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Groups as Epistemic Providers: Need for Closure and the Unfolding of Group-Centrism

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Theory and research are presented relating the need for cognitive closure to major facets of group behavior. It is suggested that a high need for closure, whether it is based on members' disposition or the situation, contributes to the emergence of a behavioral syndrome describable as *group-centrism*—a pattern that includes pressures to opinion uniformity, encouragement of autocratic leadership, in-group favoritism, rejection of deviates, resistance to change, conservatism, and the perpetuation of group norms. These theoretical predictions are borne out by laboratory and field research in diverse settings.

Keywords: group-centrism, need for closure, shared reality

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When people care a lot about sharing opinions with others in their group; when they endorse central authority that sets uniform norms and standards; when they suppress dissent, shun diversity, and show in-group favoritism; when they venerate their group's norms and traditions and display fierce adherence to its views; when, above all, they exhibit all these as a package, one may well speak of an emergence of a syndrome. We call it *group-centrism*, as each of its components attests to the degree to which the "groupness" of a collectivity, or its coherence, mattered to its members. Our present purpose is to advance an understanding of this phenomenon and of conditions that bring it about.

Two fundamental characteristics of the human species are our strong cognitive and social proclivities. The two are intricately interwoven, as we hardly carry out our thinking in disregard of others. Our construction of realities is conducted interactively with fellow members of groups to which we belong and that we deem important. It is through such a group process that a system of agreed upon categories and beliefs is constructed whereby reality is apprehended. Indeed, the notion that groups provide a sense of reality for their members has been the mainstay of classical social psychological theories of group interaction (e.g., Festinger, 1950, 1954; Lewin, 1965; Sherif, 1936; Sherif & Sherif, 1964), and it continues to be central to contemporary analyses of social behavior (Hardin & Higgins, 1996). An essential precondition for the fulfillment of the group's epistemic function is that the reality it presents to its members be shared—that is, grounded in pronounced opinion uniformity or group consensus.

Social psychological analyses of group processes have, accordingly, emphasized the tendency of groups to exert pressures toward conformity (cf. Asch, 1955; Deutsch & Gerard, 1955) or opinion uniformity on their members (Back, 1951; Festinger, 1950, 1954; Schachter, 1951). Construction of shared realities has been hailed as a fundamental feature of the group process. In fact, numerous definitions of groups revolved about the *common beliefs* aspect of their essence, in regard to their goals, norms, or traditions. Bar-Tal (1990), for instance, stated that "group members have to hold group beliefs in order to be a group" (p. 39). In a subsequent work, Bar-Tal (2000) further proposed that "sharing beliefs is an integral part of group membership . . . shared beliefs serve as a basis of group formation, provide meaning to group membership, and direct or justify . . . group action" (p. xi). And Levine and Higgins (2001) stated that "the idea that shared reality is a defining group characteristic . . . has a long history in social psychology" (p. 33).

Classic group theorists across the social science spectrum echo this understanding. Thus, Deutsch (1968) stressed that "a psychological group exists (has unity) to the extent that individuals composing it [commonly] perceive themselves as pursuing promotively interdependent goals" (p. 468). Merton (1957) insisted that "the sociological concept of a group . . . is that the interacting persons *define themselves* [italics added] as 'members,' i.e., that they have *patterned expectations* [italics added] of forms of interaction which are morally binding on them and on other members" (pp. 285–286). DeVos (1975) defined an ethnic group as a

> self-perceived group of people who hold in common a set of traditions shared by the others with whom they are in contact. Such tradition typically includes "folk" religious beliefs and practices, language, a sense of historical continuity, and common ancestry or place of origin. (p. 9)

Cartwright and Zander (1968) summarized different theorists' definitions of groups in terms of the shared beliefs whereby individuals

> (b) define themselves as members, . . . (d) share norms concerning matters of common interest, . . . (f) identify with one another as a

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> result of having set up the same model-object or ideals in their superego . . . (h) pursue promotively interdependent goals, and (i) have a collective perception of their unity. (p. 48)

Newcomb (1951) similarly stated that

> the distinctive thing about a group is that its members share norms about something. The range covered by the shared norms may be great or small, but at the very least they include whatever it is that is distinctive about the common interests of the group members—whether it be politics or poker. (p. 337)

Writers in the psychoanalytic tradition also have defined groupness in shared reality terms. Thus, Scheidlinger (1952) wrote that "two or more people constitute a psychological group if they have set up *the same* [italics added] model-object (leader) or ideals in their superego, or both, and consequently have identified with each other. . ." (pp. 137–138).

Even though the sharing of realities has been repeatedly highlighted as a definitional aspect of groupness (Levine & Higgins, 2001), other definitions too have been offered. A major definition has turned on the concept of *interdependence* (Cartwright & Zander, 1968; Lewin, 1948), defined as a situation wherein "a change in the state of any subpart changes the state of any other subpart" (Lewin, 1948, pp. 84). But, presumably, it is a commonly perceived interdependence rather than interdependence in some objective sense that matters. In discussing the norms that group members share, Newcomb (1951) stated in this connection that these norms "include, necessarily, norms concerning the roles of the group members—roles which are interlocking, being defined in reciprocal terms" (p. 337). It appears then that for Newcomb at least, *interdependence* refers to *commonly perceived* reciprocality of roles and relations rather than to an *objective* interdependence. Indeed, an owner of a given stock can be said to be *interdependent* with other owners of the same stock (his or her selling of the stock will affect the other owners' outcomes and vice versa), yet one would not, normally, refer to all owners of a given stock as a *group* in the psychological sense (Deutsch, 1968, pp. 467–468). Nor would *common fate* in the objective sense qualify as a criterion for psychological groupness, although the shared perception of *common fate* would. Thus, members of a social class (e.g., the workers' class) may share a common fate or be objectively interdependent, but it would take *class consciousness* (i.e., a shared reality pertaining to their commonalities and interdependencies) to transform them into a group (Marx, 1867). Thus, even though a variety of definitions have been proffered to capture the essence of groupness (in terms of interdependence, commonality of goals, etc.), a conceptual theme implicit in most definitions refers to a sharing of beliefs by members about varied aspects of their worlds, including their current and desired states and their interrelations.

If, as the foregoing suggests, a central aspect of groupness resides in the coherence and consistency of the shared reality a group provides for its members, different groups in the same situation and the same group across situations may well differ in their degree of groupness or "entitativity" (Campbell, 1958; Lickel et al., 2000). This may depend on the degree to which the group's objectives and/or other characteristics personally mattered to its members. If its objectives were deemed important, members should be motivated to forge a firm social reality affording group locomotion (Festinger, 1950, 1954).

Because persons construct their beliefs in concert with their fellow members, individual knowledge is inevitably grounded in a shared reality, and a desire for shared reality is tantamount to the quest for a firm individual knowledge. If so, a desire for knowledge may fuel individuals' concern about their groupness or their tendency to exhibit *group-centrism*. Indeed, it seems plausible that ascribing value to the group's goals increases individuals' desire for firm group-based knowledge necessary for the group's locomotion toward its objectives. Thus, whereas Festinger (1950, 1954) distinguished between *social reality* and *group locomotion* as two separate reasons for desiring opinion uniformity in a group, the latter reason actually presupposes the former. In other words, locomotion of the group as a body would not be possible unless members agreed about where it is that they actually wished to go and what is it that they need to do in order to get there—all representing facets of a pertinent social reality. Beyond local determinants associated with individuals' endorsement of a given group's goals, a desire for firm knowledge may emanate from a variety of individualistic concerns. Over the last 2 decades, we have theorized that such desire represents the need for cognitive closure—the antecedent conditions of which include both situational and personality factors (Kruglanski, 1989, 2004; Kruglanski & Freund, 1983; Kruglanski & Webster, 1996; Webster & Kruglanski, 1998). Indeed, our major thesis is that the need for cognitive closure, once aroused, may impact a broad array of group phenomena—the unifying purpose of which is to create a coherent shared reality in a group, contributing to members' sense of groupness. Thus, an epistemic–social nexus may exist whereby a heightened need for closure promotes a syndrome of group-centrism characterized by diverse manifestations, attesting to the degree to which the groupness and coherence of a social collectivity mattered to its members.

Our proposal is consistent with heterogeneous findings scattered in the social psychological literature. These are appropriately cited in the text that follows. But the present theory extends beyond prior knowledge by integrating previously observed phenomena under a common conceptual umbrella and pointing to heretofore unidentified connections and relevancies. As a preview of what is to come, we first describe the need for closure construct and review a body of earlier research that validates it. We then outline the implications of the proposed epistemic–social nexus for a diverse array of group interaction phenomena. A closing discussion explores the connotations of our theory for the relations between individual motivations and group dynamics and their significance for real-world societal concerns.

The Need for Cognitive Closure

The (nonspecific) need for cognitive closure represents an individual-level construct that determines how persons process information and render judgments. Our main thesis, explored in subsequent sections, is that need for closure exerts intriguing indirect effects on social interactions and group phenomena. For now, however, we review the elementals of this concept and the basic empirical data adduced in its support. The need for closure was defined as individuals' "desire for a firm answer to a question, any firm answer as compared to confusion and/or ambiguity" (Kruglanski, 2004, p. 6). A continuum was envisaged with a strong need for closure at one end and a strong need to avoid closure at

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the other. A strong need for closure is experienced as a desire to have closure urgently and maintain it permanently. Hence, individuals with a strong need for closure tend to "seize" on information permitting a judgment on a topic of interest and to "freeze" on such judgment, becoming relatively impermeable or closed-minded to further relevant information (Kruglanski & Webster, 1996). Such individuals make strong judgmental commitments and are relatively unshaken in their views. Individuals with a strong need to avoid closure, by contrast, are leery of judgmental commitments: They feel more comfortable keeping their options open; hence they eschew binding views or definite opinions.

An individual's standing on the need for closure continuum is determined by the perceived benefits and costs of possessing versus lacking closure. Such costs and benefits can be made salient by contextual features, and/or they may follow from individuals' stable world views and life philosophies. For example, time pressure has been often shown to elevate the need for closure (for reviews, see Kruglanski, 2004; Kruglanski & Webster, 1996; Webster & Kruglanski, 1998). That is so because time pressure threatens missing an important deadline, highlighting the price of lacking closure. Other contextual determinants of the need for closure relate to the high potential costs of information processing, for instance, when it becomes arduous or laborious. Thus, need for closure is elevated by ambient noise (Kruglanski & Webster, 1991; Kruglanski, Webster, & Klem, 1993; Livi, 2003), fatigue (Webster, Richter, & Kruglanski, 1996), and alcoholic intoxication (Webster, 1993a)—all of which render information processing difficult. Need for closure was also successfully manipulated via instructions implying that the task is of low interest compared with its alternatives (Webster, 1993b), lowering its benefits-to-costs ratio, thus inducing the desire to be done with the task quickly and creating a self-imposed time pressure that increases the desirability of closure.

The need for closure is lowered (or the need to avoid closure is heightened) via accuracy instructions stressing the potential costs of a premature (i.e., erroneous) closure (e.g., Kruglanski & Freund, 1983) and assumed to arouse the fear of invalidity. The need for closure is also lowered by instructions suggesting that the task is of a high-interest value as compared with its alternatives (Webster, 1993b). This presumably enhanced the participants' desire to stay with the task for as long as possible, removing the pressure to reach closure on the task.

Beside its various situational determinants, the need for closure may also vary stably across individuals. A 42-item scale was developed to tap persons' dispositional need for closure (Webster & Kruglanski, 1994). The scale has been translated into several (12) languages, thus enabling the cross-cultural investigation of various need for closure effects (for reviews, see Kruglanski, 2004; Mannetti, Pierro, Kruglanski, Taris, & Bezinovic, 2002; Richter & Kruglanski, 2004). Results obtained with the Need for Closure Scale (NFCS) have typically replicated those obtained with various situational inductions of this motivation, providing convergent evidence for construct validity of the need for closure concept.

As an individual difference variable, the need for closure resembles several classic personality constructs, such as authoritarianism (Adorno, Frenkel-Brunswick, Levinson, & Sanford, 1950), dogmatism (Rokeach, 1960), intolerance of ambiguity (Eysenck, 1954; Frenkel-Brunswick, 1949), and the Openness factor of the Big Five (Costa & McCrae, 1985). However, though the need for closure construct is continuous in some respect with those prior notions, it is also distinct from them in consequential ways. The primary continuity is that the earlier concepts also bear on the issue of prejudiced disposition and on the tendency to reject and to be impervious to new ideas or experiences. This commonality notwithstanding, the prior notions were mostly psychodynamic in character, referred to broad personality typologies, were linked to particular belief contents (e.g., the closed and open belief systems discussed by Rokeach, 1960, differed fundamentally in the contents of their basis premises), were often treated as cognitive rather than motivational (Sorrentino & Short, 1986), and often stressed the dysfunctional nature of uncertainty avoidance (for discussion, see Kruglanski & Webster, 1996). The present conceptual framework is broader by comparison, encompassing as it does situational antecedents as well as individual-difference factors and shunning commitment to any particular circumstances of psychosexual development (highlighted by Adorno et al., 1950; Eysenck, 1954; Rokeach, 1960; Sorrentino & Short, 1986) or any particular contents of belief systems (Rokeach, 1960). In contrast to the psychodynamic point of departure characterizing most prior work on closed-mindedness and rigidity, need for closure theory is grounded in an epistemic analysis in which the closure motivation fulfills an essential function of stopping the potentially incessant search for information and contributes to the formation of crystallized knowledge indispensable for everyday living (Kruglanski, 1989, 2004).

Indeed, psychometric work on the scale (e.g., Kruglanski et al., 1997; Mannetti et al., 2002; Webster & Kruglanski, 1994) revealed that the need for closure exhibits low to moderate correlations with several alternative constructs related to closed-mindedness. Thus, Webster and Kruglanski (1994) found that the correlation between need for closure and the F (Fascism) scale (Sanford, Adorno, Frenkel-Brunswick, & Levinson, 1950) was .26. The correlation between need for closure and intolerance of ambiguity (Frenkel-Brunswick, 1949) was .29, and the correlation between need for closure and dogmatism (Rokeach, 1960) was .28. Of interest, need for closure also exhibited a low and negative correlation with the need for cognition (Cacioppo & Petty, 1982) and a low and negative correlation with the fear of invalidity (M. Thompson, Naccarato, Parker, & Moskowitz, 1993).

Of particular importance, a wide variety of studies replicated findings obtained with the NFCS using alternative, situational, inductions of the need for closure (e.g., by means of ambient noise, time pressure, fatigue, or alcoholic intoxication). Such convergence supports the assumption that the need for closure has diverse antecedents that are functionally equivalent in producing the theoretically expected results (for discussions, see Kruglanski, 1989, 2004; Kruglanski & Webster, 1996; Webster & Kruglanski, 1998). We now turn to a selective review of some of these prior findings.

Intrapersonal and Interpersonal Need for Closure Effects

Social Judgment

Numerous experiments tested predictions of need for closure theory in regard to processes of social judgment and interpersonal relations. Early work by Kruglanski and Freund (1983) demonstrated that time pressure induces the seizing and freezing tendencies referred to earlier, producing pronounced primacy effects in

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impression formation (see also Freund, Kruglanski, & Schpitzajzen, 1985; Heaton & Kruglanski, 1991; Webster et al., 1996) and the tendency to base judgments on prevalent stereotypes (see also Dijksterhuis, Van Knippenberg, Kruglanski, & Schaper, 1996; Jamieson & Zanna, 1989) and to assimilate numerical estimates to anchor values. Webster (1993b) showed that lowering task attractiveness (relative to available alternative activities) induces a need for closure manifested in an increased tendency to accept readily accessible attributions, whether internal ones leading to a correspondence bias or external ones attenuating such bias. Further evidence that the need for closure induces the tendencies to seize and freeze on accessible notions was furnished by the priming studies of Ford and Kruglanski (1995) and E. P. Thompson, Roman, Moscovitz, Chaiken, and Bargh (1994). In those experiments, need for closure was either manipulated via time pressure or measured by means of the NFCS. In both cases, need for closure led to an increased tendency to judge the target consistently with the primed constructs.

Kruglanski, Webster, and Klem (1993) conducted two experiments designed to separate the seizing from the freezing tendencies, both of which were assumed to emanate from a high need for closure. In one study, the need for closure was engendered by environmental noise, and in the second study, it was assessed via the NFCS. These two operationalizations yielded identical results: Before participants were able to form a crystallized opinion, increased need for closure led to seizing expressed in their tendency to be quickly persuaded by an interaction partner. After participants crystallized an opinion, however, a heightened need for closure led to freezing expressed in a resistance to persuasion.

Interpersonal Phenomena

Webster-Nelson, Klein, and Irvin (2003) found that because of individuals' tendency to freeze on their own perspectives, persons under high need for closure, induced via mental fatigue, were less able to empathize with their interaction partners. Similarly, Richter and Kruglanski (1999) found that individuals with a high (vs. low) need for closure (measured by the NFCS) tended less to implement an effective "audience design." They tended less to "tune" their messages to their interlocutors' unique attributes; as a consequence, their communications were less effectively decoded by recipients.

In the domain of negotiation behavior, DeDreu, Koole, and Oldersma (1999) found that individuals with high (vs. low) dispositional need for closure tended more (a) to adhere to anchor values (alleged profits attained by others) in defining the minimal profits they themselves would accept, (b) to make smaller concessions to their negotiation partners, (c) to engage in less systematic information processing, and (d) to base their negotiation behavior more on stereotyped perceptions of their opponents. DeDreu and Koole (1997) lowered participants' need for closure via providing accountability instructions (Tetlock, 1992) or by increasing the costs of invalid judgments (Kruglanski & Freund, 1983). These manipulations lowered participants' tendency to use the "consensus implies correctness" heuristic as well as their tendency to behave competitively and to reach an impasse when a majority suggested a competitive strategy.

Several studies looked at need for closure effects on language abstractness in interpersonal communications. Abstract language indicates a permanence of judgments across situations and hence a greater stability of closure. Accordingly, it was predicted that individuals under high (vs. low) need for closure would tend more to use abstract terms in their communications. Consistent with this prediction, Boudreau, Baron, and Oliver (1992) found that participants, when communicating their impressions to a knowledgeable and potentially critical other (assumed to induce a fear of invalidity and lower the need for closure), tended less to describe a target in abstract trait terms than did participants communicating their impressions to a recipient assumed to have little knowledge on the communication topic.

Using Semin and Fiedler's (1991) linguistic category paradigm, Rubini and Kruglanski (1997) found that participants under high (vs. low) need for closure (manipulated via noise or measured via the need for closure scale) tended to frame their questions in more abstract terms, inviting reciprocal abstractness from the respondents. That, in turn, contributed to the creation of greater interpersonal distance between the interlocutors and lessened their liking for each other.

The foregoing findings exemplify need for closure effects on a variety of intrapersonal and interpersonal variables (for an extensive review, see Kruglanski, 2004). The remainder of this article is devoted to the effects of the closure motivation on groups, in particular reference to the group-centrism syndrome described next.

Need for Closure Induces Group-Centrism

Earlier we characterized the concept of group-centrism by the degree to which individuals strive to enhance the groupness of their collectivity. Groupness, in turn, has been defined by a "smooth" shared-reality surface (Hardin & Higgins, 1996) unperturbed by dissents and disagreements that threaten the breakup of the group and the eruption of schisms (Sani & Reicher, 1998). Although reality sharing has been regarded as the defining essence of groupness (e.g., Bar-Tal, 1990, 2000), its attainment may be facilitated by several aspects of group interaction.

At the initial phases of group formation, the quest for shared reality may involve members' attempts to arrive at a speedy consensus, by exerting uniformity pressures on each other. It should also foster support for an autocratic group structure in which influence emanates from a centralized authority, enhancing the likelihood of commonly shared opinions. It may also express itself in members' intolerance of diversity, which may impede the arrival at consensus. Once a group had been formed, the quest for shared reality should fuel attempts to maintain it. This may express itself in members' tendency to reject opinion deviates and to extol the conformists. It should also be reflected in favoritism toward one's in-group, in direct proportion to its degree of groupness, as well as in out-group derogation, insofar as the out-group is contrasted with the in-group. A quest for a shared reality should render out-groups less unappealing if they manifested opinion uniformity in their midst.

Valuation of shared reality should express itself in conservatism and the upholding of group norms and traditions over time. Finally, it should foster a loyalty to one's in-group and a reluctance to abandon it and defect to alternative collectivities. This should be moderated by the extent to which the realities of one's original collectivity were clear and present in individuals' social environ-

ment. If, however, an alternative group's perspectives became overridingly salient, a predilection for a strong sense of shared reality may prompt members to switch, in fact, to the alternative assembly.

On the basis of the preceding discussion, the present theory may be succinctly presented via a number of propositions:

> *Definition 1*: The need for cognitive closure represents a desire for firm knowledge (Kruglanski, 1989, 2004; Kruglanski & Webster, 1996).
>
> *Assumption 1:* Firm individual knowledge is grounded in the shared reality of one's reference groups (Hardin & Higgins, 1996; Kelley, 1952; Newcomb, 1950).
>
> *Assumption 2:* The degree of shared reality in a social collectivity defines its degree of groupness or entitativity (Bar-Tal, 1990, 2000; Campbell, 1958; Cartwright & Zander, 1968; Deutsch, 1968; Merton, 1957).
>
> *Derivation 1 (from Definition 1 and Assumptions 1–2):* Need for closure should induce the quest for groupness.
>
> *Assumption 3:* Shared reality, and hence groupness, is attained and secured by a cluster of features pertaining to group interaction, including (a) pressures to opinion uniformity among group members, (b) endorsement of an autocratic leadership and decision-making structure, (c) intolerance of diversity in group composition (that betokens the potentiality for dissent), (d) rejection of opinion deviates and extolment of conformists, (e) in-group favoritism and out-group derogation, (f) attraction to groups (both in- and out-groups) possessing strongly shared realities, (g) conservatism and adherence to the group's norms, (h) loyalty to one's in-group qualified by the degree to which it constituted a "good" shared reality provider.
>
> *Definition 2:* Let the term *group-centrism* denote a syndrome of features (a–h) denoting individuals' group-related behaviors designed to promote the groupness of their collectivity.
>
> *Derivation 2 (from Definition 2 and Assumption 3):* The need for cognitive closure should foster the emergence of group-centrism in its varied manifestations.

The remainder of this article reviews a body of evidence relevant to Derivation 2, our central thesis.

Uniformity Pressures

From infancy onward, human beings are dependent on the "epistemic authority" of others for the comprehension of objects and events (Ellis & Kruglanski, 1992; Kruglanski et al., 2005). At first, epistemic authority is conferred on the child's proximal caregivers, primarily their parents and other local adults, but in the course of subsequent sociopsychological development, it is transferred to individuals' peers, fellow members of groups to which they belong and to whose collective opinions they refer. It is such collective opinions, representing group consensus, that define individuals' social realities (Festinger, 1950, 1954), constraining their perceived options and expected outcomes.

Whereas early discussions (e.g., Centers, 1949; Kelley, 1952; Newcomb, 1950) portrayed reference groups as relatively enduring entities (such as a political party, a church, or a family), common experience and experimental findings alike suggest that ephemeral ad hoc assemblies can serve as important reference groups as well, attesting to the considerable "power of the situation" (Ross & Nisbett, 1991, p. 3): A pretentious waiter in an upscale restaurant can become an intimidating reference figure even though, realistically, one may hardly expect to interact with her or him on future occasions. So may a group of strangers making perceptual judgments of line lengths (Asch, 1956) or an unknown fellow estimator of light-point movements (Sherif, 1936).

In social psychology, the classic group dynamics research program (Back, 1951; Festinger, 1950, 1954; Festinger, Schachter, & Back, 1950; Schachter, 1951) viewed pressures to uniformity as a consequence of group cohesiveness defined as "the resultant of all forces acting on members to remain in the group" (Festinger, 1950, p. 273). The underlying logic here is that if the group matters to individual members (the forces acting on members to remain in the group are considerable), individuals care a great deal about the group's social reality in matters important to the group (Festinger, 1950; Schachter, 1951) and exert efforts to bring that social reality about. In this vein, research by Back (1951) demonstrated greater pressures to uniformity as a function of cohesiveness, on the basis of several different sources of group attractiveness—namely, congeniality afforded by group membership, prestige afforded by membership, and instrumentality of the group to the attainment of individuals' ulterior objectives.

That cohesive groups may induce pressures to opinion uniformity is also central to Janis's (1972, 1982) analysis of groupthink, a phenomenon defined "as a mode of thinking that people engage in when they are deeply involved in a cohesive in-group, when the members' striving for unanimity override their motivation to realistically appraise alternative courses of action" (Janis, 1972, p. 9). Janis (1972) illustrated the groupthink phenomenon via several striking examples of political decision making including (a) the poor preparedness of the U.S. Navy at Pearl Harbor in December, 1941; (b) the problematic decision by the Eisenhower administration to pursue the defeated North Korean army on its home territory; (c) the Bay of Pigs invasion carried out by President Kennedy and his advisors; and (d) the series of decisions by the Johnson administration to continue and escalate the Vietnam War. A revision of the original volume published 10 years later (Janis, 1982) included another striking case study of groupthink: the Watergate cover-up operation by President Nixon and his advisors.

Whereas the group dynamics movement put caring about the group (individuals' attraction to the group) first and caring about its social reality second, our present analysis reverses the emphasis in suggesting that caring about one's social reality may prompt caring about one's group because it constitutes the provider of such a reality. Of greatest importance, from the present perspective, is the quest for solid individual knowledge that prompts the pursuit of firm socially shared realities, ultimately effecting the group-centrism syndrome of present concern.

Early suggestions that this is so were implicit in classic sociological analyses of collective behavior. Blumer (1956) for instance, asserted that "collective behavior . . . is behavior formed or forged to meet undefined or unstructured situations" (p. 683). Smelser's (1962) work on social movements, from cases of panic

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to the eruption of trends, fashions, or political bandwagons, viewed them as, by and large, a response to "structural strain" (p. 47), a principal kind of which is ambiguity that "at the psychological level (translates) to uncertainty" (pp. 51–52). And in their volume, *Collective Behavior*, R. H. Turner and Killian (1957) stated that

> from the standpoint of collective behavior . . . an important aspect . . . of crisis . . . is the sudden, unexpected disorganization of the world with which the individual is familiar. His normal expectations as to what other objects, both human and inanimate, will do next and as to what he himself should do, are no longer appropriate to the situation. The situation becomes ambiguous and unstructured. (p. 41)

The sociological analyses above support the notion that the disruption of familiar realities occasioned by crisis situations might foster "collectivization trends," possibly manifesting themselves in pressures to opinion uniformity. But according to the present theory, societal disruptions and crises may constitute special cases of a broader underlying variable—the quest for firm and definite knowledge or the need for cognitive closure (Kruglanski, 1989, 2004; Kruglanski & Webster, 1996). Though crises and disruptions may well elevate the need for closure, this motivation can be aroused also by a wide array of mundane circumstances having to do with time pressure, noise, alcoholic intoxication, or mental fatigue. In addition, the need for closure constitutes an important dimension of individual differences (Webster & Kruglanski, 1994), possibly reflecting varied socialization histories (Kruglanski, 2004) and cultural influences (Hofstede, 1980).

Furthermore, whereas the sociological analyses pertained to intense disruptions of individuals' lives in real-world circumstances, the present theory depicts need for closure effects as fundamental to the epistemic–social nexus more generally, hence capable of emerging also in artificial ad hoc groupings created in the experimental laboratory.

In one such laboratory study, De Grada, Kruglanski, Mannetti, and Pierro (1999, Study 1) had participants in groups of 4 role-play the managers of four corporate departments negotiating the division of a monetary prize among four candidates. After a preliminary perusal of the candidates' resumes the four "managers" engaged in a deliberation (lasting 46 min on average) that was video recorded and later analyzed by independent observers. Half the groups were composed of individuals high on dispositional need for closure and the remaining half were composed of individuals low on the need for closure. Participants in high need for closure groups reported feeling stronger pressures to uniformity during the discussion than did participants in low need for closure groups. This finding was seconded by independent observers of the groups' interaction.

In another pair of studies, Kruglanski et al. (1993) had participants role-play members of two-person juries in which one juror was actually a confederate. Participants (and allegedly their fellow jurors as well) received materials describing a legal case and either received or did not receive "legal advice" allowing them to crystallize a confident opinion about the appropriate verdict. Participants perused the materials, formed a verdict, and conferred with the other juror, who invariably advocated the opposite point of view.

In one of the studies, half the participants were high on dispositional need for closure and the remaining half were low on that need. In another study, half the participants were exposed to ambient noise, assumed to heighten their need for closure, and the remaining half were not. In both studies, participants high on the dispositional or the situational need for closure expressed a significantly stronger desire for consensus with their fellow jurors than did participants low on the need for closure.

How they went about attaining consensus differed, however, depending on whether participants possessed crystallized views to begin with. Those who received the legal advice, affording the formulation of strong views, attempted to promote consensus by firmly adhering to their opinion and striving to persuade their fellow jurors to alter theirs, thus opting for what Festinger (1950) dubbed as the "change other" strategy of uniformity strivings. Those with poorly crystallized views, by contrast, readily changed their opinions and accepted the fellow juror's influence, opting for Festinger's (1950) "change self" strategy of courting opinion uniformity.

In summary, the findings above are consistent with our theoretical predictions (a) that the need for closure augments the desire for consensus in groups, (b) that this manifests itself in pressures toward uniformity, and (c) that such pressures may include attempts at influencing other group members as well as the readiness to accept other members' influence.

Autocratic Group Process

A quest for consensus under heightened need for closure has an additional implication beyond the exertion, or acceptance, of influence. It may encourage the emergence of an autocratic influence structure in the group. That is so because in an egalitarian structure—in which all members' views are expected to be considered and reconciled—arrival at a consensus may be agonizing and laborious. Consensus may be much easier to come by in an autocratic structure in which leaders' views may carry the day, "everyone being entitled to the boss's opinion," and be unquestioningly accepted by all.

The notion that need for closure may bias group interaction toward a hierarchic structure received support in De Grada et al.'s (1999, Study 2) investigation mentioned earlier. These investigators used the sociolinguistic index of speech dominance to detect the emergence of an autocratic discussion pattern. Specifically, the number of instances were recorded in which members seized the discussion floor, referred to as *turns obtained*, and the number of instances in which they held sway despite interruption attempts by others, referred to as *turns maintained*. It was found that groups composed of members dispositionally high (vs. low) in need for closure exhibited greater asymmetry of maintained turns, suggesting greater dominance of the discussion by some group members to the exclusion of others. The corresponding difference in turns obtained, although in the expected direction, fell short of significance.

Pierro, Mannetti, De Grada, Livi, and Kruglanski (2003) extended the work of De Grada et al. (1999) in two additional studies. Both used the procedure of De Grada et al. (1999) in which group members role-played managers discussing the allocation of rewards to meritorious workers. Study 1, using the "floor control" analysis found that in groups composed of individuals high (vs. low) in need for closure, there was a greater asymmetry in both turns obtained and in turns maintained. Furthermore, members' autocratic style as assessed by the independent observ-

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ers, blind to the groups' composition, was positively correlated with both the turns obtained and the turns maintained, but only in the high (and not the low) need for closure groups. In other words, the dominant "talkers" that emerged in the high need for closure groups exhibited a more autocratic behavioral style than did the less dominant participants, whereas those who emerged in the low need for closure groups were no more autocratic than their less active counterparts. Finally, the degree of floor control (operationally defined in terms of the turns obtained and turns maintained) was significantly correlated with members' perceived social influence over their peers. This was so both for members' own assessment of social influence and for assessments rendered by independent observers. In short, the greater asymmetry of floor control in high (vs. low) need for closure groups seems to demonstrate the domination of the group by the more autocratic members.

These findings were convergently validated in Pierro et al.'s (2003) second study. Rather than assessing members' dispositional need for closure and creating groups composed of high or low need for closure individuals, this study manipulated the need for closure situationally via time pressure (cf. Kruglanski & Freund, 1983; Kruglanski & Webster, 1996). In addition, rather than looking at the conversational index of floor control, this study examined the patterns of influence emerging within groups via the Bales (1970) interaction process analysis. It was found that in groups under high need for closure (created by time pressure), there was greater asymmetry in members' centrality than there was in groups under low need for closure. Specifically, in the high (more so than in the low) need for closure groups, some members, more than others, both received and emitted a disproportionately greater number of communicative acts than did other members. It also was the case that the same members who received the preponderance of acts also emitted the preponderance of acts and that members' centrality (both in terms of acts emitted and acts received) was correlated significantly with their perceived influence within the group as assessed by the group members as well as by the external observers. The above findings were replicated by Pierro, De Grada, and Livi (2004, Study 1),[1] who in addition used Kenny's (1994; Kenny & La Voie, 1984) social relations model to determine the degree of consensus emerging under time pressure (vs. no pressure). Consistent with the present analysis, consensus was significantly greater in groups under time pressure than in groups not exposed to time pressure.

Research in other labs converges on similar conclusions. Thus, Isenberg (1981) found that groups in a high time-pressure condition (given 3 min to perform a task) shared airtime less equally and reported a more salient emergence of a hierarchic leadership structure than did groups in a low time-pressure condition (given 15 min for the same task). Also, Kelly and McGrath (1985) found that members of groups under time pressure (vs. no pressure) devoted less time to discussion and the expression of individual views. All of which implies that groups under high (vs. low) need for closure (whether operationally defined via group composition or manipulated via situational inductions such as time pressure) tend more to develop a centralized or "wheel type" communication structure in which egalitarian discussion is stifled and the influence flows asymmetrically from leading figures to more peripheral members.

Need for Closure and Leader Prototypicality

If the stronger tendency of high (vs. low) need for closure individuals to "anoint" some individuals as leaders reflects group-centrism, then prototypical leaders, similar in their basic characteristics to the group membership as a whole, should have greater sway for high (vs. low) need for closure individuals than would nonprototypical leaders. In this vein, social identity theorists of leadership (Hogg, 2001; Hogg & van Knippenberg, 2003; van Knippenberg & Hogg, 2003) proposed that because members treat the group as a source of social reality, group members should be more susceptible to the influence of prototypical leaders (van Knippenberg, Lossie, & Wilke, 1994). To examine the relation between need for closure and the impact of leader prototypicality, Pierro, Cicero, Bonaiuto, van Knippenberg, and Kruglanski (2005) asked employees in three Italian companies to respond to the Italian version of the NFCS (Webster & Kruglanski, 1994) as well as a two-item measure of leader prototypicality ("This team leader is very similar to the members of my team" and "This team leader resembles the members of my team") and measures of (a) perceived leadership effectiveness, (b) turnover intentions, (c) job satisfaction, and (d) self-rated performance. On all these measures, need for closure increased the effects of leader prototypicality on perceptions of organizational effectiveness and participants' sense of well-being: Leaders' prototypicality had significantly greater impact on these variables for high versus low need for closure members.

In-Group Favoritism and Out-Group Derogation

If need for closure fosters a desire for firm knowledge and if such knowledge is grounded in one's group's shared reality, then need for closure should foster a particularly positive liking toward one's in-group, serving as the provider of such reality. Also, to the extent that the out-group is contrasted with the in-group, need for closure should promote out-group derogation. In-group favoritism and out-group derogation constitute particularly direct indicators of the extent to which a group matters to its members. Their increased presence under need for closure would, therefore, constitute evidence that this motivation is indeed a causal antecedent of group-centrism.

Shah, Kruglanski, and Thompson (1998) tested this possibility in a series of studies. In the first of these, University of Maryland students classified themselves as European American, Hispanic American, Asian American, or African American. Their need for closure was assessed via the NFCS (Webster & Kruglanski, 1994). *In-group favorability* was operationalized in terms of participants' positivity of rating their own ethnic group, and *out-group favorability* was operationalized in terms of their positivity of rating the remaining three groups. Across two independent samples, need for closure was significantly and positively related to participants' in-group ratings and significantly and negatively related to their out-group rating. A third sample revealed a positive relation between dispositional need for closure and collective self-esteem,

[1] Unlike Pierro et al.'s (2003) indices, Pierro, De Grada, Mannetti, et al. (2004) used only the Acts Emitted Index (Index of Participation) as a measure of centrality.

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associated with one's ethnic group (Luhtanen & Crocker, 1991), another manifestation of in-group favoritism.

In another study, Shah et al., (1998) manipulated the need for closure via time pressure and looked at transient groups assembled in the laboratory. Each participant was informed that together with a teammate they would be competing against a rival team of two students on a reading comprehension task. Allegedly to prepare them for this activity, participants were presented with two self-descriptions and strategic suggestions for succeeding at the (reading comprehension) task, one ostensibly written by their teammate and the other by a member of the competing team. As hypothesized, time pressure significantly increased participants' identification with their teammate and significantly decreased their identification with their competitor. Additionally, time pressure significantly increased participants' tendency to accept the suggestions of their teammate and to reject those of the competitor. These findings were replicated in a study that used need for closure scores in lieu of time pressure. In addition, need for closure was significantly related to participants' tendency to display attitudinal agreement with their teammate.

Finally, the notion that the high (vs. low) need for closure individuals tend more to favor their in-groups and disfavor their out-groups was additionally supported by significant positive correlations reported in several studies between need for closure and nationalism as well as patriotism (Golec, Federico, Cislak, & Dial, 2005; Federico, Golec, & Dial, 2005).

Shared Reality Versus Cue Effects

Findings described above are consistent with the notion that need for closure increases in-group favoritism because the in-group serves as a shared reality provider. However, there exists an alternative interpretation of these results, in terms of the *cue effect* of group identity. Specifically, in-group identity could function as a positive cue fostering a favorable attitude to a given member, in accordance with a simple inference rule whereby if in-group, then positive (likable, favored, etc.; Kruglanski & Thompson, 1999). Similarly, an out-group identity could function as a negative cue, fostering an unfavorable attitude consistent with the "out-group = negative" rule. Because a heightened need for closure is known to prompt seizing and freezing on accessible notions (Ford & Kruglanski, 1995; E. P. Thompson et al., 1994), it might promote seizing and freezing on in-group and out-group cues as well, fostering more pronounced positivity or negativity, respectively, toward the groups in question.

The shared reality and cue-based interpretations can be disentangled by varying the degree to which a given in-group or out-group constituted an effective epistemic provider (i.e., a procurer of shared realities). If attitudes varied as a function of this factor, this would be evidence for the shared reality function of groups as a determinant of greater in-group favoritism under need for closure. If, however, they covaried exclusively with in-group and out-group status, this would be evidence for the cue function of group identity as such a determinant.

A series of studies by Kruglanski, Shah, Pierro, and Mannetti (2002) put these notions to empirical test. Specifically, they manipulated the groups' efficacy as shared reality providers by varying the consensus said to prevail in the group. Our theory suggests that rather than favoring their in-group indiscriminately, high versus low need for closure individuals may do so contingently, as a function of the degree of group consensus. Moreover, our theory implies that the consensus should be of the kind with which the members could agree and which they could adopt as their own reality. An unacceptable consensus, after all, would be of little epistemic value.

With University of Maryland students as participants, Kruglanski et al. (2002, Study 4) manipulated perceived agreement in the views of 2 other University of Maryland participants (the in-group) or of 2 George Washington University students (the out-group). Need for closure was assessed via a scale (Webster & Kruglanski, 1994). Participants were also asked about the degree to which they perceived the 2 (Maryland or George Washington) students as similar to themselves (assumed to reflect the degree to which they could use their views as a reality). It was found that high (vs. low) need for closure participants favored the in-groups and tended less to derogate the out-groups if these exhibited consensus (vs. divergence of opinions). This relation was significantly moderated by the degree to which participants perceived themselves as similar to the group members in question and hence likely to share in their particular realities.

The notion that similarity of group members to one another and to the perceiver would be more appealing to individuals who are high (vs. low) on the need for closure was examined in an additional study by Kruglanski et al. (2002, Study 3). This experiment manipulated the need for closure via time pressure (Kruglanski & Freund, 1983: Kruglanski & Webster, 1996). Participants, University of Wisconsin students, rated how similar they were to typical Wisconsin students (the in-group) and how similar they were to typical Michigan State students (an out-group). They also rated how similar to each other were Wisconsin students and how similar to each other were Michigan State students. Then participants indicated their feelings toward Wisconsin and toward Michigan State University students. Again, high (vs. low) need for closure participants were more attracted to the in-group and were less repelled from the out-group that maximized the similarity of members to each other, provided these groups' members were also perceived as similar to the participants.

The crucial role in the above findings played by the groups' similarity to one's self is particularly consistent with the notion that homogeneous groups appeal to high need for closure individuals because of their potential for a shared reality. Were it not for this fact, one could argue that the appeal of group homogeneity to high need for closure persons may reflect a mere case of stereotyping, hence of forming firm and coherent beliefs about the group's nature. If that were the case, however, the group's similarity to one's self should hardly matter, for stereotyping could be accomplished as readily with groups that are dissimilar from oneself. That the homogeneous groups' resemblance to one's self was crucial is consistent with the notion that their appeal to high need for closure individuals hinged on the kind of social reality they were capable of affording and on whether these individuals saw themselves capable of sharing in those particular realities.

Maintaining Groupness

Our discussion thus far has addressed primarily the phase of group formation, in which members' need for cognitive closure may prompt attempts to forge tightly knit communities, substan-

tially agreed on basic issues. But need for closure may also affect members' orientation toward groups after a given shared reality had been formed, namely, during the phase of group maintenance. Our theory suggests that then, too, the tendency toward groupcentrism would manifest itself in various ways. Specifically, it should promote the rejection of opinion deviates and encourage the maintenance of group norms and traditions, reflecting resistance to change and conservatism.

Rejecting opinion deviates. In a classic work, Schachter (1951) proposed that when a group consensus emerges, members are likely to reject opinion deviates whose dissenting views threaten to undermine it. Our theory suggests further that if consensus is particularly valued by individuals with a high need for closure, they should be particularly likely to manifest such a rejection.

Kruglanski and Webster (1991) carried out several studies to investigate this possibility. In a field experiment conducted with members of a Tel-Aviv, Israel, chapter of the Boy and Girl Scouts organization, participants were confronted with a decision about the desirable location for their annual summer working camp. Participants were presented with two choices. One was a well-established kibbutz in the middle of the land (Naan) equipped with swimming pools, lush lawns, TV sets, and tennis courts. The other was a fledgling settlement in the Judean desert (Ktorah) that had hardly any amenities at all, at the time this research was carried out (1983). On the basis of a pilot investigation, it was clear to the researchers that the Scouts overwhelmingly preferred the struggling pioneer settlement over its lush alternative. Within each group, they recruited as a confederate one of the members occupying a median sociometric standing in the group and asked her or him to appeal either for the consensual choice (the conformist condition) or for the dissenting one (the deviant condition).

Need for closure was manipulated via time pressure. Specifically, the confederate expressed the dissenting or conforming viewpoint at one of three different times: In the *objectively early* condition, he or she did so near the beginning of the group's deliberations (which lasted for about 1 hr). In the *objectively late* condition, he or she did so near the expected deadline, and in the *subjectively early* condition, at the same temporal point as in the objectively late condition but with the deadline appropriately postponed, there was the same amount of time remaining as in the objectively early condition.

The main dependent variable was the magnitude of evaluative shifts toward the confederate following the discussion. No significant differences in evaluative shifts as a function of timing obtained in the conformist condition. Reactions toward the deviate, however, strongly depended on the timing of her or his dissent. Whereas no significant evaluative shifts appeared in the objectively early condition, substantial negative shifts occurred in both the subjectively early and objectively late conditions, the latter being significantly more pronounced than the former.

The second experiment in this series was carried out at the University of Maryland, and it manipulated the need for closure via ambient noise. Groups of University of Maryland students in favor of drug testing for campus athletes (a majority opinion at the time) were asked to reach consensus on a case involving compulsory drug testing. Two confederates rotated the enactment of two roles. One role was that of a conformist who argued the majority viewpoint in favor of testing. The other was that of a deviate who argued against testing.

Manipulation checks confirmed that the noisy environment indeed elevated participants' need for cognitive closure. This, in turn, resulted in a stronger tendency to downgrade or reject the deviate in the noisy versus the quiet condition. It is possible to argue that noise and in the preceding experiment time pressure constitute noxious conditions capable of evoking the participants' irritation (Berkowitz, 2003) and hence inducing a general negativity, expressed as derogation of the deviate. To control for such an "irritation–derogation" hypothesis, the researchers allowed participants in a follow-up experiment to reach a decision by a majority rule rather than by consensus. It was found that rejection of the deviate occurred only in the noise–consensus rule condition, in which the deviant frustrated the remaining group members' desire for shared reality. No comparable rejection occurred in the noise–majority rule condition, in which the craving for closure could be satisfied within the context of the allowable majority. Consistent with this interpretation, in a final study an active conformist who vocally defended the consensus was evaluated more positively under noise (vs. the quiet condition), contrary to the irritation–derogation hypothesis.

Resistance to change. A straightforward implication of the notion that the need for closure induces the tendency to preserve existing knowledge is that need for closure will foster resistance to change. Several lines of evidence converge in support of this possibility.

Political conservatism. An intellectualized manner of resisting change is by adopting a conservative political ideology. Indeed, reviews by Jost, Glaser, Kruglanski, and Sulloway (2003a, 2003b) report consistent evidence for a significant relation between individual differences in need for closure and various measures of political conservatism. Webster and Kruglanski (1994) obtained a significant correlation between need for closure and authoritarianism. Jost, Kruglanski, and Simon (1999) obtained a significant correlation between need for closure and a single-item measure of liberalism–conservatism. Kemmelmeier (1997) found that as one moves across the German political spectrum from left to right, one's need for closure score increases proportionately. In this research, the Democratic Socialists scored lower on the NFCS than did members of the Green party, who scored lower yet than the Social Democrats, who, in turn, scored lower than members of the right-wing Christian Democratic party.

Jost et al. (1999) found a positive correlation between the need for closure and the tendency to support the death penalty, consistent with the notion that capital punishment implies a resolution that is quite unambiguous, permanent, and final—that is, one that should appeal to high need for closure individuals. Thus, an empirical connection was found between need for closure and specific ideological opinions. Research conducted in Poland by Golec (2001, 2002a, 2002b) found (a) a positive relation between individual differences in need for closure and the tendency to preserve the status quo and (b) a positive relation between need for closure and the preference for right-wing ideologies. In Golec's (2001, 2002a, 2002b) work, need for closure was correlated positively with cultural (religious and nationalist) conservatism but was correlated negatively with economic conservatism, presumably because of Poland's traditionally socialist economy.

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Golec's (2001, 2002a, 2002b) findings were echoed in two studies by Kossowska and Van Hiel (2003), who compared the relation between need for closure and conservatism in adult Polish and Flemish samples. Their first study replicated the positive relation between need for closure and general conservative beliefs, left–right self-placement, and political party preferences. Their second study drew a distinction between cultural and economic conservatism and found that both were positively related to need for closure in the Flemish sample. However, consistent with Golec's (2002a, 2002b) data, in the Polish sample need for closure was negatively related to economic conservatism, reflecting the tendency of high need for closure individuals to adhere to past arrangements and to resist change.

Stabilization of group norms under need for closure. Individuals with a high need for closure may also resist change originating from the fresh opinions and ideas contributed by newcomers to the group (Levine & Moreland, 2003). These possibilities were investigated in two recent studies by Livi (2003). Participants in this research received information about a (fictitious) new voice-activated computer software and were asked, in a group format, a number of questions allegedly posed by a marketing firm, including the age of potential users, optimal number of TV commercials, and optimal advertising budget for marketing this product. Livi (2003) used a generational design originally introduced by Jacobs and Campbell (1961). Each generation consisted of three members. In the first generation, two of these were confederates who (by design) anchored the norms on rather low values with respect to all three issues being discussed (i.e., on a relatively low age of potential users, a low optimal number of TV commercials, and a low optimal advertising budget), thus appropriately influencing the judgments of the third member who was a naive participant.

After all three individuals stated their opinions, one of the confederates left the room and was replaced by a naive participant. Following the second cycle, the second confederate was replaced by a naive participant, and following the third cycle, the original naive participant was thus replaced, and so on for the total of eight generational cycles. Half the groups were placed under a high need for closure by means of an ambient noise (cf. Kruglanski & Webster, 1991, 1996). The remaining half of the groups did not experience noise. Appropriate manipulation checks verified that the noise manipulation induced in the participants a relatively high degree of the need for closure. Livi (2003) found that over the several generational cycles the group norms were considerably more stable under noise than under no noise. These findings were conceptually replicated in a second study in which dispositional differences in need for closure were substituted for the noise: Groups composed of participants high on the dispositional need for closure maintained a significantly greater norm stability than did groups composed of participants low on the dispositional need for closure. Similar findings obtained for the remaining two judgments—namely, for the optimal number of commercials and the optimal advertising budget. These results are consistent with our theoretical derivation concerning the positive relation between need for closure and resistance to change.

Reactions to normative violations. If high need for closure individuals place a high premium on their communal norms and strive to assure these norms' perpetuity, they should be particularly upset by normative violations. This notion was examined in a recent study by Pierro, De Grada, Mannetti, Livi, and Kruglanski (2004). Undergraduates at a southern Italian university (of Naples) responded to the Italian version of the NFCS (Webster & Kruglanski, 1994) and to Pepitone's (1981) Scale of Responses to Normative Violations. That scale consists of two factors, one concerning violations of which the self is a target and the second concerning violations of which other persons and the community at large are targets. A structural equation model strongly confirmed a positive relation between need for closure and an aggressive response to both types of normative violations.

Interactive effects of need for closure and saliency of shared realities on immigrants' assimilation to a host culture. Though need for closure may induce a resistance to change, such a tendency may be moderated by the degree that the extant social realities are firm and/or salient for the individual. Recall that in the jury study by Kruglanski et al. (1993), participants with firm opinions regarding the appropriate verdict (crystallized via the alleged legal advice they had received) strongly resisted changing their views when confronted by a disagreeing confederate. By contrast, high (vs. low) need for closure individuals lacking firm opinions were swayed more by the confederate's arguments. In other words, high need for closure individuals are not invariably intransigent and uninfluenceable. To the contrary, they may be highly influenceable in situations in which they lack closure (Kruglanski et al., 1993) or in which the saliency of their original worldviews is less than that of rival alternative closures. For instance, if high need for closure individuals found themselves in a social milieu in which the dominant perspectives differed from their group's perspectives, they might be tempted to defect to the new group with the more ubiquitous closure (cf. Levine & Moreland, 2002).

Kosic, Kruglanski, Pierro, and Mannetti (2004) analyzed in those terms immigrants' tendency to assimilate to the host culture. Specifically, Kosic et al. (2004) argued that whether need for closure would facilitate or hinder immigrants' assimilation should depend on the kind of social reality they encountered on arrival to the new land. If they were surrounded by coethnics, their culture of origin would be salient and accessible. It would represent a shared reality in which the individuals' own beliefs would be grounded. If the quest for shared reality increases with the need for closure, the higher such a need is, the stronger should be immigrants' tendency to adhere to their original culture, and the weaker should be their readiness to assimilate to the host culture, representing a foreign social reality.

A very different situation should exist for newcomers who upon arrival in the new land find themselves relatively isolated from their coethnics and for whom the social realities of the host culture are more salient.[2] In such a case, high (vs. low) need for closure might prompt individuals to embrace those novel social realities and, hence, to assimilate to the host culture.

In one study, Kosic et al. (2004) investigated a sample of Croat immigrants to Italy. They responded to a Croatian translation of the NFCS (Webster & Kruglanski, 1994; see also Mannetti et al., 2002) as well as a Sociocultural Adaptation Scale (Kosic, 1998; see also Berry & Kim, 1988) and an Acculturation Strategies Scale (Kosic, 1998; see also Donà & Berry, 1994). They also responded

[2] This is due to frequent contacts with members of the host culture in the immigrants' work or home environments.

to items inquiring (a) whether they joined family, relatives, or friends in the host country ("yes" or "no"); (b) with whom did they come to Italy ("With family and friends" or "alone"); and (c) with members of what reference group did they have social relations during their first 3 months of residence in Italy. These items were appropriately combined into an overall index of the reference group at entry, assumed to represent the degree to which the Croatian or the Italian social reality was salient in the newcomers' entry environments. Consistent with our theory, it was found that for immigrants whose entry reference group consisted predominantly of their coethnics, the higher their need for closure was, the lesser was their assimilation to the Italian culture as attested by the Sociocultural Adaptation and the Acculturation Strategies Scales. In contrast, for immigrants whose entry reference group significantly included Italians, the higher their need for closure was, the more extensive was their assimilation to the Italian culture.

Kosic et al. (2004) conceptually replicated these findings with two samples of Polish immigrants to Italy. Participants in the first sample responded to the Polish translation of the NFCS (Webster & Kruglanski, 1994), the Sociocultural Adaptation and the Acculturation Strategies Scales used in our previous study, and an Italian Cultural Knowledge Scale (including questions about the names of the regions of Italy, the colors of the Italian flag, and the name of the president of Italy). As in the Croat sample above, participants also responded to the three items tapping the composition of their reference group at entry. It was found that for Poles whose entry reference group consisted predominantly of other Poles, the higher their need for closure was, the more they tended to maintain their culture of origins, had limited relations with other Italians, and exhibited a limited cultural knowledge of Italy. In contrast, for Poles whose entry reference group included a significant proportion of Italians, the higher their need for closure was, the less they tended to maintain their original culture, the more they tended to interact with other Italians, and the better was their cultural knowledge of Italy.

A third study, again with a sample of Polish immigrants to Italy, used a vignette methodology (Van Oudenhoven, Prins, & Buunk, 1998) and presented participants with a narrative in which the protagonist, a Polish immigrant to Italy, exhibits one of the four acculturation strategies identified by Berry (1990, 1997), namely, those of *assimilation*, *integration*, *marginalization*, and *separation*. It was found that for Polish immigrants with a predominantly Polish entry reference group, the higher the need for closure was, the greater was their identification with and empathy for the protagonist who opted for the strategy of separation, and the least was their identification and empathy for the protagonist who opted for the strategy of assimilation. By contrast, for immigrants whose entry reference group included a significant proportion of Italians, the higher their need for closure was, the stronger was their tendency to identify and empathize with the protagonist who chose the strategy of assimilation, and the weaker was their tendency to feel that way toward the protagonist who opted for the strategy of separation.

Thus, it appears that the tendency of high need for closure individuals to resist change is qualified by the relative salience of the old views versus the novel framings of reality. Should prior views loom large in the individuals' social environments, their need for closure may dispose them to be loyal and adhere to their prior views tenaciously. However, should different realities be pervasively encountered, the need for closure may induce an opposite inclination—namely, to replace the old perspectives by their rival, more ubiquitous alternatives.

General Discussion

The fundamental tendency of humans to coalesce in groups has been touted as a major evolutionary achievement of our species that contributed greatly to our ascent within the animal kingdom and the construction of civilization (Caporael & Brewer, 1991). Whereas alone we are in many ways inferior to other creatures (e.g., we are considerably slower than the cheetah, less alert than the antelope, less auditorily sensitive than the owl, and less well camouflaged than the ground-nesting bird), together we amply compensate for our individual frailties. According to this argument, it was by acting collectively that humans managed to secure food and to avoid becoming food themselves as well as to launch the spiraling conquest of the universe for which not even the proverbial sky was the limit.

Thus, group formation fulfills a variety of essential functions for individual members of our species. The strength that comes from numbers, specialization and the differentiation of labor (Festinger, 1983), intellectual cross-stimulation, and the emotional succorance we extend each other have enhanced by a manifold our capacity to cope with adverse circumstances and have set us on the extraordinary pathway from stone tools to space rockets and beyond.

The Epistemic–Social Nexus

An essential precondition for groups' ability to mediate rewards, unattainable through members' individual resources, is the sharing within groups of certain fundamental realities (Hardin & Higgins, 1996), without which concerted group locomotion toward its objectives would be well nigh impossible (Festinger, 1950, 1954). Arguably for that reason, theorists across diverse social science disciplines tied the very concept of groupness to the presence of shared reality and characterized the group concept in terms of members' agreement on such basics as the groups' goals, ideologies, and values as well as on members' common attributes or identities. In other words, the extent to which a given collectivity of people is seen to constitute a group is assumed to vary proportionately to the degree to which the members agree on various matters central to the groups' existence. An incidental crowd (Le Bon, 1895/1968) would presumably agree on less than would members of a sports team, a religious congregation, or a political party (e.g., Bar-Tal, 1990, 2000; Cartwright & Zander, 1968; Deutsch, 1968; Killian, 1964; Merton, 1957; Olmstead, 1959; Smith, 1945).

Even more fundamentally, perhaps, because people constitute epistemic authorities for each other (Kruglanski et al., 2005), human knowledge is solidly grounded in the opinions of significant members of one's reference groups (Kelley, 1952; Newcomb, 1950), whose potential disagreement with oneself would undermine one's sense of valid knowledge (Asch, 1956; Durkheim, 1898; Moscovici, 1984). In other words, an epistemic–social nexus seems to exist involving a tight connection between individuals' subjective knowledge and the shared realities of groups to which they belong and with which they identify.

The notion that shared realities are a precondition for group locomotion (Festinger, 1950, 1954) suggests that individuals de-

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sirous of group-mediated rewards (i.e., of goals that groups may attain for their members) should expend efforts on consensus building and exert pressures on others in the group to secure opinion uniformity. Indeed, classic social psychological research on group dynamics (e.g., Back, 1951; Cartwright & Zander, 1968; Festinger et al., 1950; Schachter, 1951) attests to the extent that members who are attracted to a group for some reason (i.e., who see the group as capable of mediating some important rewards) tend to exert pressures toward opinion uniformity on their fellow members and to exhibit a readiness to accept their influence in return. This notion is also immanent to Janis's (1972, 1982) concept of groupthink, which followed Festinger's (1950, 1954) theorizing in explaining the striving for unanimity in terms of in-group cohesion. Thus, classic group dynamics research attests that the perceived value of the group to its members affects at least one facet of group-centrism as presently defined: the quest for consensus and the pressures to opinion uniformity.[3]

But whereas many of individuals' needs and rewards (e.g., related to concerns for security, education, employment, or recognition) may be mediated by groups of which individuals are members, not all rewards necessarily are group mediated: Winning the heart of a potential sweetheart, convincing one's child to make the right life choices, and attaining fame and fortune, among others, are typically individualistic objectives that no group membership may suffice to attain. Yet, the pursuit of such objectives relies heavily, as well, on (one's sense of) relevant world knowledge, of which procurement is group dependent. Thus, whereas classic group dynamics research has shown that the desire for group-mediated rewards motivates members to augment the groupness of their collectivity (via uniformity pressures), the present work suggests that so does individuals' basic need for knowledge, indispensable for most human pursuits. Indeed, presently reviewed evidence amply attests that the need for firm and definite knowledge, represented by the need for closure construct, has consequences for varied facets of group behavior, coalescing around the group-centrism syndrome depicted earlier.

Across a broad variety of measures and ways of operationalizing the need for closure, the findings were as predicted by our theory. Thus, need for closure was found to induce a desire for consensus (Kruglanski et al., 1993) and to magnify pressures toward uniformity in groups (De Grada et al., 1999). It produced an asymmetric pattern of group discussion in which some members more than others (a) seized and maintained the discussion floor and (b) emitted and received a greater amount of communications from other members, hence exerting a disproportional influence over fellow members' opinions (Pierro et al., 2003). We interpreted these data patterns as signifying the emergence of an autocratic leadership structure in groups under high need for closure (see also Isenberg, 1981; Kelly & McGrath, 1985). Additionally, need for closure was shown to induce a systematic bias in favor of one's in-group and against one's out-group (Shah et al., 1998), both moderated by the degree to which the groups in question exhibited consensus or homogeneity of membership, provided the group members were perceived as similar to the self, hence reflecting a potential for affording their members acceptable shared realities (Kruglanski et al., 2002).

That homogeneous and consensual out-groups can be appealing to high need for closure individuals intimates that the latter have the potential for defection and disloyalty under some conditions (Levine & Moreland, 2002). Indeed, we have seen that high need for closure persons may be quick to embrace a new culture (hence, exhibit a disloyalty to the old culture) should its schemas and perspectives be more salient and pervasive in these individuals' ambience than those of the old culture (Kosic et al., 2004). In a similar vein, Kruglanski et al. (1993) demonstrated that high (vs. low) need for closure individuals are likely to abandon their views and accept the influence of others if the original views were lacking in social support (derived from an expert's advice). All of which suggests that the intransigence of high need for closure individuals, their adherence to their prior perspectives, and their loyalty to their in-groups are not to be taken for granted. Rather, these tendencies seem contingent on the degree to which these individuals' perspectives are grounded in a web of social support that is clear and present in their environments.

The need for closure occasioned an exclusion of opinion deviates (Kruglanski & Webster, 1991). It also induced an adherence to group traditions and a resistance to change, as revealed in a real-world penchant for political conservatism (Jost et al., 2003a, 2003b) and the tendency to preserve stable norms across multiple generations of membership in a laboratory-engendered culture (Livi, 2003).

Particularly striking is the fact that the epistemic–social nexus revealed in need for closure effects on varied features of group-centrism was manifest both in restricted laboratory contexts and in broader real-world settings (having to do with one's ethnic groups: Shah et al., 1998; the cultural assimilation of immigrants: Kosic et al., 2004; or political attitudes and party memberships: Jost et al., 2003a, 2003b). This suggests that the social psychological phenomena we are tapping are deeply ingrained in our cognitive functioning and that societal processes of appreciable real-world significance may derive from the basic epistemic workings of the human mind. Some examples of such processes are considered below.

Self-Identity or Social Reality

The relation between the need for certainty (or cognitive closure) and group processes have been investigated in Hogg's (2000) extensive program of research on subjective uncertainty reduction through self-categorization. The central theoretical notion here was that uncertainty reduction constitutes a major motivational basis of social identity processes. As Hogg (2000) summarized it, "the pursuit of uncertainty reduction provides a motivational framework for self-conceptualization in group terms—social identity. . . . Self-categorization . . . can satisfy this motivation because it assimilates self to the prototype" (p. 248). In many ways, Hogg's insights are similar to the present ones, although there exist some important differences between the two conceptions. On the side of

[3] Note that whereas the group dynamics work of Festinger (1950, 1954), Schachter (1951), and Back (1951) focused primarily on pressures to uniformity, the present theory and research expand the perspective by identifying additional dimensions of group-centrism, including the emergence of hierarchy and autocracy in a group's leadership and decision-making structures, in-group favoritism and out-group derogation, resistance to change, and the attendant inclinations toward political conservatism and traditionalism, contributing to norm stability across time and shifting circumstances.

similarity, Hogg (2000) asserted as do we that "people may join (identify) with groups because they reduce uncertainty" (p. 233). Furthermore, again in agreement with the present analysis, "within a group the discovery of disagreement or dissensus (can be) resolved by dis-identifying from a group to identify with a different group, [or by] rejection of deviates" (Hogg, 2000, p. 233). Consistent with our findings (Kruglanski et al., 2002; Shah et al., 1998), (a) research by Hogg and Grieve (Grieve & Hogg, 1999; Hogg & Grieve, 1999) demonstrated that people in minimal group settings need to be subjectively uncertain to demonstrate in-group bias, and (b) research by Jetten, Hogg, and Mullin (2000) showed that people who are uncertain are more likely to identify with a more than less homogeneous group.

Despite this convergence of insights and findings, Hogg's (2000) theory substantially differs from the present framework in its emphasis and focus. First and foremost, it derives from social identity theory (Tajfel, 1972; Tajfel & Turner, 1979; J. C. Turner, 1982), and its major issue is people's need to understand who they are. As Hogg (2000) put it, "From an uncertainty perspective, social comparison processes are governed by a desire to be sure about one's *self-concept* [italics added]" (p. 245). It is for that reason, presumably, that this theory places a strong emphasis on constructing a clear-cut group prototype, in that it "renders oneself more group prototypical" (Hogg, 2000, p. 246) and hence readily identifiable.

Actually, in Hogg's (2000) uncertainty reduction framework the issue of social identity (self-categorization) appears in three somewhat different versions. One version, described above, implies that uncertainty about one's self-identity is unique or at least primary in instigating the self-categorization process. Another version states that self-categorization is prompted by any uncertainty on any important topic, with self-identity serving as a nonunique example of such a topic. As Hogg (2000) put it, "It is quite probable that contextually *important* [italics added] uncertainties are those that reflect upon self-conception, in so far as they represent uncertainty about things that define self" (p. 233). A third version puts self-categorization in a mediating role, with one's social identity being thought to afford a variety of knowledge implicit in the group's prototype. This last meaning suggests that self-categorization could mediate uncertainty reduction on any topic of importance to the individual.

By contrast, the present theory does not accord self-categorization a unique status. Instead, it emphasizes the formation of subjective knowledge based on the shared realities of one's pertinent reference groups. Rather than viewing social categorization as an end in itself, the present theory treats it as a possible consequence of valuing one's group as an epistemic provider. Thus, whereas Hogg's (2000) uncertainty reduction framework shares basic insights in common with the present formulation, the two differ in intriguing ways concerning the relative importance to knowledge formation of shared reality versus self-identity factors. These differences could be profitably explored in further research.

Epistemic Needs and Societal Processes

The growth of scientific knowledge. Major 20th century philosophers (e.g., Feyerabend, 1975; Kuhn, 1962: Popper, 1959, 1974) agree that the growth of scientific knowledge is characterized by discontinuities in which periods of agreements (Kuhn's, 1962, "normal science") are punctuated by disagreements, occasionally erupting into scientific revolutions that give birth to novel paradigms. The dialectic between periods of agreement and disagreement may not be unique to Western science but may characterize the evolution of human knowledge in general (Popper, 1959), by affecting the balance between forces of traditionalism and innovation that drive the timeline and the pace of progress. According to the present theory, such macrolevel phenomena are rooted in microlevel epistemic processes observable in "thin slices" of behaviors by participants in small-group interactions. Specifically, our data suggest that the processes of knowledge formation and maintenance are significantly affected by the need for cognitive closure (Kruglanski & Webster, 1996). Its waxing and waning over time in given knowledge communities may thus determine their tendency to adhere to received worldviews versus reaching out for innovations and featuring an openness to revolutions (Kuhn, 1962).

Politics. No less important is the relevance of group-centrism processes to the world of politics. Mention has already been made of Irwin Janis's (1972, 1982) classic work on the groupthink phenomenon assumed to underlie major faulty decisions of several U.S. administrations. According to groupthink theorists (Janis, 1972, 1982; Hart, 1994), the likelihood of groupthink increases when decision makers are under stress occasioned, for example, by the complexity and impenetrability of the issues being addressed. These are precisely the conditions under which the need for closure is likely to arise because of the difficulty of information processing and its laboriousness.

Furthermore, the putative characteristics of groupthink are those that one could well expect to occur under a heightened need for closure. In fact, Janis (1972, 1982) identified closed-mindedness, including collective rationalizations and stereotyped images of out-groups, as one of the three major characteristics of groupthink. The other two, pressures to uniformity (including pressures applied on dissenters) and an overestimation of the in-group, are also among the major consequences of the need for closure as described above. It is noteworthy that Janis (1972, 1982) did not forge a conceptual link between the various isolated conditions (e.g., stress, issue complexity) of groupthink on the one hand and individuals' epistemic needs on the other hand. Nor did he tie this phenomenon to possible additional manifestations of the group-centrism syndrome (e.g., encouragement of autocracy, traditionalism, and conservatism) or to epistemically relevant individual differences in motivation (Webster & Kruglanski, 1994). In this sense then, the present work, although consistent with prior research (on the groupthink phenomenon or on pressures to uniformity in groups more generally), goes substantially beyond such research, both theoretically and empirically.

The presently elaborated epistemic–social nexus has been intuited in classic work by various social scientists. Recall that theoretical sociologists such as Blumer (1956), Smelser (1962, 1998), and R. H. Turner and Killian (1957) speculated that the emergence of social movements, exhibiting many of the properties of group-centrism, is related to the needs to reduce uncertainty and to dispel ambiguity. The emergence of autocratic regimes or the ascendance of fundamentalist belief systems seems also to flourish under such conditions. In this vein, Gibbon (1952) tied the surge in popularity of various religions (including Christianity, Judaism, and Zoroastrianism) during the disintegration phase of the Roman civic sys-

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tem to the attendant uncertainties this may have evoked in the empire's inhabitants (see also Toynbee, 1961). Similarly, the recent resurgence of fundamentalist Islamism has been traced to uncertainties occasioned by "social-economic modernization, where dislocation and alienation create the need for more meaningful identities" (Huntington, 1997, p. 129).[4] Thus, the present findings confirm the hunches of prior social thinkers. More important, however, they ground them in an explicit theory of the epistemic process (Kruglanski, 1989, 2004) in which the need for cognitive closure plays a pivotal role.

The body of work reviewed in the preceding pages suggest that major geopolitical events that have been shaping the course of human history might be rooted in the epistemic workings of individual minds. An exploration of this possibility may instigate a rare collaboration between social psychologists and other social scientists with interest in collective behavior and in the determinants of social stability and change.

[4] Indeed, recent research has found a significant relation between religiosity and the need for closure (Saroglou, 2002).

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