nationalism, are also based on emotional coherence that generates motivated, fear-driven, and rage-driven inference. For example, American nationalism is sometimes motivated

(the USA is the best country in the world), sometimes fear-driven (the threat of communists or, more recently, Arab terrorists), and sometimes rage-driven (the reaction to the 9/11 attacks). A recent ideological trend is the revival of anarchism since 1999 as part of the anti-globalization movement. A cognitive-affective analysis of this ideological development building on figures 4 and 5 would explain its appeal among young people in terms of several kinds of inference: motivations such as bringing about a more equitable world, fears such as oppressive governments and their police forces, and rage leading to direct action (Graeber, 2009).

Religious ideologies often arise from a combination of motivated and fear-driven inference (Thagard and Nussbaum, forthcoming). Religious leaders intensify people's fear of punishment and death, then incite the motivated inference that salvation can come via religion. Rage-driven inference can also contribute to religion when people are angry at what they see as the moral transgressions of others, generating the motivation to believe in divine retribution.

The discussion so far may have given the impression that ideologies are always unjustifiable distortions that are best avoided. On the contrary, the idea of an "end of ideology" was itself ideological, and no one can operate at a sophisticated political level without an interconnected system of concepts, beliefs, goals, and attitudes. Although inevitably emotional coherence will play a role in the acquisition of an ideology, it is also possible to assemble evidence that can support comparative judgments about the value of differing ideologies. For example, Thagard (2010a) argues that psychological and biological evidence about the nature of human needs, along with political and historical evidence about the quality of life in the world's countries, supports the conclusion that

the best kind of government are ones that incorporate social-democratic values like those shown in figure 3. Although ideologies often arise from motivated, fear-driven, and rage-driven inferences that ignore relevant evidence, it is possible to build and defend a set of concepts, beliefs, goals, and attitudes based on evidence about the nature of human minds and societies. Not all ideologies are evil.

The same emotional psychological mechanisms that lead people to acquire ideologies can be used to explain why they continue to hold ideologies, spurred by ongoing motivated, fear-driven, and rage-driven inferences. But what causes people to abandon or modify ideologies, for example when people became disillusioned with Nazism or communism or various kinds of nationalism? It would be an interesting exercise to model several ways in which people move away from ideologies, including:

- gradual disinterest that operates in the same way that some people slowly lapse from religious beliefs and practices;
- decisive events that lead people to abandon an ideology, for example when many people abandoned communism in 1956 as the result of the Soviet Union's invasion of Hungary and Krushchev's revelations about Stalin's atrocities; and
- replacement of one ideology by a competing one, for example when some American Trotskyists of the 1930s became neo-conservatives.

The mechanisms that cause abandonment of ideologies, like those that lead to their adoption, are not merely psychological, but can also depend on social interactions.

SOCIAL MECHANISMS

A full explanation of the rise of ideologies such as Nazism needs to pay attention, not only to psychological mechanisms like emotional coherence, but also to social

mechanisms by which emotional attitudes spread from one person to another. I will not attempt a comprehensive discussion here, but will merely list with appropriate references a group of methods of emotional communication. All of them contribute, I suspect, to the spread of various ideologies.

1. Mirror neurons. There are neural populations in both monkeys and humans that are activated in similar ways by both actions and perceptions of actions (Rizzolatti and Craighero, 2004). Similar mirroring occurs in the perception and experience of pain, and may occur in the perception and experience of some emotions (Iacoboni, 2008). If I see you displaying an emotion, I can have some of the same neural activity that I would have if I were experiencing the same emotion myself, leading me to actually have that emotion. This process provides a neural mechanism by which emotions can spread from one person to another, leading to the acquisition of desires, fears, and angry reactions.

2. Emotional contagion by mimicry. A more indirect kind of emotional spread occurs via facial and bodily mimicry (Hatfield, Cacioppo, and Rapson, 2004). People naturally mimic the facial expressions of those with whom they interact, inclining them to acquire similar emotional reactions because emotions are in part responses to bodily changes.

3. Attachment-based learning. Minsky (2006) described how emotional attitudes can be easily acquired from people such as parents to whom a person is emotionally attached. People commonly acquire ideologies from their parents and other close associates. Mirror neurons and emotional contagion by mimicry may account for part of this kind of transmission, but verbal communication also contributes.

4. Empathy. In empathic learning, people acquire an emotional response from others by imagining themselves in the others' situations and experiencing emotions similar to theirs. The underlying mechanisms for empathy include basic physiological responses such as mirror neurons and also higher-level cognitive operations such as analogy (Thagard, 2010a). Empathy can be either a direct physiological response or a cognitive construction in which people view themselves as analogous to others and therefore transfer over their emotions.

5. Altruism and sympathy. Except for psychopaths, humans are generally capable of caring for other people and acting towards them altruistically, taking into account the needs of others rather than mere self-interest (Batson, 1991; Hoffman, 2000). A key part of altruism is sympathy, feeling sorry for the misfortunes of others. Through altruism and sympathy, people can acquire emotional responses directed toward the well-being of others.

6. Social cuing. Giner-Sorolla and Espinosa (2011) describe how, in the social context of a group, people's facial expressions can cue negative emotions in their targets. For example, expressions of anger cue guilt, and expressions of disgust cue shame. Thus negative social emotions can be induced in others. This kind of social cuing is unlike the 5 social mechanisms so far discussed, all of which produce in the observer approximately the same emotion as in the person observed: here we get different emotions produced in the observer.

7. Power manipulations. Many social scientists have discussed the importance of power in interpersonal relations (e.g. Mann, 1986). From the perspective of emotions, there seem to be two main ways in which one person gain power over others: by offering

them something they desire, or by offering to protect them from something that they fear. The first kind of power manipulation provokes motivated inference, while the second instigates a combination of fear-driven inference (making them even more afraid than they might be otherwise) and motivated inference (encouraging them to think that the manipulator can protect them). Either way, a person or group achieves power by enhancing peoples' desires, fears, and beliefs about how to manage those desires and fears.

8. Propaganda and other forms of advertising can be effective for such emotional management. For example, propaganda can be used to generate rage-driven inference when it displays the enemy as evil and disgusting and therefore deserving of extreme retribution. One subtle way to make propaganda work is to use text and images to prime associated ideas and behaviors, for example when odious stories images of reviled ethnic groups are used to prime a full negative stereotype. Priming results from mechanisms that operate at neural, psychological, and sociological levels (Schröder and Thagard, 2013) Social media such as Facebook and Twitter can facilitate the spread of propaganda.

These eight social mechanisms all can contribute to the spread of emotions from one individual to another. They complement the psychological mechanism of emotional coherence and the kinds of inference generated by it, showing how emotional information can be transmitted from one person to another leading to emotional change in groups of individuals. Thus ideological change can be a social phenomenon as well as an individual one. Understanding of ideologies as cognitive-affective structures does not assume a kind of methodological individualism in which the behavior of groups is just

the result of the behavior of individuals, because social processes are as important as what goes on inside the head of an individual.

The spread of ideologies in groups instantiates the *principle of social recursion* (Thagard, 2012b): the actions of groups result from the actions of individuals who think of themselves as members of groups. Thinking of oneself as a German, Canadian, Nazi, communist, or social democrat has major effects on one's behaviors and inferences, and can in turn lead to the sorts of social interactions that produce emotional communications that affect psychological processes. The principle of social recursion provides the start of a solution to the problem of the relation between individual agents and social structures such as institutions and states (Giddens, 1984, Wendt, 1999). This person-group (or agent-structure) problem cannot be solved by attempting to reduce the behavior of groups to the behavior of individuals, or by treating groups as unanalyzed wholes. Rather, a solution to the person-group problem requires understanding the interactions between psychological mechanisms such as fear-driven inference and social mechanisms such as emotional contagion.

CONCLUSION

This chapter has tried to show how attention to cognitive-affective structures and mechanisms can help to explain the rise and influence of political ideologies. Ideologies can be informatively analyzed using cognitive-affective maps, including ones that employ multimodal, nonverbal representations. The acquisition and maintenance of ideologies by individuals can be explained by the mechanism of emotional coherence that gives rise to motivated, fear-driven, and rage-driven inferences. The spread of ideologies requires social mechanisms in addition to psychological ones, including at least mirror

neurons, emotional contagion by mimicry, attachment-based learning, empathy, altruistic sympathy, social cuing, and power manipulations.

The explanations of ideological change provided here complement the two main psychological theories of ideology acceptance: system justification theory and terror management theory. According to the former, adoption of ideologies often stems from a psychological motive to defend and justify the status quo (Jost and Hunyady, 2005; Jost, Kay, and Thorisdottir, 2009). For example, political conservatism holds that traditional institutions should be preserved even if they produce social and economic inequality. The cognitive-emotional antecedents of system-justifying ideologies include: needs for order, structure, and closure; perception of a dangerous world, anxiety about death, and system instability. It is easy to see how all of these concerns can lead to the motivated inference that the current system should be maintained. This inference allows personal goals rather than evidence-based beliefs to determine what conclusions are reached concerning political reality.

According to another major psychological approach to ideology, terror management theory, humans are “motivated to quell the potential for terror inherent in the human awareness of mortality by investing in cultural belief systems (or worldviews) that imbue life with meaning, and the individuals who subscribe to them with significance (or self-esteem)” (<http://www.tmt.missouri.edu/>). On this view, thoughts of death can lead to “suppressing death-related thoughts or pushing the problem of death into the distant future by denying one's vulnerability”, and also to “maintaining self-esteem and faith in one's cultural worldview ... to control the potential for anxiety that results from knowing that death is inevitable” (Pyszczynski, Greenberg, and Solomon,

1999, p. 835). Terror management thus appears to rely on motivated inference, adjusting beliefs based on the goal to avoid the anxiety associated with death. Fear-driven inference may also contribute, if obsession with death leads to anxiety that erroneously becomes taken as evidence that it is something fearful. (For reasons not to fear death, see Thagard, 2010a).

Detailed simulations of experimental results would be required to make plausible the conjecture that system justification and terror management theories are special cases of emotional coherence. One problem with both those theories is that they seem better suited to explain conservative ideologies than radical ones such as Nazism, communism, and anarchism. Worldviews that advocate overthrowing the established order hardly contribute to system maintenance or quelling of terror. In contrast, emotional coherence leading to motivated, fear-driven, and rage-driven inference can account for various ideologies that reject conservatism in favor of radical change.

A limitation of this chapter's discussion of the role of emotion in political ideologies is that it has emphasized one central dimension of emotion: evaluation of positive and negative valence. Other relevant dimensions include activity (arousal) and potency (control over action). Thagard and Schröder (forthcoming) provide a much broader neural theory of emotion that can explain the differences among particular emotions such as happiness, fear, and anger. The relevance of specific emotions to ideologies needs further investigation. As the discussion of the rise of Nazism indicated, fear is a major contributor to the impact of ideologies when it facilitates their plausibility and adoption. Ideologies also incite and exploit anger and hate when they identify an external group as responsible for alleged wrongs, for example when Nazis

blamed Jews and Hutus blamed Tutsis for economic problems and national failures. Other negative emotions that interact with valences in ideologies include blame, contempt, resentment, envy, and regret. On the positive side, an ideology can be more attractive when it fosters feelings such as happiness, pride, and hope. A fuller account of the affective structure of political ideologies will need to show how social influences based on the dimensions of activity and potency can generate specific emotions that enhance the appeal of a system of ideas.

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