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The Social Cognition of Immigrants' Acculturation: Effects of the Need for

Closure and the Reference Group at Entry

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Abstract

Three studies found support for the notion that immigrants' acculturation to the host culture is interactively determined by these individuals' need for cognitive closure (Kruglanski & Webster, 1996) and the "reference group" they forge upon their arrival in the new land. If such reference group is fashioned by close social relations with co-ethnics—the higher the immigrants' need for closure the weaker their tendency to assimilate to the new culture, and the stronger their tendency to adhere to the culture of origin. By contrast, if the entry "reference group" is fashioned by close relations with members of the host country—the higher their need for closure the stronger their tendency to adapt to the new culture, and the weaker their tendency to maintain the culture of origin. These findings obtained consistently across three immigrant samples in Italy, one Croatian and the two Polish, and across multiple different measures of acculturation.

Immigration undoubtedly represents one of the most significant social phenomena of our times, and we are witnessing today the single largest tide of population movements in history. An estimated 130 million migrants worldwide, of which 30 million reside in the United States alone (Suarez-Orozco & Suarez-Orozco, 1995; 2001), are raising unprecedented challenges for the political, educational, and economic systems of the host countries in Western and Southern Europe, the United States, Canada and Australia as well as in a growing number of Asian, African, and South American nations.

Whereas each host country has its own, more or less unique, approach to the acculturation of immigrants, two general immigration “ideologies” have emerged over the years articulating two contrasting philosophies regarding an optimal settlement of newcomers. One of these, based on the “melting pot” metaphor, represents the traditional vision for a successful entrant-adaptation to the American culture. Theodore Roosevelt (in a speech before the Knights of Columbus, New York, October 12, 1915) expressed the idea eloquently. In his words: “There is no room in this country for hyphenated Americanism...The only absolutely certain way of bringing this nation to ruin, of preventing all possibility of its continuing to be a nation at all, would be to permit it to become a tangle of squabbling nationalities...” Thus, the “melting pot” ideology touts as ideal a settlement wherein the immigrants trade most aspects of their cultural and social heritage for that of the host society.

A contrasting ideology is that of “multiculturalism”, or (in its Canadian version), of a “cultural mosaic” (cf. Bibby, 1990; Porter, 1965), based in part on the notion that the melting pot concept is unworkable (Glazer & Moynihan, 1970) and in part on the conviction that cultural and ethnic pluralism are superior on moral grounds to the

procrustean bed inherent in the notion of “melting” away the immigrants’ original identities. In this vein, the Time magazine in its Fall 1993 “Special Issue on Multiculturalism” wrote “..for the first time in its history, the U.S. has an immigration policy that, for better or worse, is truly democratic”. The public discourse about the pros and cons of multiculturalism, and about immigration more generally continues unabated, and receives major attention from politicians the media, and social scientists worldwide (for recent discussions see e.g., Chavez, 2001; Dummett, 2001).

Paralleling the larger societal questions posed by immigration are the considerable challenges the newcomers are confronting as individuals. Whether they arrive as refugees, guest workers, or the seekers of a better life- - the entrants often find themselves in a veritable “cross fire” of social and psychological forces. These give rise to the immigrants’ fundamental dilemma of whether and to what degree to assimilate into the receiving society, often in the face of considerable hostility and rejection by the local population (Bourhis, Moise, Perreault, & Sénécal, 1997; Dacyl & Westin, 2000; Dummett, 2001; Van Oudenhoven & Wilemsen, 1989), and in what part to retain one’s former cultural identity and, maintain one’s close ties to one’s society of provenance whose members may offer an invaluable lifeline of support in times of hardship (that life in the “promised land” often represents). In a microcosm of their individual personalities then, the immigrants have their own “multiculturalism” to grapple with and to optimally manage as they attempt to find their own, suitable, ways of being, in the new setting.

The processes whereby this may take place have received a considerable amount of attention from cross-cultural psychologists (e.g., see Berry, 1990, 1997; Berry, Kim, Power, Young & Bujaki, 1989; Furnham & Bochner, 1986; La Framboise, Coleman &

Gerton, 1993; Liebkind, 2000; Ward, 2001). The term 'acculturation' itself has been often used to denote shifts in attitudes, subjective norms, values, and behaviors undergone by entrants as consequence of exposure to their new culture of arrival.

Different terms such as adjustment, adaptation and integration have been used interchangeably with the term acculturation. Searle and Ward (1990) distinguished two forms of adaptation: psychological adaptation, and sociocultural adaptation. The former refers to mental and physical well being, whereas the latter emphasizes immigrants' success in effectively organizing their daily lives in the new context (e.g., in terms of acquiring facility with the new language, gaining cultural knowledge, and establishing a network of social relationships).

Berry's (1990, 1997) proposed an acculturation stress model that outlines situational and personality factors as they may impact the structure and process of acculturation. Berry's (1997) acculturation framework includes societal factors, both in the society of origin (its political context, economic situation and demographic factors) and in that of settlement (its prevailing attitudes, the amount of support extended to migrants on part of the larger society and the community of co-ethnics), individual-level variables (demographic characteristics such as age, gender, education, socio-economic status, migration motivation, expectations, cultural distance between the society of origin and that of settlement in terms of language, religion and general world views), and such personality traits as locus of control, introversion/extraversion (Ward & Kennedy, 1992; 1993), and self-efficacy (Schwarzer, Hahn & Schroder, 1994). In addition, Berry (1997) identified a number of moderating factors present during the acculturation period such as

the acculturation phase, acculturation strategies, and stress management strategies among others.

An important concept in Berry's (1997) scheme is that of acculturation strategies. These represent the intersection of two dimensions. The first concerns the degree to which one wishes to maintain the culture of origin (for example, in terms of identity, language, ways of life) versus giving it up and replacing it by the host culture. The second dimension relates to an extent to which one seeks day-to-day interactions with members of the host group versus avoiding them to the extent possible, and orienting primarily to one's own group. The intersection of these two dimensions serves to identify four major acculturation strategies: Assimilation, representing the case when "individuals do not wish to maintain their cultural identity and seek daily interaction with other cultures." (ibid., p. 9), separation, said to exist "when individuals place a value on holding on to their original culture, and at the same time wish to avoid interaction with others" (ibid.), integration, "when there is an interest in both maintaining one's own culture, while in daily interaction with other groups" (ibid.) and marginalization, "when there is little possibility or interest in cultural maintenance (often for reasons of enforced cultural loss), and little interest in having relations with others (often for reasons of exclusion or discrimination). It has been found, for instance, that stress-reaction styles are related to persons' preferred acculturation strategies (Schmitz, 1994). Specifically, based on classification of stress reaction styles according to the Grossarth-Maticek and Eysenck (1990) Psycho-Social Stress Inventory, the "Approach" style was positively correlated to the strategy of Assimilation, the "Avoidance" style to that of Separation, the "Flexible" style to Integration, and "Psychopathology" to Marginalization.

It is noteworthy that acculturation strategies consist of two (usually related) components: behaviors and attitudes (that is, the preferences and actual outcomes exhibited in day-to-day intercultural encounters (cf. Berry, Poortinga, Segall, & Dasen, 2002, p. 353). Though there is rarely a one-to-one match between individuals' preferences (attitudes) and what they are actually able to do in specific circumstances (behaviors), there often obtains a significant correlation between the two, lending utility to the overall conception of individual strategies (Berry *et al.*, 2002). In a similar vein, Camilleri & Malewska-Peyre (1997) in their work on identity strategies distinguish between "value identity" (what the immigrants would prefer; or what their acculturation attitudes are) and their "acculturation behaviors" (what people are like and what they do at the present time). As Camilleri & Malewska-Peyre (1997) noted, when a discrepancy between the two exists, people usually strive to reduce it. In the present research we used the concept of "acculturation strategies" globally without specifically differentiating between preferences and outcomes.

The studies described below fit within Berry's (1997) comprehensive framework and at the same time explore a novel personality variable and a novel moderating factor as these may interact in determining immigrants' mode of acculturation. The personality variable is the need for cognitive closure (Kruglanski & Webster, 1996; Webster & Kruglanski, 1998) and the moderating factor is migrants' reference group at entry. Based on theoretical considerations to be laid out subsequently, we hypothesize that where the migrants' reference group at entry consists mainly of co-ethnics, the higher the migrants' need for closure the stronger their adherence to the culture of origin and the weaker their tendency to assimilate in the culture of settlement. By contrast, where the migrants' social

interactions at entry are relatively devoid of co-ethnics, and/or include an appreciable number of “natives” of the settlement society, the higher their need for closure the weaker should their adherence be to the culture of origin and the stronger should be their tendency to assimilate to the new culture. As a theoretical background for these predictions, we now introduce the need for closure concept and review some of its implications for the social psychology of immigrants.

Need for Cognitive Closure. The need for (nonspecific) cognitive closure (NCC) was defined as a desire for a definite answer to a question, any firm answer, rather than uncertainty, confusion, or ambiguity (Kruglanski, 1989). The strength of this desire is a function of the benefits associated with possessing closure and the costs associated with lacking it. The need for closure can vary across individuals and situations. An individual difference measure of the Need for Closure was developed by Webster and Kruglanski (1994), who depict its conceptual and empirical relations to several kindred notions (see De Grada, Kruglanski, Mannetti, Pierro & Webster, 1996; Kruglanski, Atash, De Grada, Mannetti & Pierro, 1997; Mannetti, Pierro, Kruglanski, Taris & Bezinovic, 2002). The scale has been used extensively in research (for reviews see Kruglanski and Webster, 1996; Webster & Kruglanski, 1998) and has been translated into several languages (Mannetti et al., 2002).

Webster and Kruglanski (1994) assumed that the NCC varies along a continuum from high need for closure at one end to high need to avoid closure at the other. The NCC may influence the way a person thinks or feels. People with high levels of NCC may display greater cognitive impatience, rigidity, and impulsiveness, reduced information

processing, and aversion toward ambiguity characteristic of new situations (Kruglanski & Webster, 1996).

Webster & Kruglanski (1994) argued that NCC may express itself through five aspects broadly representing the universe of the construct. According to the first aspect, persons with a high NCC desire definite order and structure in their lives and abhor chaos and disorder (preference for order and structure). The second aspect pertains to the affective discomfort when ambiguity and uncertainty lead to an absence of closure (intolerance of ambiguity). According to the third aspect, persons with a high NCC experience an urgent desire to reach closure, leading to decisiveness in their judgments and choices (decisiveness). The fourth aspect pertains to the desire for secure or stable knowledge and trans-situational consistency that affords predictability in future contexts (predictability). The fifth aspect includes an unwillingness to have one's knowledge confronted and rendered uncertain by alternative opinions (close-mindedness). All aspects of the NCC construct tap undesirable circumstances often encountered by immigrants having to cope daily with novel, unstructured, uncertain, ambiguous, and unpredictable situations.

In accordance with its conceptual definition, the need for closure has been shown not only to vary as a dimension of individual differences but also to rise in conditions that render information processing difficult or unpleasant (hence increasing the perceived benefits of closure or the costs of lacking closure), such as time pressure (Kruglanski & Freund, 1983; Kruglanski & Webster, 1991), noise (Kruglanski, Webster & Klem, 1993), and mental fatigue (Webster, Richter & Kruglanski, 1996). Once aroused, the need for closure invokes a tendency to seek immediate and permanent answers. That is,

individuals with a high need for closure seek closure urgently, yet they also strive for relatively stable rather than transient closure that forestalls the necessity of future revisions and the attendant uncertainty and ambiguity these entail.

In interpersonal settings, cognitive closure may be fostered through the quick attainment of social-consensus, signifying epistemic stability across persons. Indeed, a number of studies have shown that need for closure may augment the desire for consensus within groups (Kruglanski & Webster, 1991; Kruglanski *et al.*, 1993). For instance, Kruglanski and Webster (1991) found that individuals in small groups placed under high (vs. low) need for closure by means of time-pressure or ambient noise were more likely to reject a confederate who professed to hold an opinion deviant from the other group members'. Similarly, Kruglanski *et al.* (1993) found that individuals with high (vs. low) need for closure, either manipulated via noise or assessed via the Need for Closure Scale (Webster & Kruglanski, 1994), exhibited a stronger preference for agreement (vs. disagreement) with their dyadic partners. Such findings support the notion that a high degree of motivation to eschew ambiguity or seek certainty is related to the valuation of consensus and shared reality (Hardin & Higgins, 1996). Consistent with this notion, Shah, Kruglanski and Thompson (1998) found that persons with a high need for closure tend to be particularly biased in favor of their in-group, perceived as an essential source of shared reality. Kruglanski, Shah, Pierro and Mannetti (2002) found, in addition, that high need for closure individuals prefer self-similar groups that are homogeneous in their composition, and hence, are particularly likely to serve as "reality providers" for such individuals. In both the Shah *et al.* (1998) and the Kruglanski *et al.* (2002) work the results held independently of whether the need for closure was assessed by means of a

personality scale (the Need for Closure Scale) or was manipulated situationally (via time-pressure).

Migrants' Entry into a Host Culture and Their "Entry Status". Various studies suggest that the immigrants' "entry status" in their land of settlement affects their acculturation orientation, depending on a number of factors (Berry, 1997). These include: (1) context (i.e., the presence of other co-nationals)- - there is evidence suggesting that some immigrants perceive the presence of other co-nationals as a source of social support whereas other immigrants do not (see Ward, 1996); (2) language, facility in communicating with the host group expedites acculturation and may catalyze the assimilation process (Elkholly, 1985); (3) social distance maintained by the immigrants, the less it is the quicker is the assimilation (Ward, 1996); (4) personality factors related to outgoingness (e.g. assertiveness, likeability, sociability, extraversion, ego control and self-monitoring; see Padilla & Perez, 2003); (5) initial plans and aspirations (e.g. whether intending a brief sojourn or a permanent relocation); (6) socio-economic status- - the higher their educational and occupational levels the greater the immigrants' acceptance by the host culture (Barona & Miller, 1994; Beiser, Johnson & Turner, 1993; Nicassio, 1983); (7) age- - It seems to be more difficult for older than for younger immigrants to assimilate into the host society (Penaloza, 1994).

Though the foregoing findings are instructive and important, there is more to the story of the immigrants' psychological situation at entry. Specifically, the research so far has not considered the immigrants' need to have a clear sense of their social realities, and their opportunities to fulfill it in the new environment wherein they may find themselves. Shared reality concerns, of acute personal relevance to high NCC individuals (cf.

Kruglanski & Webster, 1996), should loom particularly large in migrants' transition phase from their culture of origin to their society of arrival. It is a time when the entrants' world views and customary ways of doing things often clash with very different perspectives of the host community. Small wonder then that an uncertainty and a "culture-shock" may often ensue under these circumstances, posing a considerable threat to the migrants' sense of themselves and the world (Bennet, 1998; Berger, 1988; Berry, Kim, Minde, & Mok, 1987; Gudykunst, 1985, 1988). Such potential unraveling of one's realities should be particularly upsetting to high need for closure individuals who feel uncomfortable without a sense of definite and stable of knowledge on important matters (Kruglanski, 1989; Kruglanski & Webster, 1996). The question, therefore, is how might they respond to such a threat ?

The thesis explored presently is that two general modes of response might be adopted depending upon the migrants' reference group at entry to which the individual may orient: If upon arrival the immigrant found a welcoming social support network of co-ethnics, high need for closure individuals, more so than their low need for closure counterparts, might cling to their culture of "origin" because the co-ethnic company may serve as a gratifying source of shared reality (Hardin & Higgins, 1996) that validated their prior belief systems. This may retard the migrants' assimilation to the new culture.

By contrast, if the immigrant was relatively isolated from co-ethnics during her or his initial post-entry period, and if she/he was in contact predominantly with members of the society of settlement, their perspective would represent a salient new reality for the entrant, with the old reality quickly fading away. Under these circumstances, "lone", or

ethnically-isolated migrants high on the need for closure might assimilate more quickly to the host culture than their low need for closure counterparts.

To explore these notions, we carried out three studies based on three separate participant-samples of immigrants to Italy. Study 1 investigated Croatian immigrants, and Studies 2 and 3, Polish immigrants. To triangulate on our hypothesis via converging methods, the present studies differed in their specific measures of cultural assimilation. Study 1 used a measure of acculturation strategies adapted from Donà and Berry (1994) and a separate measure of sociocultural adaptation. These same instruments were also used in Study 2 which included additionally a measure tapping the immigrants' knowledge of the Italian culture. Finally, Study 3 assessed acculturation via vignettes depicting four acculturation strategies and examined participants' degree of identification with a protagonist whose mode of adjustment represented each of those strategies (Van Oudenhoven, Prins & Buunk, 1998).

Before describing our studies in detail, it may be well to dwell briefly on the immigration policies and attitudes prevalent in Italy, the host country addressed in this research. Italy has the fourth largest number of immigrants in the European Union (after Germany, England and France). According to available data (January 1, 2003; Dossier Statistico sull'Immigrazione, Caritas di Roma), Italy has 2,395,000 legal immigrants and estimated 300,000 illegal ones. Generally, member-countries of the European Union have tended to adopt an assimilationist policy towards immigrants (exception being the Netherlands, Sweden and England which support multiculturalism). Italy too has espoused an assimilation policy, but in the last years concepts of multiculturalism and

cultural diversity have been articulated with some frequency by policy makers, occasionally prompting specific initiatives for the promotion of multiculturalism.

It is also of interest that Italy started to receive immigrants fairly recently, after long being the European country with the largest number of emigrants. Moreover, the immigration into Italy did not begin in a period of reconstruction and economic development, as it did in North-Western European nations, but rather during time of a severe economic crisis, characterized, among others, by a growing unemployment. Perhaps for these reasons, Italy lacks a truly global and consistent immigration policy. This is exemplified on the one hand by “special amnesties” periodically granted to illegal immigrants, and on the other hand by vocal advocacy by some policy makers for their mass expulsion. In view of such lack of consistent attitudes or policies in Italy toward immigrants' acculturation (cf. Berry, 1997; Bourhis et al., 1997), a great deal hinges on the individuals and their specific circumstances¹. This particular nexus is addressed in the studies described below.

Study 1

Participants

The sample of our first study consisted of 157 Croatian immigrants living in Rome, Italy. Many of them arrived in a wave of Croatian immigration into Italy in the wake of the severe ethnic conflicts that a few years ago ravaged former Yugoslavia. As of February 2002, the Croatian community in Italy numbered close to 16,000 individuals

¹ Berry et al. (1989) found that immigrants whose physical features set them apart from the host society (e.g. Turks in Germany, Moroccans in Italy) may experience prejudice and discrimination because of this fact alone. It seems

(Istat report²). During the period (1996-1998) when our data were collected more than 17,000 Croatian immigrants resided in Italy, most in possession of regular residence permits, typically issued for work (about 65.6%), and study (about 27.2%) related reasons. Croatian immigrants in Rome are relatively young, and of varied occupations including professionals, baby-sitters, housekeepers and manual laborers. Culturally, Croats are not too dissimilar from Italians (e.g. both cultures are Catholic), and they are not distinct from the Italians in their physical characteristics. Furthermore, there are no particularly negative attitudes towards them in Italy, and hence no external constraints on their choice of acculturation strategies.

The length of our participants' residence in Italy varied between 10 months and 10 years ($M = 44.3$; $SD = 17.5$ months). Participants were predominantly female (71.3%). Their mean age was 28.45 ($SD=4.32$) and a majority had secondary school education (61.3%). At the time of arrival in Italy, 65.6% of the participants did not speak Italian, 22.3% spoke Italian at a rudimentary level, and 12.1% spoke Italian well. Concerning their stated reasons for immigration, 20.6% explicitly mentioned escape from war as a reason, others identified educational opportunities (43.6%), yet others (35.8%), the opportunities for work as their motives. Among those escaped from the war zone, however, there were no refugees as such, and none had suffered material or personal losses at home.

plausible that this may impose external as well as internal (or psychological) constraints on their choice of acculturation strategy.

² <http://demo.istat.it/stra1/start.html>

Materials and procedure

During the year 1997/98, participants were approached in ethnic and religious Croatian centers in Rome by a researcher of a Croatian nationality, and they were asked to respond to a 4-page questionnaire. As the latter required a great deal of concentration and a relatively long time to complete (a minimum of 45 min.) the researcher allowed participants to take it home where they could respond to it without distractions.

Immigrants not belonging to any Croatian club were contacted by phone (we obtained their names from other participants or from a church that they attended), and with their agreement (all those approached agreed to participate), they were given the questionnaires at their homes or other places of their designation.

The questionnaire was administered in Croatian. Wherever translation of measurement instruments from Italian or English was necessary, it was checked via a back translation method by two bilingual psychologists. The contents of the questionnaire included items concerning background and demographic information (e.g., gender, age, marital status, level of education, reasons for immigration, facility with Italian in the post entry period, and length of residence) as well as “reference group” questions inquiring: (a) whether they joined family, relatives or friends in the host country (‘yes’ vs. ‘no’); (b) with whom did they come into Italy (response alternatives being ‘with family or friends’ vs. ‘alone’); (c) with what reference group did they have social relationships during their first three months of residence in Italy, response alternatives being “with Croats”, “with Italians” and with “both Croats and Italians” [we dichotomized this variable into a “with

Croats” (codified = 0) and “with Italians and/or with Both” (codified = 1)³; and (d) with whom did they live together in the initial period (with Croats vs. Italians). A “reference group” index was then created by summing participants’ responses across the four items (the values of this index can vary between 0 – 4; high values representing a predominantly Italian (vs. Croatian) “reference group” during the initial period).

Note that although the Cronbach’s alpha of this index is low (.37) we did not expect to find that a measure created from four items measuring different aspects of post-entry reference group would exhibit a high internal consistency among its components. We treat the aggregated index of post-entry reference group as a causal indicator variable (i.e. as an independent variable in the present research) rather than as an effect indicator variable. As such, the low alpha value should not be regarded as a threat to the appropriateness of our index in this study (for a discussion of this point see Bollen & Lennox, 1991).

We reasoned that having encountered suitable members of the host country with whom to strike friendships makes relatively vivid the “realities” of the society of arrival and relatively pallid the “realities” of the society of origin. By contrast, having arrived with family and friends, and having preferred the company of Croats surrounds one with

³ Controlling for all indices of immigrants’ adaptation, we did not find any significant differences on any of our dependent measures between immigrants who had relationships with the Italian group versus having such relations with both the Italian and the Croatian groups. It is plausible that it is the contacts with Italians (whether or not accompanied by contacts with the Croats) that were critical in distinguishing both groups of immigrants from their counterparts with exclusive Croat contacts. In other words, it was apparently the relations with Italians that defined these immigrants’ reference group; relations with the specific Croats being less meaningful in this regard for some reason.

the “realities” of origin rendering them more salient and vivid than the “realities” of the host culture.

Finally, the questionnaire given to participants contained different measures of immigrants' adaptation (measures of Acculturation strategies, Sociocultural Adaptation and Psychological Adaptation), a Coping Strategies Scale as well as the NCC Scale.

Need for Cognitive Closure Scale. Participants responded to the Croatian version (Mannetti *et al.*, 2002) of the Need for Cognitive Closure Scale (Webster & Kruglanski, 1994; Kruglanski *et al.*, 1997). The original 42-item scale consists of five sub-scales measuring the following dimensions: preference for order, intolerance of ambiguity, preference for predictability, closed-mindedness and decisiveness. Recent studies assessing the structural properties of the scale tested different confirmatory factor models. Results of these studies indicated that even though data from different samples fitted equally well both a second order two-factor model and a second order one-factor model, the decisiveness dimension was not significantly related to the remaining dimensions (Kruglanski *et al.*, 1997; Mannetti *et al.*, 2002). Therefore, in the present study we have used only the 35 items belonging to the four sub-scales with significant structural coefficients on the second order factor representing a general need for closure, namely preference for order, intolerance for ambiguity, preference for predictability and closed-mindedness.

Items of the Need for Closure Scale are rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). We computed a composite need for closure score averaging responses to each item (after appropriately reverse-scoring those items reflecting a preference to avoid closure). Previous studies (Mannetti *et al.*, 2002)

have shown that the Croatian version of the NFCS has a satisfactory reliability (Cronbach's $\alpha = .84$). In the present research, the α value of the scale was .83.

Coping scale. This was a 20-item scale developed by Kosic (1998). Each item (see examples below) described a distinct strategy of coping with stress, and was accompanied by a question inquiring "how did this strategy characterize your behavior in stressful/difficult situations during the last three months". Ratings were made on a 5-point scale (1 = not characteristic of me; 5= very characteristic of me).

The scale was subjected to a Principal Components Analysis with a Varimax rotation. The examination of the scree plot indicated the presence of three factors with eigenvalues greater than 1, accounting together for 41.0% of the total variance. These three factors were conceptually interpretable within Endler and Parker's (1990, 1994) model of coping. Scores for each dimension were calculated by summing the ratings for items loading .30 or greater on a single factor where higher score represented a greater use of the particular coping strategy. The first dimension (accounting for 16.4% of the total variance), referred to Avoidance coping. It consisted of 7 items and dealt with issues of passivity, denial, disengagement, daydreaming, etc. A prototypical item on this scale was: "I believe that the resolution of stressful situations depends on fate".

The second dimension (explaining 12.6% of the total variance) was related to Emotion-oriented coping. It consisted of 7 items and dealt with expressions of tensions, frustrations, and self-control. "In stressful situations I become so nervous that I cannot confront the problem" is a sample item of this scale.

The third dimension (explaining 12.0% of the total variance) referred to Problem-oriented strategies. It consisted of 6 items and measured active engagement in the

problem situation, accepting responsibility, etc. A prototypical item of this scale was “I feel able to protect my interest in any problematic situation”

The internal reliabilities (Cronbach's alphas) for the Avoidance, Emotional and Problem-oriented sub-scales were .74; .69 and .61 respectively. The three coping sub-scales varied in their inter-relations. The relation between Problem Oriented and Emotional coping was $r = -.43$, $p < .01$. The relation between Problem oriented and Avoidance coping, was $r = -.10$, $p = n.s.$, and the relation between Emotion and Avoidance coping was high ($r = .35$, $p < .01$).

Acculturation Strategies Scale . Participants responded to the modified version (Kosic, 1998) of the Acculturation Strategies Scale developed by Donà and Berry (1994). The scale consists of 13 items tapping 2 dimensions assumed to underlie acculturation strategies: 1) Maintenance of the home culture (9 items; e.g. “I would be very happy if I could watch Croatian TV programs”; “I prefer to listen Croatian music”); 2) Preference for Relationships with the host group (4 items; e.g. “I like to spend time with Italians”; “The behavior of Italians disturbs me” (reversed). Items are rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). We computed two composite scores by averaging responses to the appropriate items (after previously reversing items reflecting an opposite preference). Cronbach's alphas for Maintenance of Home culture and for Preference for Relationships with the host group were .81 and .84, respectively.

Sociocultural adaptation. Participants responded to the sociocultural adaptation questionnaire adapted by Kosic (1998) from previous studies (Berry & Kim, 1988; Berry, Trimble & Olmedo, 1986; Celano & Tyler, 1990). The questionnaire contains 9 items

related to (1) the immigrant's membership in the social welfare system (e.g., "Are you a participating member of the National Health System?" 0 = No; 1 = Yes), (2) fluency in the host language (e.g. "How good is your spoken Italian?; How well do you understand TV news?") with answers recorded on a 4-points Likert scale anchored at the ends with 1 = poor to 4 = excellent), and (3) level of experienced difficulty in coping with different adjustment tasks (e.g., finding a job, obtaining a work permit, finding a house, etc.). Answers were recorded on a 5-points scale ranging from 1 = considerable difficulty to 5 = little difficulty. We standardized each item and averaged across all 9 items to create an overall index of sociocultural adaptation. Its Cronbach's alpha was .70.

Psychological Adaptation. Participants responded to a scale of Psychological Adaptation developed by Kosic (1998) and consisting of 8 adjectives representing feelings (e.g. nervous, unhappy, worried, etc.) chosen from the scale of Psychological Adjustment (Ward & Kennedy, 1993). Participants evaluated on a 5-point Likert-type scale (1 = never, 5 = often) how often in the last month they had experienced each of these emotions. Principal Components Analysis revealed a one-factor solution (explaining 44.3% of the variance) ($\alpha = .81$).

Two Adaptation Indices

In order to explore the deeper structure possibly underlying the four indices of immigrants' acculturation (i.e., Maintenance of Home Culture, Preference for Relations with the Host Group, Sociocultural Adaptation and Psychological Adaptation) we performed an Exploratory Factor Analysis (EFA) on participants' scores on these measures. It yielded a 2-factor solution accounting for 67.1% of the total variance. The first factor accounted for 40.0% of the variance and comprised the first three indices (i.e.,

Sociocultural Adaptation with a loading of .80, Preference for Relations with the Host Group with a loading of .67, and Maintenance of Home Culture with a loading of -.55.

The second factor explained 27.1% of the total variance, and comprised only our measure of Psychological Adaptation, with a loading of .79. Consequently, we averaged the scores on the separate scales belonging to the first dimension to form an overall index of "Immigrants' Acculturation" (Cronbach's $\alpha = .79$) after previously reversing the scores on the Maintenance of Home Culture scale. We treated the measure of Psychological Adaptation as a separate variable.

Results

General Findings

Summary statistics and inter-correlations between our core variables are given in Table 1. We found a significant negative correlation between NCC and initial reference group (-.20), suggesting that high NCC individuals in this sample tended to gravitate towards co-nationals. There also emerged a negative correlation between NCC and psychological adaptation (-.27), suggesting that immigrants with high NCC were more stressed. In so far as in previous research with non-immigrant samples, no relation was typically found between need for closure and various indices of psychological adaptation or negative affect (Webster & Kruglanski, 1994; Mannetti et al., 2002) it seems plausible to assume that the presently found negative relation between NCC and adaptation reflects the fact that high NCC individuals experience particular stress in foreign, relatively unfamiliar environments.

We also found a significant negative correlation between initial reference group and original culture maintenance (-.33) indicating that the more one tends upon arrival to

forge significant social contacts with Italians, the less one tends to maintain strong relations with one's culture of origin. In the same vein, there obtained a significant positive correlation between the reference group at entry and the measure of socio-cultural adaptation (.23). Furthermore, a significant positive correlation obtained between the reference group at entry and the more general index of acculturation (.33). Finally, we found a positive but non-significant correlation between entry reference group and present relationship with the host group (.16).

Table 1 about here

The Core Hypothesis

We used the product variable approach recommended by Baron & Kenny (1986; see also Cohen & Cohen, 1983) to examine the relations between immigrants' adaptation and our independent variables (NCC and Initial reference group) and, above all, to test our hypothesis concerning the moderating role of the reference group at entry on the relation between NCC and immigrants' adaptation. To that end we performed five separate moderated multiple-regression analyses: one for each single index of immigrants' acculturation and psychological adaptation, and one for our overall index of immigrants' acculturation. In each of these analyses, we considered the main effects of NCC and of initial reference group and the interaction between them. We also considered as predictors in the regression equation several pertinent socio-demographic variables (gender, age, marital status, education, reasons for immigration, host language knowledge in the initial period, and length of permanence), and coping strategies (of the "avoidance" "emotional" and "problem-oriented" types). The results of these analyses are summarized in Table 2.

As can be seen, the pattern of results was essentially the same for all three separate dimensions of immigrants' acculturation as well as for its overall index . Consequently, we shall specifically comment solely on the latter. The main effects of initial reference group on adaptation was significant ($\beta = .15, p < .04$) revealing, not surprisingly, that adaptation to Italy was better to the extent that the immigrants' reference group at entry may have been shaped more by Italians (vs. Croats). Of greater importance, the interaction between NCC and initial reference group was significantly and positively related to overall immigrants' acculturation ($\beta = .26, p < .001$). The positive sign of the beta weight suggests that the relation between need for closure and immigrants' adaptation was more positive when their entry-level reference group consisted of members of the host society (i.e., when immigrants preferred the company of Italians during the first three months) than when they initially clung to the company of co-ethnics (i.e., preferred initially the company of Croats). These findings are illustrated via the predicted mean-values showed in Figure 1. Following the suggestion of Aiken and West (1991) these were values one standard deviation above and below the means of the relevant variables in the regression equation (for more details on the simple slope analysis see Aiken & West, 1991). As can be seen, when participants' reference group at entry appeared to be shaped by their co-ethnics, the higher the need for closure the worse their adaptation to the Italian culture. By contrast, when participants' reference group at entry consisted significantly of Italians, the higher the need for closure the better their adaptation to the Italian culture. To illustrate further the nature of this interaction effect, we computed the correlation between NCC and immigrants' acculturation within each of two level of participants' entry reference group. Results confirmed that for participants

whose reference group at the post entry period consisted of members of the host country (N=90) NCC was positively correlated with acculturation ($r = .14$; $p = \text{n.s.}$), whereas for the participants whose reference group consisted of their co-ethnics (N=67), NCC was negatively correlated with acculturation ($r = -.38$; $p < .01$). Differences between these correlations was highly significant ($z = 3.28$, $p < .001$).

Importantly, the foregoing interaction effect was stable also in presence of the several socio-demographic variables and coping strategies described above. As concerns the latter, it is of interest that a significant and negative relation obtained between avoidance coping and our index of overall immigrants' acculturation ($\beta = -.16$; $p < .04$), and a significant positive relation obtained between problem oriented coping and the index of overall immigrants' acculturation ($\beta = .21$; $p < .01$).

We also found a significant negative relationship between NCC and our measure of psychological adaptation ($\beta = -.31$, $p < .001$). Of lesser theoretical interest, we found a significant positive correlation between age and psychological adaptation ($\beta = .19$, $p < .02$), and a significant negative correlation between emotion-oriented coping and psychological adaptation ($\beta = -.29$, $p < .001$).

Table 2 and Figure 1 about here

Discussion

The data of Study 1 suggest that the reference group to which immigrants orient upon their entry into a society of settlement does matter, and that its psychological impact varies as function of the need for cognitive closure. Specifically, individuals with a high (vs. low) need for closure seem to assimilate less to the host culture when they initially keep the company of co-ethnics relative to that of natives. By contrast, high (vs. low)

need for closure individuals seem to assimilate more when they initially keep the company of natives.

It is of interest that in the present sample, the need for closure exhibited a negative correlation (-0.20 ; $p < .01$) with the preference for Italian vs. Croatian company during the initial post-entry period, possibly attesting to a kind of conservatism and a preference for self-resembling groups on part of high need for closure individuals (for reviews see Jost *et al.*, 2003 a,b; Kruglanski *et al.*, 2002; Shah *et al.*, 1998;). In and of itself, this might imply a lower potential for cultural adaptation on part of high (vs. low) need for closure individuals. There was no evidence of a main effect of need for closure on cultural adaptation, however. Instead, we witnessed a significant interaction between need for closure and our measure of the initial reference group consistent with the notion that the relation between need for closure and cultural adaptation critically depends on the social environment in which the immigrants find themselves upon arrival in the host country.

It is also of interest that we found a negative main effect of NCC on the index of psychological adaptation, and no interaction on this variable between NCC and the initial reference group. It appears then that even though early contacts with members of the Italian community contributed to the immigrants' socio-cultural adaptation this was insufficient, in and of itself, to ameliorate the stresses experienced by high NCC individuals in a novel, unfamiliar environment. This result is congruent with a previous study (Kosic, 2002), and with other findings indicating that in contrast to a socio cultural adaptation psychological adaptation depends more on individual (personality) factors (Ward, 2001; Ward & Kennedy, 1992) than on socio-cultural factors (such as quantity and quality of social relations, social skills or the ability to "fit in" or to carry out

effective interactions), whose effect could be moderated by an epistemic motivation such as the NCC.

Though supportive of our core hypothesis, the present results constitute a first “pass” at its exploration, conducted with a specific sample and specific measures of cultural adaptation. An important question at this point is, therefore, whether our findings would replicate with other immigrant samples, possibly of a different cultural background, and with additional measures of cultural adaptation. Our second study was carried out to with these questions in mind.

Study 2

Participants

Participants were 162 Polish immigrants residing in Rome. This immigrant group represents one of the largest in Italy counting 31.372 individuals according to a recent census (Dossier Sull'Immigrazione, Caritas di Roma, 2002). From the beginning of the 1990s, the number of Poles immigrating to Italy has grown significantly. Cieslinska (1992) suggested that this constitutes a new type of migration, namely income-generating seasonal migration, whether short or long term, consisting mainly of women (primarily between 30-40 years of age). For several reasons, Italy is an attractive destination for Polish citizens because they can enter it easily as tourists, without a requirement for special visas. Religious affinities also, namely the Pope being a Pole, might have added to Italy's appeal as a destination. Most Polish immigrants reside in metropolitan Rome. They find employment mainly in two occupational sectors: in the tertiary sector (private care services for elderly people or young children, cleaning services, and seasonal jobs in hotels and catering) and, in the case of males, in the construction sector. Culturally, Poles,

as Croats, are quite similar to Italians (e.g. they too are Catholics), and are not visibly distinct from the Italians in physical characteristics. Finally, no uniquely negative attitudes towards them exist in Italy, which reduces the external and internal constraints upon their choice of an acculturation strategy.

The present sample consisted mostly of female (73%) and un-married (61.6%) participants. Their mean age was 31.23 years ($SD=5.67$). Eighty one percent of our respondents had a secondary school, and 19%, a college level education. Their mean length of residence in Italy was 41.25 months ($SD = 17.48$).

Materials and procedure

Participants responded to a 4-page questionnaire similar in most respects to that of Study 1. It contained demographic questions (gender, age, marital status, level of education, and length of residence), and the critical "Initial reference group" questions inquiring (a) whether they joined family, relatives or friends in the host country ('yes' vs. 'no'); (b) with whom did they come into Italy (response alternatives being 'with family or friends' vs. 'alone'); (c) with what reference group did they have social relationships during their first three months of residence in Italy, response alternatives being "with Poles", "with Italians" and with "both Poles and Italians" [we dichotomized this variable into a "with Poles" (coded as 0) and "with Italians and/or with Both" (coded as 1)]⁴; and

⁴ Controlling for all indices of immigrants' adaptation, we did not find any significant differences on any of our dependent measures between immigrants who had relationships with the Italian group only and those with relationships with both Italians and Croats. It is plausible that it is the contact with Italians (whether or not accompanied by contacts with Croats) that were critical in distinguishing both groups of immigrants from their counterparts with exclusive Croatian contacts. In other words, it was apparently the relations with Italians that defined these immigrants' reference group;

(d) with whom did they co-habitate in the initial period (with Poles vs. Italians). A “reference group” index was then created by summing participants’ responses across the four items (the values of this index can vary between 0 – 4; high values representing a predominantly Italian (vs. Polish) “reference group” during the initial period). As in the previous study, the Cronbach’s alpha for this index was low (.27), but as Bollen & Lennox (1991) point out this does not invalidate it as a causal index.

The questionnaire also contained the same measures of immigrants’ adaptation as used in Study 1, the NCC Scale, and in addition a measure tapping the immigrants’ knowledge of the Italian culture.

The entire questionnaire was translated into Polish by a bilingual graduate student. To verify the accuracy of the translation, the Polish version was then re-translated by another bilingual individual. Respondents were approached at ethnic and religious Polish centers in Rome by a researcher of Italian nationality. Additional participants not connected to organized centers were identified by previous participants (the snowball technique) and contacted by phone. With their permission (all those contacted agreed to participate) the questionnaires were administered at their homes or other venues of their choice.

Need for Cognitive Closure Scale. Participants responded to the same version of the Need for Closure Scale used in Study 1 (Mannetti *et al.*, 2002; Kruglanski *et al.*, 1997). In this participant sample the Cronbach’s alpha for the scale was .73.

Acculturation Strategies Scale. Participant responded to the Acculturation Strategies scale used in Study 1, and designed to assess two aspects of acculturation: the

relations with the specific Croats being less meaningful in this regard for

Maintenance of Home Culture, and Preference for Relationships with the Host Group.

Whereas items designed to tap the former dimension were identical to those of Study 1, we added 6 items designed to tap the latter dimension. In this sample, the Cronbach's alpha for Maintenance of Home Culture and for Preference for Relationships with the Host Group were .71 and .81, respectively.

Sociocultural adaptation. Participant responded to the 9-items of the questionnaire of sociocultural adaptation questionnaire used in Study 1. As in Study 1, we standardized each item and then combined all 9 items by simple averaging to create an index of sociocultural adaptation. Its Cronbach's alpha was .79.

Italian Cultural Knowledge Scale. Participants responded to a newly developed scale of Italian Cultural Knowledge (Kosic, 1998), designed to assess the degree to which individuals are familiar with geographical, historical and socio-political aspects of the Italian culture. This scale consisted of 18 items such as "Who is the President of Italy?"; "What are the colors of the Italian flag?"; "How many regions are there in Italy?", etc. A correct answer received a score of 1, and an incorrect answer, a score of 0. An index of Cultural Knowledge was then created by adding up the correct answers for each participant and dividing by the number of items. The Cronbach's alpha for this index was .79.

Psychological Adaptation. The scale of Psychological Adaptation used in Study 1 was used here as well. Participants evaluated on a 5-point Likert-type scale (1 = never, 5 = often) how often in the last month they had experienced each of several feelings (e.g., being nervous, unhappy, worried, etc). Principal Components Analysis performed on this

some reason.

scale yielded a one-factor solution (explaining 49.4% of the variance). The reliability was high ($\alpha = .85$).

Two Adaptation Indices

The five indices of immigrants' adaptation (i.e., Maintenance of Home Culture, Preference for Relationships with the Host Group, Sociocultural Adaptation, Italian Cultural Knowledge, and Psychological Adaptation) were significantly inter-correlated (see Table 3). As in Study 1, we investigated the underlying structure of these relationships. To that end, we carried out an Exploratory Factor Analysis (EFA) that, once again, yielded a two factor solution accounting for 63.0% of the variance. The first four indices were highly saturated on the first factor (accounting for 44.6% of the total variance), the respective factor loadings being .72 for the Sociocultural Adaptation index, -.72 for the Maintenance of Home Culture index, .72 for the Relationships with Host Group index, and .68 for index of Italian Cultural Knowledge. Given these relationships, we proceeded to compute an overall index of "Immigrants' acculturation" that yielded a Cronbach's α of .87. The second factor explained 18.4% of the total variance, and comprised only our measure of Psychological Adaptation, with loading of .83.

Results

General Findings

Summary statistics and inter correlations between the present variables are given in Table 3. As can be seen, in this sample, NCC and the reference group variable, i.e., contacts with Poles vs. Italians during the initial post-entry period, were not significantly correlated ($r = .11$, $p < 1$). This result does not replicate the relation found in our Study 1, and may seem inconsistent with the previously found preference for the in-group by high

NCC individuals (Shah *et al.*, 1998). Note, however, that a preference for the in-group (examined by Shah *et al.*, 1998) is not the same as contacts with the in group, as the latter may be limited by external circumstances rather than being under the individuals' own control. In fact, it seems to be the case that our Polish participants had only limited opportunities for contacts with their co-nationals. Unlike the Croatian community, the Polish community in Rome is not well organized; there are only one or two places where Poles can encounter other Poles, and that on Sunday only. Thus, many high NCC individuals may have been unable to forge contacts with other Poles, even though they might have preferred them over contacts with Italians.

Replicating Study 1, the reference group at entry (scored in the direction of Italian contacts) was negatively correlated with maintenance of the original culture (-.62), and was positively correlated with relations with the host group (.46), socio-cultural adaptation (.42) and Italian cultural knowledge (.38). Though these findings are unsurprising by and large, it is useful to bear in mind that the reference group items refer mostly to immigrants' contacts in the initial post entry period, whereas items about relations with the host group, socio cultural adaptation and cultural knowledge refer to participants' current knowledge, attitudes and behaviors.

Here also as in previous study emerged a negative correlation between NCC and psychological adaptation (-.19), suggesting that immigrants with high NCC were more stressed.

Table 3 about here

The Core Hypothesis

Following our approach in Study 1, we performed six separate moderated multiple regression analyses (using the product-variable approach, Baron and Kenny, 1986), one for each index of immigrants' acculturation (i.e., Maintenance of Home Culture, Relationships with the Host Group, Socio-cultural Adaptation, Italian Cultural Knowledge and Psychological Adaptation) and one for the overall acculturation index. Also as in Study 1, in each multiple regression analysis, we considered the main effects of NCC and of reference group, the interaction between them and several pertinent socio-demographic variables (gender, age, marital status, education, and length of permanence).

The results of these analyses are displayed in Table 4. As can be seen, the data-patterns were highly similar for all the five indices of immigrants' adaptation. Consequently, we will comment only on results pertaining to the overall adaptation index. Replicating Study 1, the main effects of the initial reference group variable was significant ($\beta = .62, p < .001$) attesting, unsurprisingly, that participants whose initial reference group included Italians (versus predominantly Poles) evinced a higher level of acculturation.

Of greater importance, the interaction between NCC and the entry reference group was significantly and positively related to immigrants' adaptation ($\beta = .23, p < .001$), over and above the various socio-demographic characteristics we had measured. The positive sign of the beta weight suggests that the relation between need for closure and immigrants' adaptation was more positive when during the initial post entry period the immigrants' kept a largely Italian rather than exclusively Polish company. In fact, as the predicted mean-values (Aiken & West, 1991) depicted in Figure 2 show, when participants' entry reference group consisted predominantly of their co-ethnics, the higher

was their NCC the lower their adaptation to the host culture. By contrast, when participants' post entry reference group consisted to some appreciable extent of Italians, the higher their NCC the greater their adaptation to the host culture. To explore further the nature of this interaction effect, we computed the correlation between NCC and immigrants' acculturation at each of two levels of participants' initial reference group. Results confirmed that for participants whose reference group during the initial three months was characterized by the presence of Italians (N=80), NCC was significantly and positively correlated with immigrants' acculturation ($r = .37$; $p < .01$), whereas for participants whose initial reference group consisted mainly of other Poles (N=82) this correlation was significant and negative ($r = -.48$; $p < .01$). The difference between these two correlations is highly significant ($z = 5.69$, $p < .001$).

Replicating Study 1, the foregoing interaction effect remained significant controlling for the various socio-demographic variables mentioned earlier. Among these, a significant and positive correlation appeared only between level of education and our acculturation index ($\beta = .17$; $p < .01$), and the length of residence in Italy ($\beta = .13$; $p < .05$).

As in Study 1, there obtained a significant negative correlation between NCC and psychological adaptation ($\beta = -.22$, $p < .01$), revealing that immigrants with higher NCC exhibit a lower level of psychological adaptation, or higher level of acculturative stress. Furthermore, we found a significant correlation between psychological adaptation and the entry reference group ($\beta = .22$; $p < .01$) revealing a greater degree of psychological adaptation for immigrants who in the post entry period had Italians as their reference group. Finally, we found a significant correlation between psychological adaptation and

gender ($\beta = -.17$; $p < .05$), the women reporting a lower level of psychological adaptation than the men.

Table 4 and Figure 2 about here

Discussion

The results of the present study replicate those of Study 1, using an immigrant sample from a different culture and adding a cultural knowledge measure of immigrants' cultural adaptation. As in Study 1, we find that the different aspects of acculturation as presently measured (i.e., Maintenance of Home Culture, Relations with Host Group, Sociocultural Adaptation, and Cultural Knowledge) are strongly inter-correlated and are justifiably viewed as diverse manifestations of the same underlying construct of Immigrants' Acculturation. The Psychological Adaptation index, though significantly correlated with the foregoing measures, was found to form a rather separate factor.

Also as in Study 1, we find that adaptation to a host culture was positively affected by an initial immersion in social relations prominently including members of such culture, serving to surround one with a "shared reality" prevalent in the country of settlement. Of greatest interest, the present results replicate those of Study 1 in confirming our core hypothesis concerning an interaction between the immigrants' initial reference group and their need for closure. Once again we find that when the immigrants' initial reference group represented to a significant extent the culture of the host country, the higher the need for closure the higher was their level of acculturation into the host society. By contrast, when the initial reference group was representative of the immigrants' country of origin, the higher the NCC the lower the level of acculturation into the host society.

It is also noteworthy that in the present sample no significant relation obtained between the need for closure and the reference group at entry. In other words, whether the immigrant preferred social relations with members of her or his "old country" over those from the land of settlement or vice versa was statistically independent of her or his NCC. But once congenial social relations began to form it mattered, apparently, with whom they formed, and it did differentially for high versus low need for closure individuals. As shown above, the NCC manifested the exact opposite relation to acculturation as function of the kind of "shared reality" mediated by the reference group the immigrants were able to form in the post entry period.

Whereas our studies thus far looked at immigrants' depictions of their behavior vis a vis the home and host cultures, and of their familiarity with the latter, our third and final study examined the immigrants' attitudes and feelings. Specifically, we looked how immigrants felt in regard to each of the four acculturation strategies identified by Berry et al. (1989; 2002) as function of their fit with immigrants' need for closure and their opportunity to gratify it via the entry reference group. Following Higgins' (1997) "value from fit" notion we assume that a strategy that fits one's goals and opportunities will be regarded more positively than one that does not. Accordingly, we expected to obtain an interaction between the NCC and the entry reference group with respect to two of the strategies, assimilation and separation, and no specific NCC or initial reference group effects in regard to the remaining two strategies, integration and marginalization. Assimilation, according to Berry et al. (2002, p. 354) refers to an immersion in the host culture, and a relative distancing from the immigrants' culture of origin. Based on the logic outlined earlier, such strategy should exhibit a stronger psychological fit, and hence

be more appealing to high vs. low need for closure individuals provided their entry reference group, represented the host culture. By contrast, the strategy of separation consists of a steadfast adherence to one's culture of origin (Berry et al., 2002) and a distancing from the host culture. Such strategy should exhibit a stronger psychological fit for, and hence be more appealing to, high versus low need for closure individuals provided their entry reference group was predominantly representative of their home culture. As noted above, there were no compelling theoretical reasons to expect that immigrants' feelings toward the strategy of integration, representing an amalgam of the home and the host culture, and toward that of marginalization, representing an alienation from both cultures, would be similarly affected by the interaction between need for closure and entry reference group, or be systematically influenced by either of these variables in separation.

Study 3

Participants

Participants in this research were 141 Polish immigrants residing in Rome (59 males and 82 females), recruited independently from participants in Study 2. Their ages varied between 16 and 67 years, with a mean age of $M = 33.24$ years ($SD = 10.66$). The length of their residence in Italy ranged from 6 months to 17 years, with 53.87 months ($SD = 37.86$) representing the mean length. Five per cent of participants had primary school education, 83% - secondary school education and 12% - a college degree. About 9.2% of participants were unemployed, 3.5% were students and 87.2% were employed at the time of participation. As these data suggest then, our sample was highly diverse in age, gender, and educational level.

Materials and procedure

A questionnaire similar to those of Studies 1 and 2 was administered in the present study as well. It contained a number of demographic questions (concerning gender, age, marital status, level of education, and length of residence). In this study we included only a single question (identical to that of Study 2) related to immigrants' reference group at entry, namely one concerning their social relationships during the first three months of residence in Italy (i.e., with Poles vs. Italians vs. Both).

As with the questionnaires of our prior studies, the present questionnaire too contained the same version of NCC scale. Unlike the materials of the previous studies, the present set contained a manipulated depiction of Acculturation Strategies (using a vignette methodology), as well as a check on this manipulation and, measures of our dependent variables.

The questionnaire was translated into Polish, and back translated into Italian by speakers fluent in both languages. As in Study 2, respondents were approached at Polish church in Rome. Additional participants not attending that church were recruited through references from previous participants, and they responded to the present stimulus materials either at their homes or at other locales of their choosing.

Depicting the acculturation strategies . Depiction of the acculturation strategies was accomplished via a technique used by Van Oudenhoven *et al.* (1998) in their research with Moroccan and Turkish immigrants in the Netherlands. As in that study, we presented respondents with a fictitious newspaper article telling a story of an immigrant (a Polish man for male-participants and a Polish woman for female participants). Four different versions of the story were used, respectively illustrating the acculturation

strategies of assimilation, integration, separation, or marginalization, and participants were randomly assigned to one of these variations. The following four stories constitute the versions used for male participants:

Assimilation: Suavek is a Pole who has resided in Italy for several years. Upon his arrival he kept wondering what things in the new land would be like. After all, Italy and Poland are very different. And it isn't easy for the immigrants to find a good job and to adapt to the new way of life. Suavek states : "I don't keep the traditions and culture of my country of origin and I find it important to adapt to the culture and customs of the host country. I like to live here and don't feel a nostalgia for Poland. Moreover, my children attend an Italian school. I speak with them Italian and deliberately don't teach them the history and culture of our country of origin, or do any things with them which might make them feel different from their Italian friends. I would not mind if they decided to marry an Italian and to remain in Italy or, if my grandchildren will not speak a word of Polish.

During times of difficulty I found understanding and support especially from Italians. Consequently, my friends predominantly are Italians. I acquired a high level of fluency in Italian and found a good job. During my free times, I visit Italians and never attend Polish ethnic clubs. I would like to stay in Italy for relatively long and I have an intention of acquiring an Italian citizenship".

The vignettes for the remaining three strategies commenced with the same initial three sentences and diverged subsequently. Thus, the text for the separation strategy stated: "For me, the culture and traditions of my country, are very important and I cannot accept the Italian culture and its customs. Moreover, I consider it very important that my

children know the language, history and culture of our country and, therefore, I decided to send them to school in Poland. Otherwise, they would have become too Italian and it would have been difficult for them to go back to Poland.

During times of difficulty I found understanding and support especially from other Poles and never from the Italian people. Consequently, my friends predominantly are Poles. Apart from work situations I have almost no contact with Italian people. I have difficulty with speaking Italian and as a consequence I cannot find a good job. During my free times, I prefer to attend the Polish ethnic clubs and I never visit with Italians”.

The parallel text representing the integration strategy stated: “For me the culture and traditions of my country are important but I accept also the Italian culture and customs. In my opinion, we should respect and maintain our own culture but also try to adapt to the culture of the country where we live. Moreover, I try to teach my children Polish, as well as the history and culture of Poland because this way they could choose on their own, one day, whether to remain in Italy or, return to Poland.

During times of difficulty I found understanding and support both from other Poles and from Italians. During free times, I attend Polish ethnic clubs, but also visit with Italian friends. Occasionally, I have considered adopting an Italian citizenship, but I do not see the advantages of it”.

Finally, the following text represented the marginalization strategy: “I’ve never adhered to my own culture. What is the use of a Polish attitude here? Unfortunately, nor do I find the Italian way of life right for me. But one has to try to adjust, if only for the sake of the children. I would not care if my grandchildren did not speak a word of Polish, or if my children married an Italian. Apart from the job I have almost no contact with

Italians. During times of difficulty, I didn't find comprehension and support from either Poles or Italians. Consequently, I don't have friends in Italy, neither Poles nor Italians. I don't speak Italian well and I didn't find a good job. During my free times, I don't attend Polish ethnic clubs, but I don't feel well with Italians either”.

Manipulation check. Following their perusal of the alleged newspaper article, participants indicated how much contact did the protagonist have with Italians. Their answers were recorded on a 7-points Likert scale anchored at the ends with 1 = low level of contacts and 7=high level of contacts, and how important for the protagonist was the Polish culture. Again a 7-point Likert scale, ranging from 1 = extremely unimportant to 7 = extremely important, was used to record the participants' answers. These questions served as checks on our manipulation of acculturation strategies.

Identification with the protagonist. Following Van Oudenhoven *et al.* (1998) we treated participants' identification with the protagonist as a projective measure of their own acculturation attitudes and conduct. Specifically, participants answered a question about the extent to which “they could identify with the vignette's central figure” using a 7-points Likert scale ranging from 1 = absolutely not to 7 = completely, and to indicate, on a similar scale “how positively or negatively they evaluated this person's conduct and ideas” (1 = very negatively, 7 = very positively). These two items were highly inter-correlated ($r = .74$), hence we combined them through simple averaging to form an overall Identification Index, serving as the main dependent variable in this study.

Need for Cognitive Closure . Participants responded to the same version of the NCC scale used in our previous studies (Mannetti *et al.*, 2002; Kruglanski *et al.*, 1997). Its Cronbach's alpha in the present sample was .67. Total NCC scores varied between 85

and 148. A median split was performed to create two groups of participants, with low and high NCC respectively (MDN = 116).

Results

Manipulation check

To evaluate the degree to which our vignette manipulation was successful we performed two ANOVAs, one on the item about the importance to the protagonist of the culture of origin, the second, on the protagonist's contacts with members of the host culture. Our manipulation of acculturation strategies exerted significant effects on both items: ($F(3,140) = 55.86, p < .001$) for importance of the original culture, and ($F(3,140) = 95.78, p < .001$) for contacts with the host culture. Specifically, importance of the original culture was assumed to be greater for protagonists in the separation and integration conditions ($M = 5.94$ and $M = 5.91$) than for those in the assimilation and marginalization conditions ($M = 1.81$ and $M = 2.37$, respectively). Similarly, contacts with the host culture were assumed to be stronger for protagonists in the assimilation and integration conditions ($M = 6.19, M = 4.51$ respectively) than for those in the separation and marginalization conditions ($M = 1.89, M = 1.89$ respectively). It thus appears that our manipulation of acculturation strategies was successful. It is, finally, important to note that consistent with Study 2, the correlation between participants' NCC and their initial social contacts with Poles versus Italians was non significant ($r = -.01, p > .90$).

Identification with the Protagonist

As noted earlier, we treated our participants' identification with the protagonist as a ("projective") measure of their degree of endorsement of the acculturation strategy that s/he represented (see Van Oudenhoven *et al.*, 1998). A 2 (NCC: high vs. low) X 2

(Reference group during the first three months: Poles vs. Italians/Both)⁵ X 4

(Acculturation strategies: assimilation, integration, separation and marginalization)

ANOVA design was performed on our Identification Index as a dependent variable, with the socio-demographic variables of gender, age, education level and length of residence included as co-variates.

Results revealed a significant main effect of acculturation strategies ($F(3,140) = 61.32, p < .001$). Specifically, immigrants identified with and evaluated more positively the strategy of integration ($M = 5.21$) than the remaining three strategies that did not differ amongst themselves (assimilation ($M = 2.90$), separation ($M = 2.74$), and marginalization ($M = 1.76$). In addition, our analysis yielded a significant interaction between the reference group at entry and acculturation strategy ($F(3,140) = 26.77, p < .001$).

Appropriate post-hoc comparisons between single cells (i.e., contrast analyses, Rosenthal & Rosnow, 1985) revealed that immigrants identify with more, and evaluate more positively the behavior of the protagonist representing the strategy of assimilation if they initially had been in the company of the “natives” ($M = 4.38$) than if they initially had been in the company of co-ethnics ($M = 1.73$), ($t(7,133) = -6.55, p < .001$). To the contrary, immigrants identified less with and evaluated less positively the behavior of the protagonist representing the strategy of separation if they initially kept the company of the “natives” ($M = 1.68$) than if they kept the company of co-ethnics ($M = 3.75$), ($t(7,133) = 5.08, p < .001$). None of the other focused comparisons was significant ($t < 1$).

⁵ We did not find any significant difference for the index of identification with the protagonist between immigrants who had relationships with the Italian group versus both the Italian and the Polish groups.

Of central importance, there is obtained the predicted triple interaction effect involving the NCC, reference group at entry, and acculturation strategies ($F(3,14) = 13.50, p < .001$). The pertinent means are displayed in Table 5. As can be seen from a post-hoc test (Rosenthal & Rosnow, 1985), for participants who initially had been in the company of co-ethnics (i.e. Poles), those with a high NCC endorsed the strategy of separation more than those with a low NCC ($M = 4.81, M = 2.90, t(15,125) = -3.81, p < .001$), and endorsed the strategy of assimilation less than those with a low NCC ($M = 1.25, M = 2.20, t(15,125) = 2.01, p < .05$). By contrast, for participants who initially had been in the company of the Italians those with a high NCC endorsed the strategy of assimilation more than did their low NCC counterparts ($M = 5.44, M = 3.00, t(15,125) = -4.58, p < .001$), and chose the strategy of separation less than their low NCC counterparts ($M = 1.20, M = 2.36, t(15,125) = 2.22, p < .03$). Irrespective of their post entry reference group, participants with a high (vs. low) NCC did not significantly differ in their identification with the protagonist representing the strategies of integration or marginalization.

Furthermore, as shown in Table 5, we did not find significant differences in endorsement of any of the acculturation strategies (i.e., neither assimilation nor, integration, separation, marginalization) between low NCC individuals who initially kept the company of co-nationals vs. those who kept the company of members of the host-society. Finally, none of the demographic variables that we treated as co-variates (gender, age, education level and length of residence) had any significant effects on our Identification Index.

Following our approach in previous two studies, we examined whether the continuous measure of NCC produced the same patterns of effects as the dichotomized one. Thus, we decomposed the 3 way interaction and conducted follow-up regression analyses for each acculturation strategy (i.e., Assimilation, Integration, Separation, Marginalization), using the product-variable approach (Baron & Kenny, 1986). Also as previous studies, in each multiple regression analysis, we considered the main effects of NCC and of reference group, the interaction between them and several pertinent socio-demographic variables (i.e., gender, age, marital status, education, and length of stay in Italy), as control variables.

The results of these analyses are displayed in Table 6. As can be seen, we obtained the predicted interaction between NCC and reference group at entry only for the strategies of assimilation and separation. For the strategy of assimilation, the main effects of the initial reference group variable was significant ($\beta = .53, p < .001$) attesting that participants whose initial reference group included Italians (versus Poles) chose the strategy of assimilation (that is, identified themselves with the assimilation protagonist). Furthermore, the interaction between NCC and the initial reference group was significantly and positively related to level of participants' identification with the assimilation strategy ($\beta = .38, p < .01$), over and above the various socio-demographic characteristics for which we had controlled. The positive sign of the beta weight suggests that the relation between need for closure and the level of identification with the strategy of assimilation was more positive when during the initial post entry period the immigrants' kept a largely Italian rather than exclusively Polish company. To explore further the nature of this interaction effect, we computed the correlation between NCC

and the level of identification with the strategy of assimilation at each of two levels of participants' initial reference group. Results confirmed that for participants whose reference group during the initial three months was characterized by the presence of Italians (N=16), NCC was positively correlated with the level of identification with the strategy of assimilation ($r = .37$; $p = n.s$), whereas for participants whose initial reference group consisted mainly of other Poles (N=20) this correlation was significant and negative ($r = -.67$; $p < .001$). The difference between these two correlations is highly significant ($z = 8.82$, $p < .001$).

For the strategy of separation, the main effects of the initial reference group variable was significant ($\beta = -.72$, $p < .001$) attesting that participants whose initial reference group included Italians (versus Poles) identified themselves less with the protagonist of vignette on separation. Moreover, the interaction between NCC and the initial reference group was significantly and positively related to level of identification with the strategy of separation ($\beta = -.54$, $p < .001$), over and above the various socio-demographic characteristics that we had controlled. The negative sign of the beta weight suggests that the relation between need for closure and the level of identification with the strategy of separation was more positive when during the initial post entry period the immigrants' kept a largely Polish rather than Italian company. To explore further the nature of this interaction effect, we computed the correlation between NCC and the level of identification with the strategy of separation at each of two levels of participants' initial reference group. Results confirmed that for participants whose reference group during the initial three months was characterized by the presence of Italians (N=17), NCC was significantly and negatively correlated with the level of identification with the

strategy of separation ($r = -.73$; $p < .001$), whereas for participants whose initial reference group consisted mainly of other Poles ($N=18$) this correlation was significant and positive ($r = .78$; $p < .001$). The difference between these two correlations is highly significant ($z = 5.31$, $p < .001$). In similar regression analyses conducted for the strategies of integration and marginalization, the interaction effect between NCC and entry reference group was not significant.

Table 6 about here

Discussion

The results of the present study replicate the typical finding in the literature regarding the greatest preference by immigrants of the integration strategy, followed by assimilation and separation, with marginalization being the least preferred strategy (Berry & Sam, 1997; Donà & Berry, 1994; Horenczyk, 1996; Nguyen, Messè, & Stollack, 1999; Ryder, Alden, & Paulhus, 2000; Van de Vijver, Helms-Lorenz, & Feltzer, 1999; Van Oudenhoven *et al.*, 1998; Ward & Rana-Deuba, 1999). This finding suggests that the present operationalization of acculturation strategies via vignettes tapped the same construct as did previous operationalizations implemented either via scales (Donà & Berry, 1994; Nguyen *et al.*, 1999; Van de Vijver *et al.*, 1999;) or via an alternative version of four vignettes portraying the four strategies (Georgas & Papastilianou, 1998).

Of greatest importance, the present findings conceptually replicate our former two studies using a yet different method of assessing immigrants' acculturation. Whereas the former studies tapped acculturation via pertinent self-reports (Studies 1 and 2) and an objective measure of cultural knowledge (Study 2), the present, "projective", measure tapped participants' attitudes toward various ways of relating to a host culture. Consistent

with our former two studies, we find that whether the need for closure relates positively or negatively to the inclination to immerse oneself in, or keep apart from, the host culture (as represented here by the “assimilation” and “separation” strategies respectively) depends on the social relations one forges upon arrival in the host country. If these social ties were forged predominantly with one’s co-ethnics NCC is related positively to (1) a positive attitude toward the strategy of separation, and (2) a negative attitude toward the strategy of assimilation. If, however, one’s social ties were predominantly with members of the host culture, then NCC is related negatively to (1) a positive attitude to separation and (2) a negative one to assimilation.

Finally, it is of interest that no clear differences between high vs. low NCC immigrants were expected and none were found in reference to their attitudes to the strategy of integration and marginalization. The strategy of integration does offer, on the one hand, a coherent belief system that should be attractive to high need for closure individuals. On the other hand, it represents a complex and differentiated system that may be laborious to construct, and that for that reason should be unappealing to high need for closure persons. Similarly, the attitude of high (vs. low) need for closure individuals should be ambivalent toward the strategy of marginalization. Such strategy, on the one hand rejects high need for closure individuals’ preferred shared reality (whether it be the reality of their home culture or that of the host culture), which should render it unappealing, but on the other hand, it rejects their non-preferred reality, which should lend it appeal. These two tendencies could cancel each other out, resulting in an absence of a relation between NCC and attitudes toward marginalization.

General Discussion

Immigrants in a new land typically encounter a novel social and cultural ambience quite different from that which they have known. Not only do they find themselves surrounded by unfamiliar people in unfamiliar places, but they are cast into a social and institutional context which “rules of the game” are foreign to them, including the most basic rules of communication inherent in an unfamiliar language. However much they may have craved the “promised land”, however compelling their reasons for departure, the imagined “paradise” may quickly turn into a virtual “inferno” where the newcomers, stripped of their identity and plucked from their social niche, confront an existence devoid of prospects. From that perspective, immigration often gives rise to a personal crisis of sorts, stemming from a severe “culture shock” the immigrants may experience. In response to this upheaval newcomers may strive to regain their sense of meaning and coherence. Their ways of doing so and the variables that affect those ways was what concerned us in the present work.

Our analysis highlighted the shared reality threat to newcomers from the novel cultural perspectives they may be confronting. We emphasized two contrasting ways of dealing with such a threat: (1) rejecting the novel viewpoints and re-affirming one's commitment to the “old and tried” outlooks on things (akin to Berry's notion of the “separation” strategy), (2) abandoning the “old and tried” notions and embracing the novel world views instead (akin to Berry's notion of the “assimilation” strategy). Because shared reality critically depends on opinion uniformity in a meaningful reference group (Festinger, 1954; Hardin & Higgins, 1996), we reasoned that the immigrants' choice between these modes of reaction would prevail may importantly hinge on the composition of that group.

From that perspective, a great deal should depend on who the immigrants' friends are at the time that their own, personal, "culture clash" is at its peak, early on following their arrival in the new surroundings. For a variety of reasons, some immigrants may be surrounded at entry by co-ethnics, forming a closely knit group of similar others, and creating a reciprocally supportive milieu imbued by the cultural realities of the homeland: It could be that some such immigrants have relocated to the new country with their family and long-term friends, serving as a natural support group after entry, and a firm source of shared reality in the post-entry period. Alternatively, the immigrants might have arrived at a place where a large community of their compatriots had settled beforehand, eager to welcome them in its ranks. Whatever the reason, close social relations with compatriots during the initial period in the host country should avail the immigrants of a comfortably familiar shared reality strongly reminiscent of "home".

Other immigrants, in contrast, may find themselves relatively excluded from co-ethnics during their initial, post-entry period. Again that could be so for varied reasons. The immigrants might have traveled alone, their port of entry might be relatively devoid of co-ethnics, etc. Some such immigrants might be fortunate enough to encounter agreeable nationals of the host country (possibly romantic partners) with whom they may be able to establish close relationships. Friendships with members of the host country may afford a different shared reality, representative of the native culture rather than the immigrants' original culture. This may put pressure on the newcomers to conform to the novel perspectives, and leave behind their old attitudes and opinions.

We also assumed that the degree to which immigrants will cling to, or embrace their ambient reality (whether of the old or the new variety) should depend on their need

for cognitive closure. Kruglanski, Webster & Klem (1993) found that persons under high (vs. low) need for closure tend to “freeze” on their own opinion, granting that they had a well crystallized opinion to begin with. When they didn't, individuals under high (vs. low) need for closure were quick to “seize” the opinions of their interaction partners even though these ran directly counter to these individuals' own initial hunches. Somewhat analogously, in the present case the presence of social relations with co-ethnics may make salient the “opinions” of the original community, on which high (vs. low) need for closure immigrants may be quick to “freeze” (Kruglanski & Webster, 1996). By contrast, the absence of such relations (i.e. the absence of salient opinions affirming the culture of origin) might lead high (vs. low) need for closure individuals to “seize” on the salient opinions offered by their new companions, even though these may considerably differ from opinions prevalent in the immigrants' original culture. In other words, we predicted that if their initial social ties were with co-ethnics, high (vs. low) need for closure individuals will tend less to assimilate to the new culture, and tend more to adhere to the original culture. We hypothesized further that the exact opposite pattern will be manifest where the immigrants' early social relations were with nationals of the host country. Here the high (vs. low) need for closure individuals were assumed to assimilate more to the new culture, and adhere less to their culture of origin.

Our results lent consistent support to the above predictions. In three separate studies differing in the ethnicity of the immigrants (i.e., Croats in Study 1, Poles in Studies 2 and 3) and in measures used to assess adaptation, high (vs. low) need for closure individuals exhibited lesser degree of assimilation to the host culture when their initial social relations in the new land were primarily with their compatriots. In contrast,

when their initial social relations were with nationals of the host country, high (vs. low) need for closure individuals exhibited a more pronounced assimilation to the culture of the host country.

Thus, our Study 1 investigated a sample of Croatian immigrants and assessed the tendency to assimilate to the Italian culture via our measures of Acculturation Strategies and our questionnaire of Sociocultural Adaptation. Study 2 investigated a sample of Polish immigrants using in addition to the Acculturation Strategies and Sociocultural Adaptation measures, the more “objective” index of Italian Cultural Knowledge. Finally, Study 3 conducted also with Polish immigrants, used the “projective” technique implemented via a vignette methodology and looked at the immigrants’ degree of identification with a protagonist espousing one of the major strategies of acculturation (Van Oudenhoven et al., 1998).

Several aspects of our data merit comment. First, they make sense and cohere with prior findings in the literature. For instance, the fact that immigrants who initially formed social relations with Italians evinced a more pronounced assimilation to the Italian culture (Studies 1 and 2), and endorsed more the strategies of assimilation and integration (Study 3) than their counterparts with co-ethnic social ties in the initial post-entry period makes good intuitive sense. Secondly, as in prior studies (c.f. Berry & Sam, 1997; Berry et al., 2002; Van Oudenhoven et al., 1998) in our Study 3 too, the integration strategy was evaluated more positively than its alternatives. Thirdly, our diverse measures of acculturation in Studies 1 and 2 were consistent with each other yielding a robust unitary factor, thus lending credence to the notion that degree of acculturation into the host society can be thought off as a singular latent variable with manifold facets.

Given that our data make sense and that they are based on a wide diversity of measures in two different languages and collected across two different ethnic groups it is gratifying to observe that they also unexceptionally lend support to our core hypothesis: In all our studies the need for cognitive closure exhibited opposite relations to the quality of cultural adaptation as function of the immigrants' social relationships during the initial period of their stay in the host country. On all the different measures used, immigrants high (vs. low) on the need for closure tended to assimilate to the host culture less if their initial relationships were with their co-ethnics, and more if they were with members of the host culture.

In two of the studies (Studies 2 and 3) there obtained no significant correlation between need for closure and the entry reference group to begin with. Whereas in the remaining study (Study 1) these variables exhibited a low significant correlation ($p < .05$) the statistical interaction effect between them was highly significant even after the effect (on acculturation) of the initial reference group variable per se was controlled for in the multiple regression analysis. Moreover, this interaction remained stable even after the effects of other pertinent variables (socio demographic characteristics) were appropriately controlled for. Thus, it seems fair to conclude that the reference group at entry moderated the relation between need for closure and acculturation, as hypothesized.

Finally, it is noteworthy that the need for cognitive closure exhibited a robustly negative relation to psychological adaptation (Studies 1 and 2) attesting that those high in that need may find the immigration experience particularly unsettling and aversive, over and above adjustments they may be able to make by assimilating to the new culture, or hewing to their culture of origin.

Conclusion

Whereas the reference group at entry affects immigrant-acculturation directly (the more it consists of co-ethnics the less the adjustment to the new society), the need for closure does so more complexly and in interaction with the immigrants' initial social contacts in the host country. In this sense, the need for closure could facilitate either the "melting pot" or the "multiculturalist" objectives of immigrations policies all depending on the initial social conditions in which the immigrants found themselves. It is finally noteworthy that beyond it constituting a dimension of individual differences, the need for closure can be also induced situationally (cf. Kruglanski & Webster, 1996; Webster & Kruglanski, 1998) via various constraints on information processing such as time pressure, noise, fatigue, and other sources of stress, and it can also vary across cultures (cf. Hofstede, 1980). If our present findings would generalize to these alternative sources of the closure motivation, we would gain important additional understanding into the situational and cultural conditions affecting the processes of immigrant absorption.

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Figure Captions

1: Immigrants' adaptation as a function of Need for Cognitive Closure (NCC) and participants' initial reference group (preference for Croat vs. Italian/Croat company during the first three months): Predicted mean-values (*Study 1*).

2: Immigrants' adaptation as a function of Need for Cognitive Closure (NCC) and participants' initial reference group (preference for Polish vs. Italian/Polish company during the first three months): Predicted mean-values (*Study 2*).

Figure 1

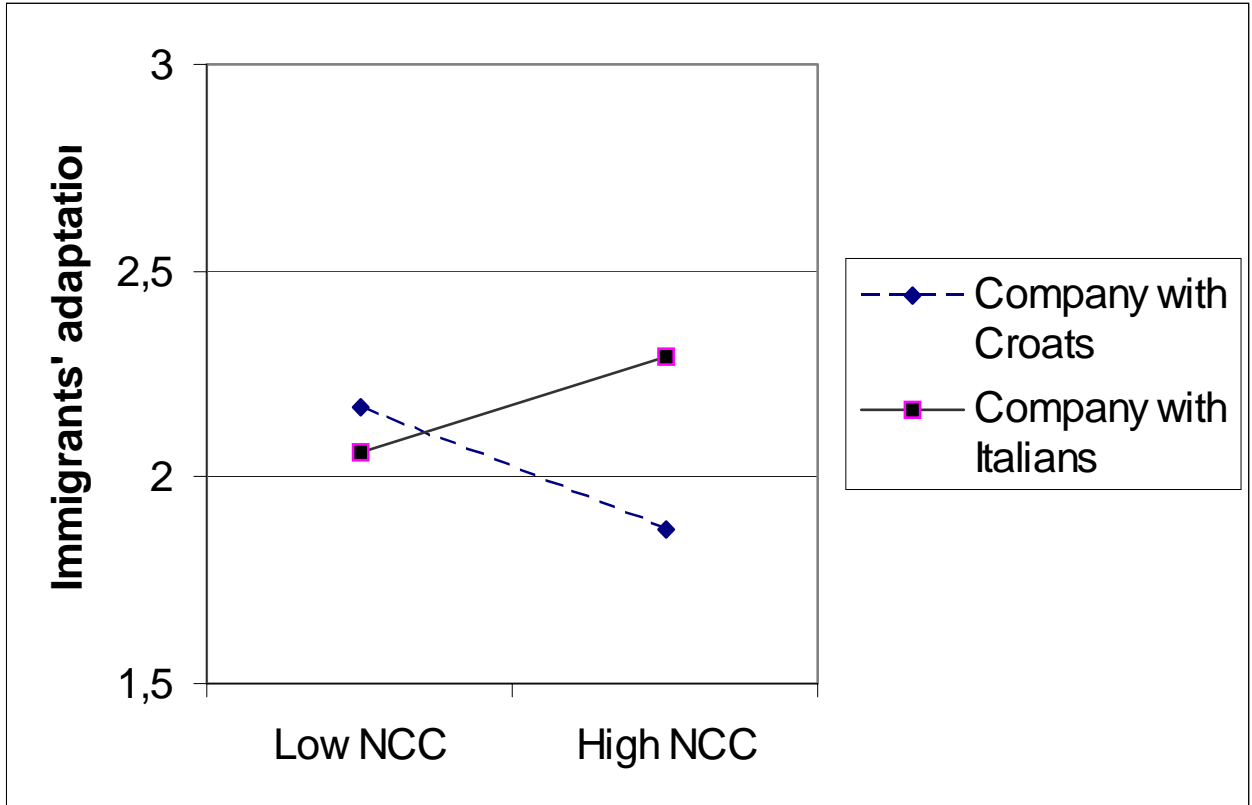


Figure 2

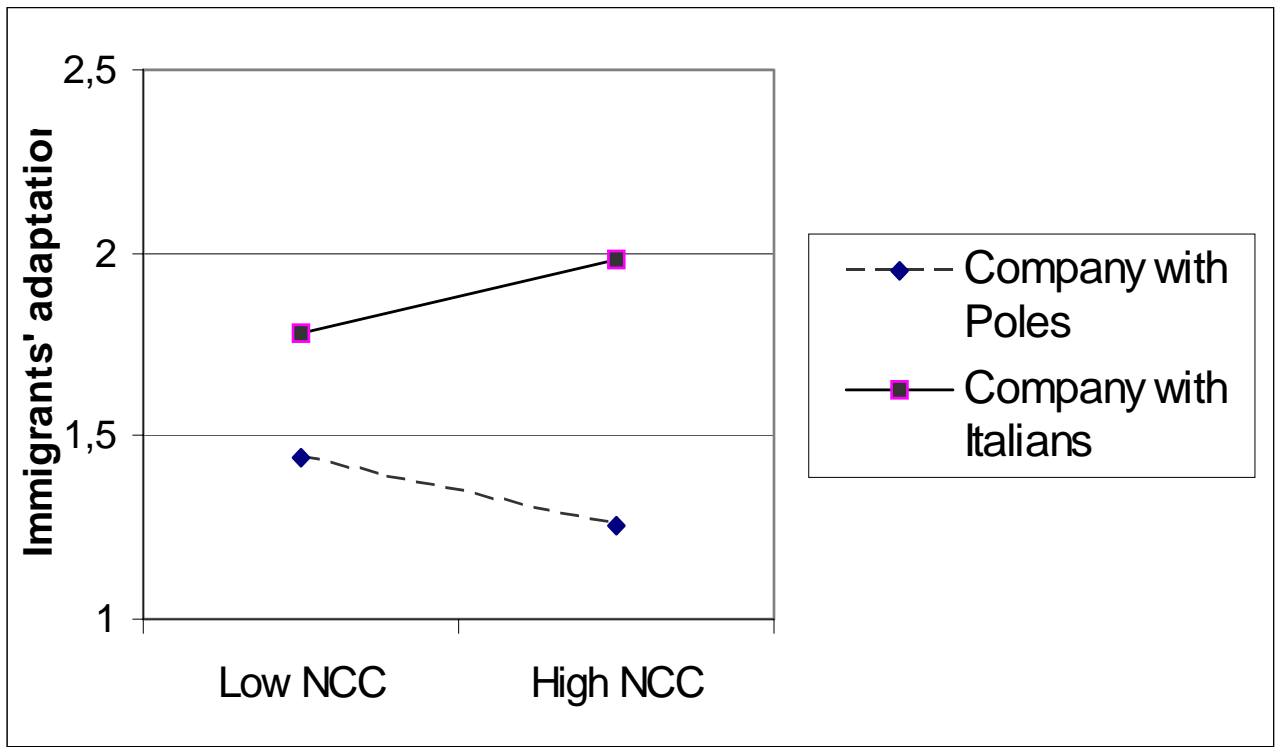


Table 1. Summary statistics and correlations between variables (*Study 1; N = 157*)

Measures	Range				Correlation			
	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	1)	2)	3)	4)
1) NCC	2.90	0.42	1.71	3.89	(.83)			
2) Entry reference group	2.67	1.11	1.00	4.00	-.20*	(.37)		

3) Original culture maintenance	3.31	0.76	1.22	5.00	.10	-.33**	(.81)	
4) Host group relationships	3.54	0.82	1.25	5.00	-.08	.16	-.23*	(.84)
5) Sociocultural adaptation	3.01	0.58	1.67	4.11	-.02	.23**	-.26**	.30**
6) Immigrants' adaptation (total)	2.07	0.51	0.76	3.28	-.10	.33**	-.72**	.76**
7) Psychological adaptation	3.20	0.59	1.25	4.88	-.27**	.01	.06	.10

Note. The Alpha values are presented in parentheses in diagonal.

* $p < .01$.

** $p < .001$.

Table 2. Summary of Moderated Multiple Regression Analyses (*Study 1*).

Predictors	Original culture maintenance		Host group relationships		Socio-cultural adaptation		Immigrants' acculturation (total index)
	<u>Beta</u>	<i>p</i>	<i>Beta</i>	<i>p</i>	<i>Beta</i>	<i>p</i>	<i>Beta</i>
NCC	.03	.72	-.01	.93	-.05	.56	-.04
Entry reference group	-.24	.01	.01	.86	.08	.34	.15
NCC X Entry reference group	-.23	.004	.17	.02	.16	.03	.26
Gender	.04	.62	.15	.05	.11	.15	.10
Age	.02	.79	.07	.42	.12	.13	.07
Marital status	.06	.50	.01	.91	.04	.59	-.01
Educational level	.02	.80	-.02	.81	-.10	.23	-.06
Reason for immigration	-.03	.75	-.02	.82	-.08	.32	-.02
Length of stay in Italy	-.09	.29	-.02	.85	.28	.001	.14
Initial knowledge of Italian	.01	.90	.17	.03	.08	.33	.12
Emotional coping	-.01	.91	-.13	.16	-.16	.08	-.12
Avoidance coping	.15	.08	-.16	.05	-.01	.98	-.16

Problem-oriented coping	-.10	.28	.22	.01	.13	.11	.21
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Table 3. Summary statistics and correlations between variables (*Study 2; N = 162*)

Measures	Range				Correl			
	<i>M</i>	<i>SD</i>	<i>Min</i>	<i>Max</i>	1)	2)	3)	4)
1) NCC	2.89	.37	1.89	3.74	(.72)			
2) Entry reference group	2.38	1.09	0.00	4.00	.11	(.27)		
3) Original culture maintenance	3.40	0.78	1.67	5.00	-.08	-.62**	(.71)	
4) Host group relationships	3.36	0.73	1.20	5.00	-.08	.46**	-.39**	(.83)
5) Sociocultural adaptation	1.89	0.63	0.56	3.22	.11	.42*	-.34*	.38**
6) Host culture knowledge	0.53	0.24	0.11	1.00	.04	.38**	-.37**	.32**
7) Immigrants' acculturation (total)	1.62	0.43	0.68	2.50	.05	.66**	-.78**	.77**
8) Psychological adaptation	3.25	0.73	1.00	5.00	-.19*	.18*	-.25**	.24**

Note. The Alpha values are presented in parentheses in diagonal.

* $p < .01$.

** $p < .001$.

Table 4. Summary of Moderated Multiple Regression Analyses (*Study 2*).

Predictors	Original culture maintenance		Host group relationships		Socio-cultural adaptation		Host culture knowledge		ac
	<i>Beta</i>	<i>p</i>	<i>Beta</i>	<i>p</i>	<i>Beta</i>	<i>p</i>	<i>Beta</i>	<i>p</i>	
NCC	-.03	.68	-.09	.23	.07	.29	.03	.73	
Entry reference group	-.61	.001	.47	.001	.33	.001	.31	.001	
NCC X Entry reference group	-.19	.01	.20	.01	.15	.05	.15	.05	
Gender	.11	.11	-.04	.58	.04	.53	.08	.31	
Age	-.03	.69	.11	.16	-.11	.15	-.11	.15	
Marital status	-.04	.59	.09	.26	-.03	.66	.01	.88	
Level of education	-.08	.24	.17	.02	.11	.10	.18	.01	
Length of stay in Italy	-.05	.41	-.10	.18	.33	.001	.22	.01	.13

Table 5. Identification with and evaluation of the acculturation strategies as a function of Need for cognitive closure, Initial reference group and Acculturation strategies (Study 3).

	Need for cognitive closure					
	<u>Low</u>					
	Initial reference group					Init
	<u>Poles</u>		<u>Italians</u>		<u>Poles</u>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
<u>Assimilation</u>	2.20	0.48	3.00	1.89	1.25	0.4
<u>Integration</u>	5.35	1.27	5.64	0.75	5.14	1.6
<u>Separation</u>	2.90	0.99	2.36	1.03	4.81	0.9
<u>Marginalization</u>	1.91	1.11	1.61	0.42	1.75	1.0

Table 6. Summary of Moderated Multiple Regression Analyses (*Study 3*).

Predictors	Assimilation		Integration		Separation		Marginalization	
	<u>Beta</u>	<u>p</u>	<u>Beta</u>	<u>p</u>	<u>Beta</u>	<u>p</u>	<u>Beta</u>	<u>p</u>
NCC	-.05	.68	.03	.90	.17	.10	.16	.36
Entry reference group	.53	.001	-.02	.94	-.72	.001	.16	.37
NCC X Entry reference group	.38	.01	-.24	.24	-.54	.001	-.03	.87
Gender	.00	.99	.00	.99	.04	.72	-.56	.01
Age	.18	.19	-.25	.25	.12	.25	-.25	.17
Educational level	.18	.20	.03	.87	-.01	.98	-.36	.07
Length of stay in Italy	.01	.96	.21	.33	-.03	.75	.08	.63