C H A P T E R 5

Cognitive Complexity:
Sometimes a Boon and Sometimes a Danger to Democracy

Peter Suedfeld

Introduction: Cognitive Interactionism

The approach summarised in this chapter is what I have called ‘cognitive interactionism’ (Suedfeld, 1983). It takes the decision-making, perspective-taking, social perception and information-processing functions of human cognition as its main foci, and the interaction of those functions with the constraints, opportunities and other characteristics of the environment, as its core concern. This view complements, without trying to supplant, more traditional theories of political psychology such as depth psychology (which takes into account unconscious processes), identity politics or any kind of determinism – structural, neurological, genetic or historical.

Some cognitive interactionist research starts by positing and measuring stable individual differences – i.e. traits – in cognition (cognitive styles) and then identifying how people with different levels of these traits function under various politically relevant circumstances. Other researchers do not deny that cognitive styles may exist, but are more interested in states of complexity, patterns of how ideas, decisions, allegiances and behaviours emerge and change under different conditions, and in how these patterns can be used to understand and perhaps forecast political behaviours and events.

This chapter will look at both the trait and the state conceptions of the roles that cognitive complexity may play with regard to democracy.

Complexity of Thought as a Personality Variable

The trait approach to cognitive personality theory has succeeded in identifying a large number of fixed individual differences that govern people’s cognitive processes (Suedfeld, 2000). Several of the theories were developed before the dominance of the cognitive approach to psychology that began in the 1950s, and have been recognised as belonging to it relatively recently (and sometimes controversially).
Authoritarianism as a Cognitive Style

A major example is the concept of authoritarian personality. In its original form (The Authoritarian Personality, Adorno et al., 1950), the researchers who developed the idea used interviews and questionnaires designed to identify traits that hypothetically made the person susceptible to the lure of autocratic, anti-democratic structures and forms of government. These traits included intolerance of ambiguity, adherence to the conventional mores of society and punitiveness toward those who transgressed those mores, suspiciousness of other people (especially members of minority groups), submissiveness to authority figures, aversion to introspection and attitudinal rigidity. Supposedly, these traits were fixed during early life, based to a great extent on parental behaviours toward the child. Adorno et al.’s explanations were mostly based in depth psychology, prominently including Freudian interpretations of child development. One of the lasting contributions of the book is the F-Scale (F for Fascism), still used in personality studies, although a number of alternative measures have been created to correct some of the flaws and fill in some of the gaps that later scholars perceived in the work (e.g. Christie and Jahoda, 1954; Stone, Lederer and Christie, 1993).

At a casual glance, there seems to be no unitary reason why all of the traits packaged under Adorno et al.’s authoritarianism construct should co-vary or be related to each other. Therefore, why is it legitimate to subsume them under one label? Why, for example, should a dislike of stories with ambiguous endings go hand-in-hand with hostility toward people who ignore parking regulations?

The answer to those questions relates the authoritarian personality to cognitive psychology. The relationship among the traits is that they share a bimodal comprehension and assessment of human attributes. In this sense, people are viewed as either ‘we’ or ‘they’, beliefs are either true or false, acts are either moral or immoral. Each pole of every bifurcated dimension is judged as either good or bad. Anything that introduces doubt into the judgement, such as ambiguity, the possible effect of introspection or membership of a group that may have different ideas, is bad. This view is a perfect prototype of what cognitive complexity theories view as a simple cognitive style.

Conceptual Complexity

Among cognitive personality variables studied in the wake of authoritarianism theory has been cognitive complexity, the major focus of this
chapter. Complexity is an aspect of the prevalent way in which a person processes information and makes decisions. Different theories of cognitive complexity define it and measure it in a variety of ways (Goldstein and Blackman, 1978; Schroder and Suedfeld, 1971).

Many complexity theories deal with the structure of thought, not with its content. In other words, they analyse how one thinks, not what one thinks. Any belief, idea or opinion can be thought about, supported or opposed at any level of complexity and, conversely, any level of complexity can generate any given belief, idea or opinion.

An early formulation is the theory of stages of conceptual structure (Harvey, Hunt and Schroder, 1961): a developmental theory proposing four basic belief systems. It proposed that, depending on parental discipline and family structure, children can progress through four sequential stages.

**System I: Reliable unilateral training.** When parents unilaterally lay down rules of thought and conduct, and reliably reinforce compliance (and punish disobedience), the result is a pervasive tendency to be submissive to authority, rules and traditions.

**System II: Unreliable unilateral training.** Parents who teach unilateral rules, but frustrate the child because the rules are not reliably linked to outcomes, create rebellious people who are prone to disobey societal demands and expectations.

**System III: Protective interdependent training.** Families where rules are developed in interactions between the child and the parents, but where the parents intervene to protect the child from disappointment, frustration or harm when the rules do not work, produce people who are concerned with fitting into the group, being liked and conforming to the in-group’s expectations and norms.

**System IV: Informational interdependent training.** Finally, interactive rule development that results in guidelines whose validity is confirmed by the child’s direct experience of positive or negative outcomes (within the limits set by real-life dangers) leads to a personality structure that guides behaviour and thought according to information sought and obtained.

Conceptual complexity theory (Schroder, Driver and Streufert, 1967) is a refinement of conceptual structure theory. It abandons the idea of developmental stages, and looks at complexity as a dimension. The level underlying an individual’s cognitive processes is a function of the person’s levels of openness to information, flexibility in planning, tolerance of ambiguity and uncertainty, recognition of nuanced differences and possible relationships among stimuli (including, ideas, opinions and beliefs), sensitivity to environmental factors and ability to change one’s plans and
positions when appropriate. Two components are involved: differentiation, the ability to perceive more than one dimension or viewpoint when processing information about a stimulus, and integration, the ability to perceive relationships among the differentiated dimensions or points of view. Obviously, differentiation is a prerequisite for integration. The construct is moderately related to IQ, and is a theoretical cousin of such factors as authoritarianism, need for cognition, dogmatism and tolerance of uncertainty. It represents a junction between complexity theory and more traditional concepts of cognitive style.

Conceptual complexity can be measured by a variety of tests, one of the earliest being the semi-projective Paragraph Completion Test or PCT (Schroder et al., 1971). PCT scores range from 1 (no differentiation or integration) through 3 (differentiation without integration) and 5 (integration of differentiated elements) to 7 (integration within a higher-level conceptual schema). The scores of 2, 4 and 6 indicate that some signs of the next highest score are present, but they do not fully meet the criteria for that level.

**Integrative Complexity**

Integrative complexity, IC for short (Suedfeld, Tetlock and Streufert, 1992), is an offshoot of conceptual complexity theory and shares that theory’s general definition of the components that comprise the complexity of thought. It also uses the same 1–7 scoring schema as the PCT. However, it differs from conceptual complexity both in theory and in methodology. Theoretically, the IC approach defines complexity as a mutable state, not a fixed trait; methodologically, it measures complexity in any sample of connected verbal communication, not a specific test such as the PCT; and it can use as its source of materials the spoken, written or electronically recorded utterances that people produce in the course of their ordinary, working or private lives rather than in a laboratory or interview setting. An added refinement is the distinction between elaborative and dialectical complexity, respectively the level exhibited when the text deals with a single dominant theme or point of view or whether it focuses on views or ideas that are in significant tension, such as opposition or dissonance (Conway et al., 2008), such as differing political standpoints.

IC theory focuses on the level of functional complexity – i.e. the level implied by specific behaviours and in specific situations. IC theory’s domain is the dynamic relationship between stimuli, both external (environmental) and internal (organismic and psychological), and functional
complexity. Although trait-like levels may be inferred from multi-
situational stability and correlations between complexity scores and the 
results of personality testing (Coren and Suedfeld, 1995; Tetlock, Peterson
and Berry, 1993), in IC the core concept is complexity as a variable state,
not a fixed trait.

As mentioned above, IC can be measured in any meaningful text, rather 
than only in an established test or task. Following appropriate training in
the use of a detailed manual, scorers abide by a range of instructions and 
examples, in order to minimise the likelihood of bias or other artifacts
contaminating the results (Baker-Brown et al., 1992; Suedfeld, 2010). 
More recently, computer-based scoring systems have also been developed
(Symposium, 2014). They include a programme called ‘AutoIC’ (Conway,
Conway and Houck, 2020), which may solve the major problem in 
measuring IC: i.e. the need for lengthy training of scorers and the labour-
and time-intensiveness of subsequent manual scoring.

Conceptual complexity has often been a selection or classification tool
to study the constancy of cognitive behaviour, as shown by the person’s
complexity level. Integrative complexity tends to be applied to the study of
how complexity levels change as a situation persists or varies, as well as the
link between such temporary variations in IC and the resultant relevant
behaviours. In political psychology, conceptual complexity research is
often used in profiling; IC research is more likely to be tracking.

Profiling is usually multi-trait, measuring complexity among a constel-
lation of traits, in recognition of the many personality characteristics that
influence behaviour in most situations. For example, Hermann (e.g. 2003)
used media interviews to analyse the leadership styles of major political
figures. The traits measured include their belief that they can influence
events, need for power, conceptual complexity, self-esteem, in-group
favouritism, distrust of others and problem versus group-maintenance
orientation. These traits are considered in different combinations, and
the scores of the leader are compared with other leaders from similar
backgrounds and in similar positions. The method is well illustrated in
Hermann’s (2003) chapters presenting a general overview of her method
and the examples of Saddam Hussein and Bill Clinton. Such analyses are
used to predict, for example, how a leader’s personal values, childhood
experiences or understanding of his/her nation’s history might affect his/
her responses to an international controversy. A famous example was the
assessment provided by the late political psychologist, Jerrold Post, to
President Carter, who applied Post’s analyses in the negotiations leading
to the Camp David accords between Israel and Egypt (Riedel, 2020).
IC has mostly been used as the single characteristic being scored, but it has occasionally been measured in conjunction with other variables, e.g. motive imagery and psychological distancing (Suedfeld, Morrison and Kuznar, 2020; Suedfeld, Tetlock and Jhangiani, 2007; Winter, 2007).

**The Relationship of Cognitive Complexity to Democracy**

The characteristics of highly complex functioning are almost a definition of the ways of thought required by a democratic system. They share many hallmarks: the ability to accept and understand the existence of dissenting views and values; to evaluate the legitimacy of those perspectives and react to them accordingly; to make fine distinctions among ideas and ideologies and to integrate them, or parts of them, into a new Gestalt; to be open to new information; to change plans and opinions when the circumstances dictate – regardless of ideology or egotism – and not to jump to conclusions. It seems to follow that low complexity must characterise undemocratic or anti-democratic politicians, political systems, organisations and populations. As we shall see, the evidence does not support such a generalised conclusion.

**A Second Look**

Adorno et al. recognised that, although their focus was on fascistic predilections, authoritarianism can also occur on the political Left, and that it is also possible to be conservative but not authoritarian. Attempts have been made to develop measures more clearly related to specific political beliefs. A mislabeled offshoot, Right-Wing Authoritarianism (RWA; Altemeyer, 1981 and later), is based on three traits that actually are neither logically nor empirically tied to the political implications of the term, ‘right-wing’: submissiveness to established authority, adherence to social norms and punitive hostility toward those who dissent from either. These qualities are obviously found in leftist dictatorships and mass movements, just as in rightist ones, so ‘RWA’ would describe enthusiasts of either.

Although the existence of Left-wing Authoritarianism has been questioned, research closely focused on that construct has empirically confirmed the intuitive belief in its existence (Conway et al., 2017; Regt, Mortelmans and Smits, 2011). The relationship between political adherence and authoritarianism is problematic because scales must measure both the content of the belief system (e.g. Left to Right) and its structural aspect (e.g. authoritarian to democratic) (Conway, Conway and Houck, 2020). This distinction will become crucial in our consideration of integrative complexity.
The difference between complexity, a structural ‘how we think’ characteristic, and authoritarianism, a ‘what we think’ content variable, is pointed up in the negative correlation between Schroder et al.’s Paragraph Completion Test and Adorno et al.’s F-Scale: between $-0.10$ and $-0.40$, varying from study to study based on the participants, the time made available for the PCT and other extraneous factors. For the less politically biased, but equally content-oriented, measure of dogmatism (Rokeach, 1960), the correlations with the PCT are about the same, ranging from $-0.20$ to $-0.40$ (Schroder et al., 1967). Thus, the two variables have some, but not very much, overlap.

**Complexity: Left, Right and Centre**

It is often assumed that liberal ideologies and politicians are democratic and that conservative ones are autocratic. Consequently, there is an understandable inference that higher complexity is the property of the Left. However, researchers comparing the complexity of leftists and rightists have not found a consistent difference between them.

For example, Thoemmes and Conway (2007) found both trait and state complexity in the first-term State of the Union messages of forty-one US presidents, with correlations between IC and personality measures, changes from the beginning of their first term to the end, as well as a variety of political environment factors. Intelligence, historical eminence, liberalism and party affiliation were not significantly correlated with complexity, although trends indicated higher complexity among liberals.

In the 2008 US presidential campaign, each party had three major contenders for the nomination. The collective mean ICs of their campaign speeches and statements were equal, with John Edwards (Democrat) having the highest score of the six men and Barack Obama (Democrat and eventual winner) the lowest (Cassel et al., 2007). This is only one example of the fact that higher IC is not necessarily conducive to electoral victory.

Suedfeld and Ahmadian (2018) measured IC in political texts dealing with the issue of immigration policy. The group of top-level European and North American leaders were chosen as a yoked pair from each country, one supporting relatively free entry to their land and the other demanding more restrictions. The two groups also differed in political party, most of the former belonging to mainstream left-of-centre parties and the latter to conservative ones. Contrary to expectations, the pairs did not differ significantly in IC.

Similar results were obtained among members of university political clubs. IC was higher among supporters of two pragmatic, middle-of-the-road parties than more ideologically Left- or Right-leaning parties.

https://doi.org/10.1017/9781108774871.007 Published online by Cambridge University Press
In the same way, a fierce political controversy over economic development of a natural environment produced higher IC in statements by a scientific committee judging the possible effects and a government group trying to mediate the conflict, than on the part of either pro-development industry personnel or anti-development environmental groups (Lavallee and Suedfeld, 1997). Tetlock, Armor and Peterson (1993) reported basically the same pattern: before the American Civil War, groups supporting a compromise on slavery (no new slave states, but continuing the status quo in those already in the Union) showed higher IC than either pro-slavery advocates or abolitionists.

The malleability of IC is supported by data showing differences as a function of topic domain. For example, Conway et al. (2016) found that, among college students and political candidates, higher IC was generally correlated with increasing topic importance and there were implications of the topic for each politically oriented group, with higher IC when a topic of importance to that particular group was involved. The same tendency has been found in studies of US Senators and both Canadian and British Members of Parliament, as well as individual politicians such as Sir Winston Churchill. Tetlock (1986) suggested that the moderate Left, to which most liberal legislators belong, is more likely to experience value conflict than the moderate Right or either extreme. When two or more of a person’s highly valued principles conflict, complex thought is needed to diminish cognitive dissonance. This explains the skewed curvilinear relationship between political position and complexity. It is also a persuasive and empirically supported view of the extreme Left and Right as equally low in complexity. Their structural similarity may explain how extremists on either side can become enthusiasts of the opposite side’s content when circumstances so dictate (Goodfellow, 1992; Koehler, 2020).

Complexity: Up and Down

IC can change in response to personal and environmental circumstances. For example, the finding that higher IC is exhibited by political incumbents than by challengers is quite consistent, despite some exceptions. It has been confirmed in studies of democratic election campaigns. Critics can afford to be unsubtle, admitting no virtue in the opponent’s policies or their outcomes, while the defence must be more nuanced, explaining or excusing imperfect results and occasional outright failures while in power. Indicating a reduction in tension, there is a tendency for political winners to show a rise in IC after their victory, at least until the next election approaches.
The same tendency, for IC to drop as stress increases and to rise when stress is resolved, was found in General Robert E. Lee’s life. Commanding the Army of Northern Virginia, Lee led a string of successful battles against larger forces, led by commanders whose IC was lower than his. Lee’s IC dropped over the course of the war, as the Confederacy succumbed to the Union’s superiority in manpower, logistics and funds, and when he faced a general whose IC was higher than his own (U. S. Grant). When Lee freed himself and his troops of further fruitless fighting, at Appomattox, there was an immediate jump in his IC. It remained high through the rest of his life (Suedfeld, Cooten and McCormick, 1986).

However, stress is not the only influence on IC levels. Among the leaders of eventually victorious revolutions, those whose rhetoric is low in IC during the combat phase but rises after they take power (e.g. Lenin, Cromwell) have more successful post-revolution careers than those who are either complex during the fighting (e.g. Alexander Hamilton) or fail to become more complex afterward (Trotsky, Guevara). The reason is probably the different requirements of the two positions: single-mindedness and implacability while fighting, but flexibility in negotiations, policies and political relationships as peacetime civil leaders (Suedfeld and Rank, 1976).

Last, it seems that the ability to resist ‘disruptive stress’ – which has the effect of reducing IC in the face of adversity or difficulty – may be connected to successful problem-solving. IC measurement of Andrei Gromyko, who managed to fill high-level Soviet diplomatic posts from 1939 to 1988 (Wallace and Suedfeld, 1988), showed him to be imperturbable in the face of both domestic and international crises. In fact, although his pre-crisis scores were about the same as those of his colleagues, they increased markedly during crises. Among sixteen important Soviet and American statesmen, Gromyko was the only one who did not show the usual IC drop under stress. A follow-up study (Suedfeld, 2014) showed an increase or no change in IC in response to stressful events among fourteen of twenty-one of history’s outstanding political and/or military leaders, from Julius Caesar to Mao Zedong, an impressive exception to the usual reaction. ‘Immunity’ to disruptive stress may also occur at relatively low IC, as in the case of President Bill Clinton (Suedfeld, 1994).

IC and Political Events: A Brief Review

Although IC measurement has been used to study a wide range of topics, much of it has focused on political decisions. In this area, the importance of complexity as an expendable but limited resource becomes crucial.
Compared to simple thinking, complex thinking uses more resources. It takes more time, collects and considers more information, processes it more fully and carefully, and requires the generation and consideration of more alternatives and plans. Consequently, more cognitive resources and energy must be expended than in thinking at a simpler level. In political decisions, it may also expend more extrinsic resources such as the number and time of staff, gaining access to more information sources, cyber options, surveillance/intelligence sources, etc. However, I remind the reader that more complex thought or decision is not necessarily better – not in theory, practical application or morality. Different levels of complexity are appropriate for different situations.

Intrapersonal economy, i.e. expending the minimal level of time and energy needed to reach a goal, leads to the processing of information at the lowest level of IC that is feasible, has a high probability of success and is within the capacity of the individual. Psychological research has shown that there are conditions that narrow cognitive scope, including a wide range of stressors: danger, fatigue, illness, information overload, time pressure, the nearness of death, among many others. To the extent that these are present in a problem situation, they tend to decrease the level of complexity that is engaged by the solver. They also raise the probability of overlearned reactions being chosen, such as standard operating procedures or drilled movements: again, a low-complexity response – and one that in many emergencies is optimal (Suedfeld, 1992a).

Other factors, such as being accountable for one’s actions and utterances, addressing a neutral or hostile audience, or having to reconcile conflict among important values, may have the opposite effect (Levi and Tetlock, 1980; Tetlock, 1983, 1986). A seldom-noted set of findings has pointed to a difference in the impact of different areas of stress: adverse personal events tend to be associated with increased IC, whereas professional or societal setbacks and dangers decrease it. This pattern, which may be related to the individual’s perceived ability to affect the outcome of the problem, has been observed in eminent authors (Porter and Suedfeld, 1981), as well as famous people across different walks of life and historical eras (Suedfeld and Bluck, 1993; Suedfeld and Granatstein, 1995).

IC research began with a focus on political psychology, and the study of international crisis decision-making has been one of its continuing concerns. During major crises, any or all of the stressors mentioned above are likely to impinge on the problem-solving processes of national leaders. Suedfeld’s (1992a) cognitive manager model likens the sequence of those processes to Selye’s General Adaptation Syndrome (1956).
problem first appears, there may be an immediate startle effect, with the
leader or leadership group assessing the problem without subtle analysis
(i.e. at a low level of complexity). Leaders consider whether it is important
and urgent enough – within the context of the government’s problem
environment – to be dealt with immediately (Selye’s stage of ‘alarm’).

If the answer is ‘Yes’, cognitive resources are dedicated to finding a
solution (Selye’s ‘resistance’ phase), in other words, to coping. The leaders
must decide which of their resources should be devoted, how intensely and
for how long, with IC rising synchronically with those decisions. The level
of IC involved is a function of the feasibility a solution is understood to
require and can be adjusted in response to feedback regarding progress
toward an acceptable solution.

If no acceptable solution is found within the time and resources avail-
able, or if too many simultaneous problems requiring attention arise in the
same time period, cognitive resources may be exhausted. If, consequently,
one of the plans has worked satisfactorily, the leaders are left tired,
frustrated and at an impasse (the stage of ‘exhaustion’); IC drops and a
solution is found that may involve giving up on the problem, or trans-
ferring it to another realm of discourse and another set of problem-solvers.
The prototypical move at this stage of an international confrontation for a
national leadership is to declare war and turn the matter over to the
military; in a domestic confrontation, to turn it over to the internal
security apparatus. Although the other major option in such a case is to
concede or surrender, that is a solution that is found only in cases of
extreme cognitive, emotional and usually material depletion.

We have to remember that the link between IC and democracy may or
may not be causal, and that our argument that there is such a relationship
must necessarily be indirect and inferential. Stress is known to narrow
information search and attentional focus; it is also known to strengthen
already dominant response tendencies. On the political level, for both
leaders and followers, these changes imply decreased tolerance of criticism
or opposition, reduced consideration of alternative policies, discomfort
with delay and uncertainty, and stronger adherence to overlearned, tradi-
tional approaches – all antithetical to democracy. These phenomena can be
related to a decrease in IC.

On the other hand, although stress may generally decrease IC, it may
also motivate some leaders who are already high in trait complexity to
consider new information, explore more options and plans and consult
new sources of advice – potentially with highly successful outcomes. It
could also motivate the electorate to consider and choose new leaders who
have those tendencies. Such changes would be in the direction of higher IC.

The extant literature on this issue has favoured the hypothesis that stress will reduce the complexity of leaders’ thinking. The best-documented topic in this context is the measurement of IC prior to and during war.

The association of IC with the large-scale threat and stress of national-level armed conflict has been studied extensively, with consistent results. Starting three to six months prior to the outbreak of war, leaders – heads of government or state, ministers of defence and foreign relations, diplomats and government spokespersons – show substantial decreases in complexity. This is true whether the war is the culmination of a cycle of increasing hostility and frustration (e.g. World War I), a major spike of open warfare in a long-duration intractable conflict (e.g. India and Pakistan) or a strategic surprise attack (e.g. Pearl Harbor). In the last category, only the eventual attacker shows the decrease in IC ahead of time, but, once the attack has occurred, both sides simplify to the same level. During crises that end without war (the Berlin Blockade, the Cuban Missile Crisis), IC mostly remains stable or even rises (reviewed in Suedfeld, 2010).

How Widespread Are IC Changes?

Relatively few studies have specifically addressed the issue of how international relations affect the IC of individuals who have no decision-making power and are not personally involved in the search for crisis resolution. However, there are some pieces of evidence that point the way.

Editorials published during the Cold War (1947–1982) in the leading newspapers of the United States of America, Canada and the USSR were sampled. The focus was on texts dealing with any of the other two nations or the People’s Republic of China. Although Pravda, a Soviet government-controlled publication, was expected to conform to the party line, there was a question of whether independent and frequently critical newspapers (the New York Times and the Toronto Globe and Mail) would continue to exhibit such freedom during times of increased international friction (Suedfeld, 1992b). The IC of the editorials in all three newspapers was significantly higher during periods when bilateral events were more positive and relations presumably more relaxed. Both US and Canadian newspapers exhibited significantly higher IC than Pravda, but did not differ significantly from each other.
Another relevant study (Suedfeld, 1981) calculated IC levels in editorials of the *Bulletin of the Atomic Scientists*, as the magazine’s famous ‘Doomsday Clock’ approached the fateful midnight point or retreated further from it, showing the editors’ judgement of the danger of nuclear war. Editorials were categorised as reflecting high tension (clock hands at 11:55 or closer to midnight), medium tension (11:50–11:54) or low tension (10:49 or earlier). Mean IC scores on the seven-point scale were 1.62, 2.87 and 3.05 respectively. Importantly, the editorials being scored for IC rarely dealt with the situation that determined the setting of the clock hands: the levels of IC thus reflected the general effect of changing levels of stress on the writing of editorials, mostly by eminent scientists with significant degrees of autonomy from the government.

A related piece of research repeated the same stress-IC analysis in presidential addresses of the American Psychological Association (APA) (Suedfeld, 1985). All eighty-five published speeches from the beginning of the APA in 1894 to the last one before data collection was finished in 1981 were scored for IC. Compared with speeches given in the years before and after each major war involving the United States of America during that period (the Spanish–American War, the two World Wars and the Vietnam War), speeches by APA presidents who served during a war were significantly lower in IC than those before or after the war. The Korean War was excluded because it began chronologically too close to the end of World War II for the before-and-after comparisons to be made. To test the effect of other kinds of national stress, the addresses given during the years before and during ten major economic downturns were compared. Although IC was again lower during than before the event, this difference did not reach statistical significance.

As in the other studies in this section, it is clear that wars have the effect of reducing cognitive complexity not only among governmental decision-makers, but among the population – at least among a population of elite scientists.

There is another relevant category of research, which does not directly measure the effects of societal stress on cognitive complexity, but uses data from which some tentative inferences may be made. In general, proxy variables are used rather than direct measures of complexity, so a short summary of the reports will suffice.

Basically, these studies look for associations between adverse conditions in society, often loosely labelled ‘threats’ (as I use ‘stressor’, although, in my usage, not all stressors are threats), and some behaviours that the author considers to be a sign of growing authoritarianism. As discussed
earlier, authoritarianism in its original formulation goes far beyond mere cognitive simplicity, although the implication is that high authoritarianism and low complexity go together. In what follows, measures (and sometimes just impressions) of authoritarianism are sometimes taken as a proxy for complexity. This strategy is used because relatively few such studies actually measure complexity; but the results should be considered with the caveat that the two variables are not identical.

Public IC in Stressful Times

In democratic states, it is likely (and desired) that the government’s relations with other countries reflect the feelings of the people, both opinion leaders and the general public, who are not involved in the government. In both democratic and non-democratic systems, the government is likely to try to foster such agreement; in the former, if the attempt fails, the government is more likely to change its stance to accommodate the popular will. Such a change may happen in dictatorships as well, but is less likely to occur without eventual regime change.

In situations of nationwide stressors, such as hostile though non-violent confrontations with other countries, civil unrest, terrorism, natural or anthropogenic disasters, economic depressions, lethal epidemics and so on, leaders and citizens both are likely to manifest the same tendencies as in pre-war and war periods. That is, an early recognition of the crisis may increase general complexity, but prolonged and perhaps even increased suffering and danger are likely to lead to decisions indicating lower IC on the part of the government and the people alike. For government at that point, the tendency would be to dispense with democratic forms, especially those that may hamper the development and application of drastic measures to deal with the problems.

The people’s responses may be characterised by either a more docile or even enthusiastic acceptance of infringements on civil and human rights (as is often the case during wartime) or, in at least part of the population, increasingly extreme, determined and possibly violent resistance up to and including revolution. Historical examples show a plethora of episodes in which nations under stress moved away from democratic laws, customs and traditions – justified by government as necessary to deal with the ‘crisis’ – which were accepted, sometimes reluctantly and sometimes enthusiastically, by the populace. The rise of dictatorships in the newly democratised nations of Western and Central Europe as the Great Depression destroyed their economies in the 1930s is only one historical
example. The attraction of undemocratic organisations during stressful times is not limited to politics: for example, the conversion successes of authoritarian religious sects during the Great Depression in the United States of America has also been documented (Sales, 1972).

The 2020 worldwide pandemic occasioned autocratic rules promulgated by governments in complete disregard of legal, and often constitutional, civil liberties of the population. These included the regimentation of business openings and closures, private gatherings, religious services, political meetings, educational activities, recreational facilities, interpersonal distancing, etc. Even the deliberations of legislative and judicial bodies became subjected to interference, with heads of government and ruling parties making unilateral decisions rapidly and with minimal, if any, information search or consultation. The point is not whether these decisions were wise, appropriate or effective; I mention them as demonstrating the proliferation of low-complexity thinking under stress and pressure.

It would be facile, and unscientific in the absence of actual data, to cite events in specific nations as they have tried to deal with the COVID-19 pandemic and its assorted economic and social effects. Anecdotes are not data, as the cliché goes; but enough anecdotes illustrating the same points should be taken seriously enough to initiate a search for data, especially in polities where data-based decisions and conclusions are valued. News media around the world have documented dictatorial efforts of governments to enforce curfews, social distancing, the wearing of protective masks, vaccinations, prohibition or severe limiting of group events and even visits among family members; and the increasing amount and prominence of resistance against those efforts. In some jurisdictions, including the federal Parliament of Canada, legislative assemblies have reduced their meetings and debates, allowing the Executive to impose and enforce tax increases, business closures, travel restrictions, quarantine rules, etc. The responses of opposition parties and the citizenry have often been angry and rebellious. Governmental response has sometimes clearly reflected the view that legal niceties could be abandoned during the pandemic.1 All of these are incursions upon democracy, and scholars interested in IC may well collect the documents related to them. At the same time, the violations of

1 Here is an example: ‘On April 3, the town of Lakewood [New Jersey, P. S.] broke up an Orthodox Jewish funeral for a local rabbi and charged 15 mourners with violating lockdown edicts. Pressed by Fox News Channel’s Tucker Carlson to explain where the authority to abridge the right to worship could be found in the Constitution, the governor [Phil Murphy] explained that he “wasn’t thinking of the Bill of Rights” when he issued the order’ (Rothman, 2020).
democracy seem fairly limited (Joffee, 2020), and do not – at least, not as yet – justify ‘the sky is falling’ panic of some political commentators.

**Complexity: Good or Bad**

Most commentators and researchers tacitly assume that high complexity is preferable to low, but the basic theory explicitly rejects such assumptions: it insists that either high or low IC decisions can be appropriate under different circumstances. The same is true of democratic and undemocratic government actions. As one frequently cited example goes, ‘When the sergeant yells, “Hit the ground!”’, it is not a good time for collecting extensive information, considering different aspects of the situation and of possible responses and maintaining flexibility of decisions – in other words, a high-IC approach to the decision. Similarly, it may not be a good time for debate and democratic voting.

Occasions when rapid decisions are crucial are not the only ones in which low IC may be preferable to high. When faced with an implacable and dangerous enemy, open-mindedness, empathy and the search for compromise may be deadly. In the Munich negotiations of 1938, UK Prime Minister Neville Chamberlain’s complexity was considerably higher than that of Adolf Hitler (Tetlock and Tyler, 1996). The agreement hammered out in conference seemed to be a compromise between Hitler’s demands and the wish of Britain and France to maintain the peace while protecting Czech security (Czechoslovakia was not consulted). Chamberlain returned to England proclaiming that he had assured an honourable peace ‘for our time’; Hitler started World War II about a year later. Chamberlain became the symbol of appeasement, and Churchill (whose rhetorical style was also lower in IC than Chamberlain’s) became the heroic prime minister whose rhetoric inspired the Western defence of democracy against Nazism, and later against Stalinist Communism.

Tetlock and Tyler (1996) provide a succinct list of characteristics that reduce the advantages of high IC. Decision-makers functioning at high levels are more prone to the ‘dilution effect’, placing too much emphasis on unimportant and sometimes irrelevant factors; they are easily distracted; they try hard to avoid responsibility for decisions that could harm others, even when not making those decisions ends up harming more, perhaps many more, people (the Munich example is a prototype here); they are willing to compromise basic values and principles that should be defended at almost any cost. The defence of democracy may well be one of those.
IC Training for Democracy

If we consider IC a characteristic that changes in response to changes in the stimulus environment, we may think about how to modify it for various purposes. To begin with, we should consider the possibility that any change will be limited in scope. Suspending, for the moment, our insistence that any level of IC can be optimal, depending on the circumstances, we may posit that we can identify circumstances for the desirability of either the high or the low part of the complexity dimension. Historical cases of deradicalisation illustrate the importance of cognition and the difference between the content and structure of thought. For example, attempts to change the content of hostile thinking could include ideological topics, religion, cultural influences, social connections, etc., while attempted change to the structure of thought concerns flexibility of thought, trade-offs between alternatives, perspective-taking and synthesis between recognised differentiations and higher-order concepts (Suedfeld et al., 1992).

This can be done indirectly, by manipulating the circumstances of the task performance. Knowing a list of stimulus factors that affect IC, researchers can change those factors to increase or decrease the probability of different levels of complexity in the response. For example, putting an experimental participant under stress (sleep or food deprivation, the cold pressor test, time pressure, etc) will in most cases result in relatively low IC in written materials; arousing value conflict or presenting highly complex ‘model passages’ will raise it. These are obvious and at this point not very interesting manipulations, regardless of how effective they may be.

Much more interesting have been programmes aimed at changing negative intergroup attitudes by familiarising participants with the principles of high-IC cognition. We know that a negative correlation exists between IC and pro-violence orientations among radical and extremist groups (e.g. Conway et al., 2011; Suedfeld, Cross and Logan, 2013). The IC Thinking research group at Cambridge University used that fact to design programmes to reduce intergroup hostility among Christian sects and between Muslim youths and the wider British population in the UK (e.g. Boyd-MacMillan et al, 2016; Boyd-MacMillan, 2016). The IC-focused approach can be used to create openness to alternative viewpoints (e.g. Koehler, 2017; Savage and Liht, 2008), and thus to show the contending parties that their views of themselves and the world can be reconceptualised to enable cooperation or collaboration while holding on to their core values.

The interventions worked, and the researchers went on to develop multidimensional programmes with a major emphasis on the raising of
participant IC. These are tailored to specific countries and groups in Europe and Africa (so far, some eighty projects in eight countries) and are designed to enable participants to choose to turn away from radical and violent movements. Collaboration with a Pakistan programme involved reintegrating former militants in their communities (Nemr and Savage, 2019). More recently, the Cambridge Partnership for Education, UK, has been developing educational materials under the aegis of UNICEF for children of migrants, refugees, asylum seekers, and displaced families in general. The result was the IC-ADAPT Consortium with members and consultants from a number of countries, and the creation of a detailed and comprehensive plan, the ‘Learning Passport’, which includes IC-oriented material in its section on Social Emotional Learning (https://www.cambridge.org/partnership/learning-passport).

Conclusion

This chapter has traced the development of theory, research and applications connecting democracy and integrative complexity. Beginning with social psychological experiments, the research progressed to field studies and ‘assessment at a distance’ content analyses of texts, trying to maintain as much scientific rigour as possible while studying the behaviour of individuals in the course of their daily lives and thoughts. The research has supported the essential aspects of the theory, and has moved into the application of the work to the inculcation of positive social values and practices among individuals who were at risk of, or had actually been involved in, ideologically motivated antisocial actions.

Notes and Acknowledgements

Space limits dictated that many studies were referred to, but not individually cited; the author will supply such citations if requested: psuedfeld@psych.ubc.ca.

I thank the Social Sciences Research Council of Canada, the Strategic Multilayer Assessment programme administered by the University of Maryland and subsequently by Arizona State University, and the University of British Columbia for funding years of my work on integrative complexity. I am also grateful to many friends, colleagues and students for their part in building the IC structure. Philip E. Tetlock and Lucian G. Conway III deserve special mention, as does Phyllis J. Johnson for her perceptive critical reading and comments on many manuscripts.

2 Full disclosure: I have acted as a consultant to the project.
REFERENCES


terrorism and responses to it (pp. 61–68). Washington, DC; Strategic Multilayer Assessment Occasional White Paper.


