

The Need for Cognitive Closure

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Democratic theorists have long espoused Gabriel Tarde's view that democracy is based on difference. These differences are ubiquitous, manifesting themselves across institutions, political parties, and individuals, and generating considerable variance in political opinion formation and voting behavior. Within the realm of political communication, particularly in the many recent studies of political deliberation, scholars have become increasingly concerned with the antecedents and outcomes of citizens' exposure to divergent points of view in political discussion (see Held, 2006).

Such exposure to disagreement has been associated with a variety of individual-level outcomes in the empirical literature, including citizens' propensity to engage in political discussion with others (see Scheufele & Moy, 2000) and to hold considered opinions that take into account a multitude of perspectives (Luskin, Fishkin, & Jowell, 2002). A natural consequence of this exposure to dissonant views then is the body and quality of information that citizens glean and use in their decision-making processes. Outcomes notwithstanding, what predicts exposure to dissonant views? Researchers have identified several variables conditioning people's willingness to speak up in the face of political opposition such as attitude certainty (Matthes, Rios Morrison, & Schemer, 2010) and communication apprehension (Willnat, Lee, & Detenber, 2002). Only more recently have researchers begun to investigate broad ("Big Five") *personality traits* as influencing individuals' overall frequency of political discussion and the

degree to which they tend to seek or avoid exposure to disagreement in discussion (Gerber, Huber, Doherty, & Dowling, 2012; Mondak, 2010) and a broad range of media sources for political information (Gerber, Huber, Doherty, & Dowling, 2011). Our proposal extends this research by examining the role of individuals' *cognitive style* for their individual disagreement-avoidance behaviors in the U.S. context. Specifically, we propose the inclusion of a novel short version of the *Need for Closure Scale* (NFCS, Webster & Kruglanski, 1994), the NFCS-5.

Reasons for Including a Measure of the Need for Closure (NFC)

Theoretical motivations

The normative concerns articulated above speak to the significance of studying need for closure. As a dispositional construct, the need for cognitive closure reflects individuals' desire for predictability, their preference for structure and order, their discomfort with ambiguity, their decisiveness, and their closed-mindedness (Webster & Kruglanski, 1994). Since its formulation two decades ago, it has been validated repeatedly as a single coherent construct comprising these five facets (Roets & Van Hiel, 2007; also Kruglanski, Dechesne, Orehek, & Pierro, 2009).

To date, no general survey in the social sciences has successfully implemented a psychometric measure of NFC, which has severely restricted opportunities for analysis of its role in public opinion formation and political communication processes. For example, including the NFC battery will allow for replication of results indicating its association with political conservatism (e.g., Jost, Glaser, Kruglanski, & Sulloway, 2003; Kimmelmeier, 1997; Kossowska & Van Hiel, 2003). In addition, one key theoretical expectation based on motivated cognition theory situates need for cognitive closure as an antecedent to frequency of political discussion, and identifies it as a factor that moderates the relationship between exposure to disagreement and frequency of political discussion. However, we should emphasize that the

attitudinal, cognitive and behavioral outcomes of engaging in political talk are numerous – particularly as they relate to electoral behavior. For instance, given the highly fragmented information environment, it would be theoretically useful to identify how NFC links to perceptions of political bias in social network media as well as consumption of content from these and traditional political information outlets. If connected with campaign-related instruments, these data also would allow us to empirically link NFC with processing of televised debates and campaign advertisements, ultimately allowing us to better understand the conditions under which specific campaign-related media content can have strong effects.

Analytical motivations

Recent years have witnessed a resurgence of scholarly interest in the cognitive and motivational sources of political attitudes and behaviors. This is why the 2006 ANES Pilot Study included a short, five-item instrument to measure the NFC. Unfortunately the attempt to validate this measure was not successful, as the authors of the proposed items noted in their final report (Federico, Jost, Pierro, & Kruglanski, 2007). No effort has been undertaken since to construct a more valid general-survey measure of NFC, although a 14-item version of the 42-item original scale was deployed in a nationally representative survey (Federico, Deason, & Fisher, 2012). Instead, most subsequent research on how NFC influences political attitudes and behaviors has been confined to nonprobability samples, mostly composed of students or other convenient populations (e.g., Chirumbolo, Areni, & Sensales, 2004; Cornelis & Van Hiel, 2006; Golec de Zavala & Van Bergh, 2007; Kimmelmeier, 1997; Kossowska & Van Hiel, 2003; Thórisdóttir & Jost, 2011; Van Hiel, Pandelaere, & Duriez, 2004). Consequently, advancing the study of NFC's political functions requires moving from the small scale of convenience samples and research labs to studies of the wider public (Roets, Kruglanski, Kossowska, Pierro, & Hong, 2015).

Evidence for the Psychometric Quality of the NFCS-5

To date, the best-validated short NFC scale is the NFCS-15 (Roets & Van Hiel, 2011). Since a 15-item scale still is too long for inclusion into regular ANES studies, we propose an even more economic, five-item measure of NFC, the NFCS-5, based on the NFCS-15. As with the abbreviation of any established scale, item selection for the NFCS-5 was designed to minimize the loss of content coverage and reliability – namely, by including the highest-loading item on each of the five NFC dimensions identified by Roets and Van Hiel (2011).

After initial item selection, the NFCS-5 was included in three independent, web-administered studies that produced evidence of its (1) factorial structure and internal consistency reliability, (2) long-short form consistency, (3) discriminant and criterion-related validity, and (4) the efficiency gains associated with it (i.e., decreased completion times). Study 1 analyzed original data from a US-American student convenience sample ($N = 382$), Study 2 analyzed further original data from a US general population convenience sample ($N = 1,023$), and Study 3 analyzed data from a quota sample of the German voting age population (German Longitudinal Election Studies - Online Tracking Component, Wave 18, $N = 1,049$).

The NFCS-5 proved to be internally consistent in all three studies (Study 1: $\alpha = .72$; Study 2: $\alpha = .74$; Study 3: $\alpha = .71$). In terms of factorial structure, confirmatory factor analyses showed that the theoretical one-dimensional model of NFC (Roets & Van Hiel, 2011) fit the NFCS-5 data reasonably well in all three studies, judged by common standards of model fit (Hu & Bentler, 1999), with the exception of RMSEA values in Study 3 (Study 1: SRMR = .027, RMSEA = .055, CFI = .982; Study 2: SRMR = 0.017, RMSEA = .044, CFI = .990; Study 3: SRMR = .045, RMSEA = .113, CFI = .937).

In Studies 1 and 2, all items in the full NFCS-15 were administered. The long form (NFCS-15) and proposed short form (NFCS-5) were highly correlated at $r = .92$ in both studies. Internal consistency decreased notably, but not dramatically, from NFCS-15 to NFCS-5 (Study 1: $\Delta\alpha = -.13$; Study 2: $\Delta\alpha = -.12$). The sample means for both NFC scales were almost identical in both studies (Study 1: $\Delta M = .10$; Study 2: $\Delta M = .09$ on a scale from 1 to 5).

Studies 1 and 2 produced evidence of discriminant validity of the NFCS-5 by replicating the moderate negative correlations of NFC with need for cognition known from previous studies (e.g., Roets & Van Hiel, 2011; Schlink & Walther, 2007) (Study 1, $r = -.28$; Study 2, $r = -.34$). Similarly, the NFCS-5 replicated the known moderately positive correlation of NFC with a single-item measure of political conservatism (e.g., Chirumbolo, 2002; Golec, 2002; Kemmelmeier, 1997) in all three studies (Study 1, $r = .23$; Study 2, $r = .20$; Study 3, $r = .13$). Finally, Study 3 produced evidence of criterion-related evidence for the NFC by replicating a statistically significant positive correlation between NFC and a measure of ethnocentrism, $r = .09$ (cf. Federico, Golec, & Dial, 2005; Shah, Kruglanski, & Thompson, 1998).

Table 1. NFCS-5: Administration Times

	Study 1 (US student)	Study 2 (US general)	Study 3 (DE general)
NFCS-15 mean (in sec)	128	103	-
NFCS-5 mean (in sec)	43	37	44
NFCS-15 vs. NFCS-5 mean comparison (ΔM in sec)	-85	-66	-

Most important, the NFCS-5 proved much more economic in terms of completion time than the NFCS-15 – and therefore much more practical for administration in a general population

survey. Table 1 shows the completion times for all items of the NFCS-5 and NFCS-15 (if administered) for Studies 1-3. As expected, the completion time for the NFCS-5 was only about a third of the NFCS-15 (Studies 1 and 2), and ranged from 37 seconds (Study 2) to 44 seconds (Study 3). The NFCS-5 provides an improvement in completion time of more than 60% compared to the NFCS-15, and with less than a minute needed to administer it, it is very feasible to include it in general population surveys.

In sum, the NFCS-5 has the theoretically expected factorial structure and adequate internal consistency reliability, divergent validity, criterion validity, and – most important – it is economic. Given the advances it promises for the empirical study of public opinion formation and political behaviors, especially in an electoral context, we propose it for inclusion in the 2016 ANES Pilot Study. Table 2 presents the exact wording of the NFCS-5.

Table 2. A Five-Item Measure of Need for Closure (NFCS-5)

Question Wording	NFC Facet
Below is a list of statements which may or may not be used to describe you. Please indicate whether you agree or disagree with the following statements.	
I enjoy having a clear and structured mode of life.	Order
I dislike unpredictable situations.	Predictability
I don't like situations that are uncertain.	Ambiguity
I dislike questions which could be answered in many different ways.	Closed-mindedness
I would quickly become impatient and irritated if I would not find a solution to a problem immediately.	Decisiveness

Note: Responses are recorded on a 1-5 scale (1 = Strongly Agree, 2 = Somewhat Agree, 3 = Neither Agree or Disagree, 4 = Somewhat Disagree, 5 = Strongly Disagree).

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