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The Development of Ethnic/Racial Self-Labeling: Individual Differences in Context

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Abstract

Ethnic/racial self-labeling represents one's knowledge of and preference for ethnic/racial group membership, which is related to, but distinguishable from, ethnic/racial identity. This study examined the development of ethnic/racial self-labeling over time by including the concept of *elaboration* among a diverse sample of 297 adolescents (Time 1 mean age 14.75, 67% female, 37.4% Asian or Asian American, 10.4% Black, African American, or West Indian, 23.2% Hispanic or Latinx, 24.2% White, 4.4% other). Growth mixture modeling revealed two distinct patterns—low and high self-labeling elaboration from freshman to sophomore year of high school. Based on logistic regression analyses, the level of self-labeling elaboration was generally low among the adolescents who were foreign-born, reported low levels of ethnic/racial identity exploration, or attended highly diverse schools. We also found a person-by-context interaction where the impact of school diversity varied for foreign-born and native-born adolescents (b = 12.81, SE = 6.30, $p < 0.05$) and by the level of ethnic/racial identity commitment (b = 14.32, SE = 6.65, $p < 0.05$). These findings suggest varying patterns in ethnic/racial self-labeling elaboration among adolescents from diverse backgrounds and their linkage to individual and contextual factors.

Keywords

Ethnic/racial self-labeling; Nativity; Ethnic/racial identity; School diversity

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Authors' Contributions Y.C. reviewed the literature, conducted statistical analyses, and drafted the manuscript; S.B. conceived of the study, reviewed the literature, conducted initial statistical analyses, helped to draft the manuscript; Y.W. reviewed and helped to draft the manuscript; T.Y. designed and supervised the original data collection, helped to draft the manuscript. All authors read and approved the final manuscript.

Data Sharing Declaration This manuscript's data will not be deposited.

Compliance with Ethical Standards

Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval The study procedures were approved by Fordham University Institutional Review Board. All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants (parents) included in the study. Informal assent was obtained from adolescents.

Introduction

Ethnic/racial self-labeling is an organic and often fluid representation of one's knowledge of and preference for ethnic/racial group membership (Phinney 1992; Speight et al. 1996). In the United States, options and choices in self-labeling are dynamic and complex due to contextual features such as ethnic/racial diversity, the sociocultural histories of ethnic/racial groups, and current events. The impact of these contextual features may interact with developmental status, particularly in adolescence—a period of active identity formation. These developmental changes are complicated not only by ethnic/racial heritage but also individual perceptions and contextual structures. The current study examines ethnic/racial self-labeling over time in an ethnically/racially diverse sample of adolescents. The implications for adolescents' heritage are considered through their nativity, while individual perceptions are captured by ethnic/racial identity. The impact of contextual structure is examined as the ethnic/racial composition of adolescents' schools. Through a person-by-context approach, this study also examines interactions between individual and contextual factors, offering a holistic perspective.

The Development of Ethnic/Racial Self-Labeling

Adolescence has long been recognized as an active period of identity development (Erikson 1968; Marcia 1966). Adolescents strive to recognize who they are not only as individuals, but also as social group members (Ruble et al. 2004). By adopting a group label or multiple group labels, adolescents assert how they view themselves in relation to available ethnic/racial groups. While individuals may choose ethnic labels that are different from racial labels, previous research on ethnic/racial identification and ethnic/racial identity found that these are often conflated. Therefore, we opt for a metaconstruct ethnic/racial self-labeling to refer to the ethnic and racial labels that individuals elect (Kiang et al. 2010; Nishina et al. 2010; Umaña-Taylor et al. 2014).

Simultaneously, it is important to distinguish ethnic/racial self-labeling from ethnic/racial identity—the two are related, but distinct. According to social identity theory (Tajfel 1981), social identification involves both knowledge and the emotional significance of group membership, which could respectively correspond to ethnic/racial self-labeling and ethnic/racial identity (Kiang and Witkow 2018). Ethnic/racial self-labeling refers specifically to self-declaration of one's ethnic group membership (Kiang 2008) and is usually more qualitative in nature than ethnic/racial identity. Ethnic/racial identity reflects the meaning of self-declared ethnic/racial labels and includes multidimensional aspects such as exploration and commitment (Phinney and Ong 2007). Typically, dimensions of ethnic/racial identity are measured on a Likert-type scale from low to high, and the construct has received a substantial amount of empirical attention in the last two decades. While each construct is unique, understanding how adolescents self-declare their ethnic/racial group membership is essential prior to understanding what that self-declaration means.

The research on ethnic/racial self-labeling is relatively new. A few studies that exist on this topic have explored the content of self-labeling such as the use of panethnic (Fuligni et al.

2008; Kiang 2008), national heritage (Kiang 2008), and American (Fuligni et al. 2008; Kiang 2008) labels. Panethnic labels typically encompass multiple national, regional, and/or ethnic origins (e.g., Asian, Latinx). National heritage labels refer to specific countries of origin (e.g., Mexican, Polish). American labels refer to the adoption of "American" into ethnic labels, typically in conjunction with panethnic or national heritage terms (e.g., Asian American, Mexican American). These studies contribute to understanding the distinctions among various types of labels, yet, whether these labels are maintained or change during adolescence is still unclear.

Adolescence is a period of change and active development in self-concept, which may stimulate changes in self-labels. While early self-labels may be ascribed or heavily influenced by popular terms, later labels can change with maturity and hold more personal meaning (Malott 2009). Studies have found evidence for both consistency and change of ethnic/racial self-labels over time (Fuligni et al. 2008; Kiang and Witkow 2018; Nishina et al. 2010; Nishina et al. 2018). Fuligni and colleagues (2008) examined whether the adolescents from Asian and Latin American families retained ethnic labels for their national origin, or adopted the American terms. They found no support for consistent patterns of development overall, but within-person changes both toward and away from panethnic and American terms were observed (Fuligni et al. 2008). Nishina and colleagues (2010) considered within-person change in ethnic/racial self-labeling through a person-centered approach and discovered the following patterns: some adolescents demonstrated consistent stability in their use of ethnic/racial self-labels over two years; others showed continued instability; and still others showed a late emergence of stability. A recent study by Kiang and Witkow (2018) also found variability in the use of an American label among Asian adolescents in emerging immigrant communities where 42% of the adolescents in the study used an American label at one-time point, but not at other times. Nishina and colleagues (2018) found ethnic identification to be generally consistent throughout high school years. All of these findings provide valuable evidence for heterogeneity in longitudinal patterns of adolescents' self-labeling by both individual differences, such as race, and contexts, such as home and school environment (Harris and Sim 2002; Nishina et al. 2010; Tovar and Feliciano 2009); some adolescents evidence stability over time while others change. These studies conducted separately for different ethnic/racial groups also call for studies that include diverse ethnic/racial groups taking into account a wide range of possible ethnic/racial self-labels, as they may be "trying on" and experimenting with available categories as part of adolescents' developmental task of self-searching (Kiang and Witkow 2018).

Whereas previous work has placed significance on specific types of self-labels, we extend the existing literature by including the *elaboration* construct—the degree to which self-labeling becomes detailed over time. Previously, the construct of elaboration was not typically used to explain the development of ethnic/racial self-labeling, but it has been discussed as part of the Elaboration Likelihood Model (Petty and Cacioppo 1986) to predict the strength of one's attitude. Based on this model, elaboration was operationalized as the time taken to develop attitudes, and the number and quality of the related arguments (Kwon and Nayakankuppam 2015). Applying this operationalization, self-labeling elaboration may also be considered both in terms of quantity and quality. In other words, adolescents' ethnic/

racial self-labeling elaboration can be assessed both by the content and the number of labels (i.e., higher numbers indicating higher elaboration).

While elaboration may involve both quantitative and qualitative aspects, this study focuses on the *number* as a proxy for the number of groups with which an adolescent chooses to associate. This approach presupposes that each label represents a distinctly meaningful group for the adolescent, regardless of distinctions among panethnic, national heritage, and American labels. It also affords flexibility by recognizing a variety of ways in which adolescents may self-identify from any combination of terms that are meaningful to them (e.g., Asian, Chinese, Asian American, Chinese American, Asian-Chinese). Furthermore, based on previous studies that have discovered heterogeneity in longitudinal patterns of ethnic/racial self-labeling during adolescence (Fuligni et al. 2008; Nishina et al. 2010; Kiang and Witkow 2018; Nishina et al. 2018), we seek to identify adolescents' self-labeling elaboration patterns by considering both the *number* and *change* in the number of ethnic/racial self-labels over time.

Previous work implies the importance of identifying the patterns of ethnic/racial self-labeling elaboration as they may relate to adolescents' social and psychological development (Fuligni et al. 2005; Fuligni et al. 2008; Phinney 2003; Portes and Rumbaut 2001; Tseng and Fuligni 2000). However, discussions on self-labeling elaboration have been scarce, and the related findings have been mixed. According to Linville (1987), self-complexity is marked by a high number of cognitive self-aspects, which buffers against the negative influence of stressors. Self-complexity is also negatively associated with depressive symptoms (Linville 1987) and positively related to coping with successes and failures of everyday life (Campbell et al. 1991). In line with the social identity perspective (Tajfel 1981), self-complexity theory suggests that a higher level of elaboration (i.e., a higher number of ethnic/racial self-labels) provides support and resources for adolescents' adjustment. For example, Kiang (2008) suggests that high levels of self-labeling elaboration relate directly to funding opportunities available to specific ethnic/racial subgroups and adolescents' active participation in their ethnic/racial communities. An adolescent who chooses a label of "Asian" may only search scholarship opportunities available to Asians, while another adolescent choosing the labels "Asian" and "Chinese" may uncover a wider range of opportunities with a more exhaustive search. Furthermore, Sue and Sue (1999) implies that the integrated form of minority racial identity ultimately involves both the ethnic/racial label and the American label.

On the other hand, some scholars argue that aspects of self-concept need to be consistent and integrated in order to benefit one's well-being (Donahue et al. 1993). From this perspective, high levels of elaboration, or multiple self-labels, may represent a fragmented or divided self-concept, which indicates lack of self-regulation and poor adjustment (Carver and Scheier 2002; Donahue et al. 1993; Vallacher et al. 2002). The fragmented or divided self-concept is viewed as a risk factor for adjustment signaling inconsistency, instability, or confusion. For example, among bicultural Chinese American adolescents who reported multiple self-labels, those who felt that their multiple selves were fragmented and were uncomfortable with cultural shifting scored low on relationship quality and psychological adjustment (Kiang and Harter 2008). Additionally, Fuligni et al. (2008) suggests a negative

relationship between the selection of a panethnic-American term (i.e., two labels) and ethnic/racial identity development, attributing it as a simple acceptance of popular terms without putting much effort into identity exploration and commitment. From this perspective, higher levels of self-labeling elaboration need to be viewed with caution.

In sum, while a higher level of elaboration may indicate having more social resources and being at higher levels of development, it may also reflect a divided and fragmented identification with different ethnic/racial categories and being at lower levels of development. These competing positions on its developmental implications, given the heterogeneity in the level of elaboration suggested in existing studies, raise subsequent inquiries about whether different patterns exist in the ethnic/racial self-labeling elaboration among adolescents of diverse backgrounds, and if they do, who, under which circumstances, displays each of these patterns.

In the present study, we first attempt to identify the patterns of ethnic/racial self-labeling elaboration among adolescents by adopting a person-centered approach. While a variable-centered approach contributes to understanding the impact and characteristics of a construct, a person-centered approach provides information about individual and contextual characteristics of those who participate in the study. Furthermore, whereas previous studies have discovered and compared consistency versus fluctuation regarding the use of specific labels (Fuligni et al. 2008; Nishina et al. 2010; Kiang and Witkow 2018; Nishina et al. 2018), the current study extends and contributes to the existing body of literature by taking into account all possible combinations of self-labels and addressing the currently limited understanding of linear change in the number of self-labels over a relatively short period of time. The understanding of linear change is expected to provide a detailed and zoomed-in picture of the fluctuations found in previous studies. For this purpose, the present study explores the patterns of self-labeling elaboration over 1.5 years starting at the beginning of high school—a critical period of self-development and contextual change from middle school.

Individual Factors in Development

The choice of self-labels that correspond to specific domains of self-concept is more closely related to some individual characteristics than others. The ethnic/racial self-labeling elaboration may particularly be related to individual differences in immigration or cultural background and the process of ethnic/racial identity development. For example, children of Mexican immigrants who were born in the United States were more likely than their counterparts born in Mexico to report multiple labels as they transitioned from adolescence to adulthood (Tovar and Feliciano 2009). Also, adolescents who changed their ethnic/racial self-labels over time tended to display lower levels of ethnic/racial identity (Phinney and Alipuria 1996). Particularly, by testing the relationship between self-labeling elaboration and ethnic/racial identity development, the findings will add to the currently competing discussions on developmental implications for self-labeling elaboration. As a result, this study will consider individual differences by adolescents' nativity and ethnic/racial identity development.

Nativity

Nativity status has been observed to explain differences in ethnic/racial self-labeling, with the majority of distinctions made between individuals who have immigrated to the United States during their lifetime (i.e., foreign-born) versus those who were born in the United States (i.e., native-born) (Doan and Stephen 2006; Masuoka 2006; Phinney 2003; Tovar and Feliciano 2009). Differences by nativity are often attributed to differences in psychological acculturation—individual changes in beliefs, attitudes, values, and behaviors resulting from contact with another culture (Berry 1980, 1997). Research suggests psychological acculturation processes may explain the ethnic/racial self-labeling of foreign-born and native-born individuals. For example, foreign-born adolescents of Asian and Latin American heritage were more likely than the native-born adolescents to use labels that refer to their national origin, rather than panethnic, American, or compound/hyphenated labels (Fuligni et al. 2005; Portes and Rumbaut 2001). Also, foreign-born young adults of Chinese descent, foreign-born Asian adolescents, and Mexican immigrant adolescents who were born in Mexico were less likely to include an American label in conjunction with an ethnic/racial label than the native-born adolescents (Kiang 2008; Kiang and Witkow 2018; Tovar and Feliciano 2009). According to a longitudinal study (Nishina et al. 2010), foreign-born Asian, Latinx, and Mexican-origin adolescents were more consistent in their ethnic/racial self-labeling than third-generation adolescents. These results suggest that foreign-born adolescents are likely to self-label with a single national origin, and to persist in this self-label across time. For second or third generation adolescents who are native-born, an American label is often added to a panethnic or national label by virtue of being born in the United States (Kiang and Witkow 2018). Accordingly, a higher degree of self-labeling elaboration (i.e., multiple ethnic/racial self-labels) is expected among native-born adolescents than foreign-born adolescents.

Ethnic/Racial Identity

Ethnic/racial identity is a multifaceted construct representing one’s sense of connection to an ethnic or racial group, and is developed through a process of exploration and commitment (Phinney and Ong 2007). Exploration refers to the process of seeking information related to one’s ethnicity/race including activities such as attending cultural events or talking to same ethnicity/race others. Commitment refers to one’s sense of belonging characterized by a strong attachment and a personal investment to the group(s) (Phinney and Ong 2007). Ethnic/racial self-labeling is considered to be a prerequisite for ethnic/racial identity development in that an individual must first choose a group membership before developing feelings and attitudes about it (Cross et al. 2001). Indeed, one of the most popular measures of ethnic/racial identity development, the Multigroup Ethnic Identity Measure (MEIM) (Phinney 1992), asks respondents to complete an open-ended question indicating ethnic/racial self-labels before responding to the multidimensional scaled items. Theory suggests that an adolescent in the early stages of ethnic/racial identity development does not have a clear sense of what ethnicity/race means (Phinney 1993), and so the labels likely reflect this ambiguity. As adolescents explore and commit to an ethnic/racial identity and make decisions about its importance, they may also adjust their self-labels to reflect this process resulting in changes.

Both ethnic/racial identity exploration and commitment have implications for ethnic/racial self-labeling elaboration. Fuligni and colleagues (2008) found that for Asian and Latinx adolescents, lower levels of exploration were associated with a greater likelihood of using a panethnic-American term in one's self-description. That is, adolescents who reported not seeking information or experiences relevant to their ethnic/racial group membership were more likely to use multiple labels, possibly as a result of complying with widely used hyphenated-American terms. Parallel results were found for commitment, though these results only held true for foreign-born adolescents (Fuligni et al. 2008). The foreign-born adolescents and those who reported feeling less attached to their ethnic/racial group were more likely to describe themselves in either a panethnic or a panethnic-American than a national heritage term. In Fuligni et al. (2005), higher levels of ethnic identity, measured by ethnic centrality (i.e., individuals' emphasis on ethnic group membership as part of their overall self-concept), were associated with the use of a national or hyphenated label compared to panethnic or American label. Other research has found that adolescents of Chinese descent who reported higher levels of ethnic/racial identity exploration were more likely to use heritage national-American labels (e.g., Chinese American) than panethnic-American (e.g., Asian American) terms (Kiang 2008). For ethnic/racial identity commitment, they did not find a significant relationship with self-labeling choice.

In the latter two studies, although differences were found between the use of heritage national and panethnic terms, their results do not provide much information about the aspect of elaboration that captures the number of ethnic/racial self-labels. Therefore, our understanding of exactly what ethnic/racial identity means for ethnic/racial self-labeling elaboration remains equivocal. Furthermore, not many studies in the existing literature have examined exploration and commitment in tandem, despite the strong association between these ethnic/racial identity dimensions (Wang et al. 2017). The current study attempts to reconcile these findings by considering how both ethnic/racial identity exploration and commitment are associated with ethnic/racial self-labeling elaboration captured by the number of labels. Amidst a limited amount of information, we refer to Fuligni et al. (2008), a study that most closely examines the construct of ethnic/racial self-labeling elaboration, and predict that low levels of ethnic/racial identity exploration and commitment will be related to higher levels of elaboration, due to the addition of an American label by adopting the widely used hyphenated-American labels without putting much effort into ethnic/racial identity exploration and commitment (Fuligni et al. 2008).

Structural Factors in Development: Ethnic/Racial Composition of School

In addition to individual characteristics, adolescents' ethnic/racial self-labeling develops in various contexts. Bioecological theory posits that multiple contexts in which an individual is situated have vast implications for development (Bronfenbrenner 1979). The importance of context has been highlighted particularly in social identity research (e.g., Ashmore et al. 2004; Branscombe et al. 1985; Byrd and Chavous 2009; Chavous et al. 2004; Ethier and Deaux 1994, 2001). Especially for adolescents, schools have been recognized as an important and proximal developmental context both for how much time adolescents spend in this context as well as the amount of embedded social interactions.

The understanding of one's ethnicity/race is part of self-concept development—a critical developmental task during adolescence. Since this developmental process requires an understanding of both who one is as an individual and as a social group member (Brewer and Gardner 1996), ethnic/racial diversity at school is likely to provide information for ethnic/racial self-labeling (Tatum 2004; Yip et al. 2013; Yip et al. 2010). One of the few studies that investigated the impact of school ethnic/racial composition on ethnic/racial self-labeling found that adolescents were more consistent in their ethnic/racial self-labeling across 5 to 6 semesters when they attended schools in which they were majority group members (Nishina et al. 2010). Their findings suggest that when individuals are surrounded by others who are ethnically/racially similar, their self-labels tend to be stable, possibly because ethnicity/race is not very salient to them.

At the same time, an opposing view exists. According to optimal distinctiveness theory (Brewer 1991), individuals strive to reach a balance between social inclusion and distinctiveness. They want to be similar enough and yet different enough. When the overall school environment is ethnically/racially diverse, it may lead adolescents to generally put less effort into elaborating their ethnic/racial self-labels. On the contrary, less school ethnic/racial diversity may push adolescents toward wanting to be more elaborate in self-labels as a method for establishing distinctiveness.

While both the findings of Nishina et al. (2010) and optimal distinctiveness theory provide reasonable explanations, distinctions need to be made between majority/minority status and overall diversity. Whereas the majority/minority status captures the effects of same versus different ethnic representations, overall diversity, on the other hand, considers the proportion of various ethnicities/races. Independent of one's majority/minority status, the overall diversity, or the heterogeneity in school composition, plays a unique role in adolescent development and provides information about the role of school as a structure (Benner and Crosnoe 2011; Rjosk et al. 2017). For example, in Rjosk et al. (2017), the classroom proportion of ethnic minority students was negatively associated with German elementary school students' outcomes. However, the overall diversity scores were positively associated with students' math scores, controlling for the proportion of minority students.

While one's majority/minority status and overall diversity have been found to influence individual development both independently and interactively, as we are interested in examining the structural impact associated with self-labeling elaboration, our study focuses on the overall objective school diversity, rather than each adolescent's majority versus minority status. Therefore, instead of referring to the findings from an existing study that considered one's majority/minority status (Nishina et al. 2010), we refer to the optimal distinctiveness theory and predict greater levels of objective school diversity to be associated with lower levels of ethnic/racial self-labeling elaboration.

The Person-by-Context Approach

The daily lives of adolescents are highly contextualized, and development occurs as a product of the interaction between individual and contextual factors. Individual differences in ethnic/racial identity might influence subjective perceptions of the objective reality (Yip et

al. 2013). The present study adopts a person-by-context interaction approach by considering how individual factors may have different implications for the development of ethnic/racial self-labeling elaboration in different contextual settings. By investigating interactions of nativity, ethnic/racial identity exploration and commitment with school diversity, both personal and structural effects are considered. Given that lower levels of school diversity and being native-born are expected to be associated with higher levels of ethnic/racial self-labeling elaboration, the association between school diversity and elaboration may be stronger among native-born adolescents. We also expect the association between school diversity and elaboration to be stronger among adolescents with lower levels than higher levels of ethnic/racial identity, as higher school diversity and lower ethnic/racial identity are expected to be related to higher levels of elaboration.

Current Study

The present study examines ethnic/racial self-labeling in adolescence by considering the concept of elaboration. First, we explore potential patterns in adolescents' ethnic/racial self-labeling elaboration from the first to second year of high school at three different time points. Based on previous research, we predict that various patterns of ethnic/racial self-labeling will emerge from the first to second year. Second, we consider whether these patterns vary by individual factors, including nativity and ethnic/racial identity. We predict that nativity, ethnic/racial identity exploration and commitment will be associated with the development of ethnic/racial self-labeling elaboration such that native-born adolescents and those who report low levels of ethnic/racial identity exploration and commitment will either display high or increasing levels of elaboration. Then, we consider whether these patterns vary by the ethnic/racial diversity of adolescents' schools. We predict that higher levels of school diversity will be related to lower levels of elaboration. Finally, we consider person-by-context interactions by examining school diversity with nativity and ethnic/racial identity. We predict that the association between school diversity and elaboration will vary for native-born versus foreign-born adolescents and by different levels of ethnic/racial identity exploration and commitment.

Methods

Participants

Among a total of 405 adolescents who participated in a larger longitudinal study on ethnic/racial identity development, those with enough longitudinal data across 3 waves were included in the preset study (N = 297, mean age at time 1 = 14.75, SD = 0.56; 198 females). When the demographic information (i.e., gender, age, nativity) were compared for those who were included in the study versus those with missing responses, there were no significant differences in the mean age and the distribution of these demographic information. At the beginning of the study, participants were asked to self-identify their race/ethnicity on a census-like form, and responses were coded into five major categories. Of all the participants, 111 adolescents self-identified as Asian or Asian American, 31 identified as Black, African American, or West Indian, 69 identified as Hispanic or Latinx, 72 identified as White, and 13 identified as other. The majority of participants reported not knowing the

highest level of education completed by their parents (n = 116), but the most common response of those who knew was that their parents had completed a high school (n = 36), followed by having completed a four-year college degree (n = 20).

Procedure

Four schools in New York City were recruited to take part in a longitudinal study. Schools were selected to be similarly-sized and academically comparable, but vary systematically by ethnic/racial composition of the student bodies. Specifically, the schools include one predominantly Asian school, one predominantly Hispanic school, and two heterogeneous schools. "Predominantly" is defined by a single ethnic/racial group representing at least 50% of the school's student population. Once the school administrators agreed to participate in the study, parental consent and youth assent letters were sent home to all 9th graders. Only students with completed consent and assent forms were allowed to participate. This procedure was repeated for two years, resulting in two cohorts of students (Cohort 1, n = 166; Cohort 2, n = 131). At each school, surveys were administered to participants every sixth months. Surveys used in the current study were administered over 1.5 years, first in the spring of participants' freshman year (T1), next in the fall of their sophomore year (T2), and then in the spring of their sophomore year (T3). For survey administration, researchers went to schools and administered surveys to participants in groups ranging from 10 to 30 students. These surveys included demographic questions along with measures of ethnic identity. After participants completed each survey, they were compensated and dismissed.

Measures

Ethnic/Racial Self-Labeling—Participants were asked to indicate their race/ethnicity in an open-response item of "I consider my race/ethnicity to be: _____". This item was from the Multigroup Ethnic Identity Measure (MEIM) (Phinney 1992) assessed at each time point, and responses were coded for elaboration by taking a count of the number of labels used (M = 1.20, SD = 0.69, range = 0–3). Previously, open-ended questions have successfully assessed ethnic/racial self-labels (Kiang 2008; Marlott 2009; Tovar and Faliciano 2009). All of the labels were counted independently. For example, "Mexican" was coded 1, while "Mexican American" was coded 2. There were exceptions in two cases. First, if labels included nationalities with multiple words (e.g., Puerto Rican), it was coded as a single label. Second, the label "African American" was coded as a single label due to the historical background of the nomenclature commonly used in the United States. In other words, whereas "Mexican American" refers to both Mexican and American cultures, the term "African American" does not necessarily refer to a combination of African *and* American culture, but is rather viewed as another way of referring to the "Black" heritage.

Nativity—Nativity was assessed at Time 1 by asking "Were you born in the United States?" If adolescents indicated that they were born in the United States, they were coded as native-born (coded 1). If they indicated that they were not born in the United States, they were coded as foreign-born (coded 0). Approximately 18% of the sample reported being foreign-born (n = 55). Of these participants, the largest group reported being born in China (n = 17), the second largest group reported being born in Poland (n = 6), and the third largest group

included adolescents born in Ecuador ($n = 3$) and the Philippines ($n = 3$). The age of immigration ranged from 6 months to 14 years old ($M = 5.74$, $SD = 3.56$).

Ethnic/Racial Identity—Ethnic/racial identity exploration and commitment were assessed at Time 1 using the Multigroup Ethnic Identity Measure (MEIM; Phinney 1992). For ethnic/racial identity exploration, participants responded to 6 items using a scale ranging from 1 (strongly disagree) to 4 (strongly agree) ($M = 2.66$, $SD = 0.56$, $\alpha = 0.77$), including statements such as, "I have spent time trying to find out more about my ethnic/racial group, such as its history, traditions, and customs." Ethnic/racial identity commitment was assessed with 7 items using the same response scale ($M = 2.96$, $SD = 0.42$, $\alpha = 0.87$), including statements such as "I have a strong sense of belonging to my own ethnic/racial group."

Objective School Diversity—Publicly available data on the New York Department of Education website about the percentage of White, Black, American Indian, Asian, Hispanic, and Other students attending each school were used to create an objective diversity index. While the schools were selected to be diverse, there was considerable variability in the overall ethnic/racial diversity of each school. We computed an ethnic/racial diversity index for each school (Juvonen et al. 2006). Using the number of different ethnic groups reported (g) and the proportion of individuals (p) who are members of each group (i), the index (D_C) provides an estimate of the relative probability that two randomly selected students are from different ethnic/racial groups:

$$Dc = 1 - \sum_{i-1}^{g} p_i^2$$

Possible scores range from 0 to 1, with higher scores indicating greater diversity of the student body, and lower scores representing lower chances for intergroup contact for all students in the same school. Diversity scores for the four schools were 0.55, 0.59, 0.67, and 0.74, respectively. It should be noted that all of the schools in our sample had higher diversity scores than the average score of New York State public schools, which was 0.37, and the national average of 0.31. They were also higher than the average scores of schools in New York City five boroughs (Manhattan = 0.48, Brooklyn = 0.43, The Bronx = 0.45, Staten Island = 0.53, Queens = 0.51).

School: Student Achievement Score—From the same public data on the New York Department of Education website, each school's overall student achievement score was retrieved and used as a control variable. This is a composite score that takes into account qualities such as students' graduation metrics, college readiness, regents metrics in various subject areas, credit metrics, and closing the achievement gap metrics.

School: Students Living Below Federal Poverty Level—From the same public data on the New York Department of Education website, the estimated ratio of students living in households with income below federal poverty line was retrieved for each school and used as a control variable.

School: Supportive Environment—From the same public data on the New York Department of Education website, the scores that reflect students' overall perception of supportive school environment were obtained and used as a control variable. This score includes students' perception of most students' general classroom behavior, encouragement to continue education after high school by the adults at the school (e.g., teachers, administrators, counselors, and the principal), peer support for academic work, personal attention and support, safety, social-emotional support, communication of high expectations to students and staff, and movement of students with disabilities to less restrictive environments.

Gender—Participants were asked to indicate their gender at Time 1 (0 = male, 1 = female). Gender was included as a control variable.

Ethnicity/Race—Participants' responses to the census-like closed-ended questions regarding their ethnicity/race was also controlled for in all of the analyses. While White adolescents were coded 0 and assigned as the reference group, a variable was created for each ethnic/racial minority group and dummy-coded. The identified ethnicity/race included Hispanic/Latinx (coded 1), Asian (coded 1), Black (coded 1), and other (coded 1). Overall, 37.4% were Asian or Asian American (n = 111), 10.4% were Black, African American, or West Indian (n = 31), 23.2% were Hispanic or Latinx (n = 69), 24.2% were White (n = 72), 4.4% were other (13%), and one was missing (0.3%).

Results

Descriptive Statistics

Prior to testing the main research questions, exploratory analyses were conducted to examine key demographic differences. Results indicated that the demographic variables were distributed similarly between cohorts and gender (Table 1). The distributions for gender and nativity among high schools were also similar (Table 1), indicating that males and females, foreign-born and native-born adolescents were equally distributed across all schools proportional to the overall distribution of the sample. Since the information about adolescents' socioeconomic status was missing for many, school data on the percentages of families with incomes below the federal poverty line was obtained (Table 1). In order to account for additional school characteristics, schools' overall student achievement score and students' perception of supportive school environment were also considered (Table 1). There were no mean differences in ethnic/racial identity exploration and commitment across schools and by ethnicity/race (Table 1). Significant correlations were observed between nativity and ethnic/racial identity commitment (native-born, lower commitment); ethnic/racial identity exploration and ethnic/racial identity commitment (higher exploration, higher commitment); ethnic/racial identity exploration and objective school diversity (higher exploration, lower diversity) (Table 2).

Differences were observed in ethnicity/race of adolescents across school contexts, and these differences were all consistent with the purposeful recruitment of school contexts. Specifically, in schools with predominant ethnic/racial populations, there was an over-

representation of the sample identifying as the predominant ethnicity/race. However, all groups of ethnicity/race were present in all schools.

Identifying Patterns of Self-Labeling Elaboration over Time

Data Analysis Overview—Growth Mixture Modeling (GMM) was used to investigate the presence of patterns (i.e., latent classes) in ethnic/racial self-labeling elaboration from the first to second year of high school (Muthen and Muthen 1998–2012). GMM is a person-centered approach that allows for the emergence of meaningful subgroups of individuals in time-based data (Jung and Wickrama 2008). In the present study, the GMM enables the examination of between-person patterns in the within-person change in the number of self-labels over time. The GMM also allows for heterogeneity within classes and does not impose a normality restriction on growth parameters, making it more flexible than other person-centered approaches such as Latent Class Analysis (Muthen 2006).

Latent class models are evaluated based on model fit, using a combination of four methods of evaluation to determine the best model fit for the data. First, statistical indices including the Akaike Information Criterion (AIC: Akaike 1987), the Bayesian Information Criterion (BIC: Schwartz et al. 2010) and the sample size Adjusted Bayesian Information Criterion (ABIC: Sclove 1987), with the lowest values on these indices across models indicating the best fit. Second, entropy was evaluated. Entropy is a measure that ranges from 0 to 1, and it assesses the accuracy of individual classification that a model produces based on the produced posterior probabilities. A high value closer to 1, indicates more accurate classification, and thus is used as a measure of model fit. Third, models with k classes were tested against a model with k-1 classes to statistically determine the model improvement with the additional class. The bootstrap Lo Mendell Rubin test (BLRT; Lo et al. 2001) produces a p-value against which to test this improvement. A significant p-value suggests that the k classes indeed provides a significant improvement over the k-1 classes. Finally, the substantive usefulness of the models was evaluated to determine if (a) additional classes produce meaningful stratification between individual experiences, and if (b) additional classes include a substantial number of people to ensure that both parsimony and interpretability are taken into account (Jung and Wickrama 2008). For all of the analyses, missing data was handled with full information maximum likelihood estimation.

GMM Results—The one class (independence) model was first explored using GMM, followed by the sequential addition of classes to examine more complex models. Fit information used to evaluate the models is presented in Table 3, including AIC, BIC, ABIC, entropy, and BLRT. Models with up to three classes were evaluated. For models with more than three classes, significantly worse fit indices were presented and included class membership sizes of 0, which resulted in the exclusion from the comparisons.

Comparing models, AIC, BIC, ABIC, and entropy values all indicated that the two-class model fits best (Table 3). In addition, the BLRT indicated that the two-class model was a significant improvement over the one-class model, but that the three-class model was not a significant improvement over the two-class model. Based on these statistical indices, the two-class solution was considered the best fit. The utility of the classes was also considered.

The two-class model included patterns of development that appeared meaningfully different, and the three-class model included one-class that contained only 4% of the participants. Considerations of meaningfulness, interpretability, and parsimony also indicated that the two-class model provided the best fit. The estimated trajectories for the two-class model are presented in Fig. 1. Class 1 included 74.4% ($n = 221$) and Class 2 included 25.6% ($n = 76$) of the adolescents in the study.

Additional Descriptive Statistics—In order to further understand the characteristics of the two identified classes, additional descriptive statistics analyses were conducted. The t-tests revealed statistically significant differences in the mean number of self-labels reported by Class 1 and Class 2 both at Time 1 and Time 3. The mean numbers were higher for Class 2 than Class 1 at both time points. Therefore, we named Class 1 “low elaboration” and Class 2 “high elaboration.”

For “low elaboration,” the mean number decreased significantly ($p < 0.05$) from 1.24 ($SD = 0.49$) at Time 1 to 1.00 ($SD = 0.00$) at Time 3. This group included both individuals who consistently reported one label and those who moved from more than one label to one label from freshman to sophomore year. While characterized by generally low levels of elaboration across time, all of the adolescents in this group, including those who reported more than one during the freshman year, reported one label by sophomore year. For example, one adolescent indicated “Ecuadorian” at all three time points, while another adolescent indicated “Pacific Islander-Philippines” at Time 1 and “Pacific Islander” at Time 3. In this group, there were 76 adolescents who were identified as Asian (34.4%), 20 Black, African American, or West Indian (9.0%), 59 Hispanic or Latinx (26.7%), 57 White (25.8%), and 9 other (4.4%)

For “high elaboration,” the mean number of self-labels increased significantly ($p < 0.05$) from 1.67 ($SD = 0.59$) at Time 1 to 2.09 ($SD = 0.29$) at Time 3. This group was marked by generally high levels of elaboration across time and included adolescents who consistently reported multiple labels and those whose level of elaboration increased over time. An adolescent in this group self-identified as “Mexican” at Time 1 and “Mexican American” at Time 3. Another adolescent in this group reported “Asian American” both at Time 1 and Time 3. In this group, there were 35 who were identified as Asians or Asian Americans (46.7%), 11 Black, African American or West Indian (14.7%), 10 Hispanic or Latinx (13.3%), and 4 other (5.3%). Overall, the “low elaboration” to “high elaboration” ratio was approximately 3:1 and all of the ethnicity/race and both cohorts were similarly distributed in both classes.

Person-by-Context Predictors of Self-Labeling Elaboration Patterns over Time

Data Analysis Overview—The differences in ethnic/racial self-labeling patterns by nativity, ethnic/racial identity, and school diversity were analyzed. Results from the two-class GMM were used to assign adolescents to their most likely ethnic/racial self-labeling elaboration class. Hierarchical logistic regressions were conducted to predict membership to “low elaboration” from both individual (i.e., nativity, ethnic/racial identity) and structural (i.e., school diversity) factors, controlling for gender, ethnicity/race, and related school

factors. This way, the probability of class membership can be compared across the predictors of interest. Additionally, interactions between individual and structural predictors were considered to examine person-by-context interactions. Again, all of the missing data were handled with full information maximum likelihood estimation.

Nativity and Ethnic/Racial Identity—Logistic regressions examined whether patterns of ethnic/racial self-labeling elaboration varied by individual factors. We explored the relationships between membership to "low elaboration" and nativity, ethnic/racial identity exploration, and ethnic/racial identity commitment, controlling for gender and ethnicity/race. The results indicated that nativity significantly predicted class membership (Table 4). Regression coefficients were converted from log-odds ratios to probabilities of class membership as a function of nativity (Fig. 2). Within each class, the probability of belonging to "low elaboration" was higher among the foreign-born adolescents than the native-born adolescents while the probability of belonging to "high elaboration" was higher among the native-born adolescents than the foreign-born adolescents.

Results also indicated that ethnic/racial identity exploration significantly predicted class membership (Table 4). Contrary to our hypothesis, the probability of belonging to "low elaboration" was higher among adolescents who reported low levels of ethnic/racial identity exploration than those reporting high levels of exploration (Fig. 2). Further, the probability of belonging to "high elaboration" was higher among adolescents with high levels than low levels of ethnic/racial identity exploration. Consistent with the finding from a previous study (Kiang 2008), the association between ethnic/racial identity commitment and class membership was not significant.

School Diversity—We explored the role of school structure by examining the relationships between class membership and school diversity. This direct effect was examined by adding objective school diversity to the model, along with additional control variables that captured additional school characteristics such as, overall student achievement, ratio of students living in households with income below federal poverty line, and students' perception of school's supportive environment. Results for model 2 indicated that objective school diversity significantly predicted class membership (Table 4). Higher school diversity was associated with a higher probability of belonging to "low elaboration" (Fig. 2). Adolescents in high diversity schools displayed higher probabilities of belonging to "low elaboration" than those in relatively low diversity schools. Adolescents in relatively low diversity schools had higher probabilities of belonging to "high elaboration" than those in high diversity schools.

Person-Environment Interactions—Person by environment interactions of school diversity with nativity and ethnic/racial identity (i.e., exploration and commitment) were examined by adding the interaction terms. First, we tested whether the effect of nativity varied by school diversity. Results indicated that the interaction of objective school diversity and nativity was significant (Table 4). The effect of nativity by school diversity on membership to "low elaboration" and "high elaboration" is depicted in Fig. 3. Specifically, this person by environment interaction indicates that both personal and structural factors work together. For native-born adolescents, the school diversity context positively predicted

membership to “low elaboration” ($b = 0.11$). In other words, native-born adolescents, but not foreign-born adolescents, in high diversity schools were more likely to be in “low elaboration” than the native-born adolescents in low diversity schools. While a native-born adolescent attending a low diversity school had a 63% chance of belonging to “low elaboration,” another native-born adolescent who attended a high diversity school had an 94% chance of belonging to this group. However, the school diversity context was unrelated to class membership for foreign-born adolescents in both “low elaboration ($b = -0.00$)” and “high elaboration ($b = 0.00$).” At the school with the highest diversity level, the probability of belonging to “low elaboration” was similar for foreign-born adolescents (95%) and native-born adolescents (94%). Again, for “high elaboration” group, whereas foreign-born adolescents’ probability of belonging to this group stayed low and consistent (4–5%), the probability of native-born adolescents belonging to this group decreased with increasing school diversity from 37 to 6%.

Next, the moderating effects of school diversity on the relationship between ethnic/racial identity exploration and class membership as well as the relationship between ethnic/racial identity commitment and class membership were included. No interaction effect was found for ethnic/racial identity exploration, but there was an interaction effect of objective school diversity and ethnic/racial identity commitment on class membership to “low elaboration.” As shown in Fig. 4, the relationship between school diversity and probability of class membership to “low elaboration” was positive among adolescents with high ethnic/racial identity commitment ($b = 0.10$). Adolescents with high ethnic/racial identity commitment had the highest probability of belonging to “low elaboration” in the highest diversity school (97%), whereas their probability was the lowest in the lowest diversity school (68%). For adolescents with low ethnic/racial identity commitment, the probability of belonging to “low elaboration” was also positively related to school diversity but the slope was much less steep, demonstrating similar levels across the four schools ($b = 0.03$). At the same time, the relationship between school diversity and class membership to “high elaboration” was the opposite and negative among adolescents with high ethnic/racial identity commitment ($b = -0.10$), and, again, the slope was less steep among those with low ethnic/racial identity commitment ($b = -0.03$). In summary, the ethnic/racial self-labeling elaboration patterns were more strongly related to school diversity among the adolescents with high than low ethnic/racial identity commitment.

Sensitivity Analysis—In order to account for possible cohort effect, cohort membership was controlled for in the analyses. Class membership remained significantly related to nativity ($b = -1.35$, $SE = 0.48$, $p < 0.01$), ethnic/racial identity exploration ($b = -0.97$, $SE = 0.36$, $p < 0.01$), and school diversity ($b = 10.14$, $SE = 3.96$, $p < 0.05$). The interactions for school diversity with nativity ($b = 13.61$, $SE = 6.31$, $p < 0.05$) and ethnic/racial commitment ($b = 15.36$, $SE = 6.64$, $p < 0.05$) also remained significant.

Discussion

Ethnic/racial self-labeling is an important prerequisite for ethnic/racial identity development, which reflects one’s declaration of ethnic/racial group membership. Previous studies suggest that various patterns exist in the way adolescents ethnically/racially label themselves during

this developmental period (Fuligni et al. 2008; Kiang and Witkow 2018; Nishina et al. 2010; Nishina et al. 2018). Some adolescents adopt a single label, others use multiple labels, still others add or drop certain labels over time. While the implications for adopting multiple labels in previous literature are competing, the present study investigated adolescents' ethnic/racial self-labeling through the concept of *elaboration*, the degree to which self-labeling is detailed, by focusing on the number, and change in the number, of ethnic/racial self-labels over time. By introducing the construct of elaboration, this study sheds light on different patterns of ethnic/racial self-labeling elaboration over time and how they relate to individual and structural factors during adolescence.

Two distinct patterns emerged from the person-centered approach. Across time, one group reported relatively low levels of elaboration, while another group reported relatively high levels of elaboration. These patterns displayed individual differences by nativity and ethnic/racial identity exploration, as well as structural differences by school diversity. Taking a person-by-context approach, we uncovered an interaction of school diversity with nativity and ethnic/racial identity commitment. Herein, we explain in detail the two patterns of self-labeling elaboration and offer implications for the individual and contextual factors that are related to these patterns of development.

Patterns of Development

The identification of two patterns through person-centered analyses extends the existing knowledge on ethnic/racial self-labeling that have mainly been established through variable-centered analyses and adds to the few longitudinal studies that examined changes in ethnic/racial self-labeling patterns over time. In addition to heterogeneous patterns found for the changes in adolescents' ethnic/racial self-labeling contents (Fuligni et al. 2008; Kiang and Witkow 2018; Nishina et al. 2010; Nishina et al. 2018), we have found meaningfully different patterns of elaboration in the *number* of ethnic/racial self-labels over time.

For most of the adolescents, the level of self-labeling elaboration stayed low or decreased (74.4%) from freshman to sophomore year ("low elaboration"). While some adolescents in this group consistently selected one label over time, we also found adolescents who de-selected some of the labels as they moved from freshman to sophomore year. The overarching characteristic of this group was the generally low levels of self-labeling elaboration, which came down to a single label for all by sophomore year. Furthermore, we have found that this pattern represents the majority of adolescents in the study. Still, around a quarter of adolescents (25.6%) identified with one or more ethnic/racial categories during the freshman year and the number increased to an approximate average of two during the sophomore year ("high elaboration"). In this group, some adolescents consistently selected multiple labels at all three time points, while others took on additional labels over time. The overarching characteristic of this group was the generally high levels of self-labeling elaboration across time. Our results have revealed two distinctive patterns—low and high—of ethnic/racial self-labeling elaboration from freshman to sophomore year of high school.

Both patterns of self-labeling elaboration demonstrate the process of self-searching (Erikson 1968; Marcia 1966) and reflect heterogeneity in the development of ethnic/racial identification during adolescence. This finding is somewhat consistent with the results of

previous studies that found both within-person stability and change in adolescents' use of different ethnic/racial self-label contents (Fuligni et al. 2008; Kiang and Witkow 2018; Nishina et al. 2010). At the same time, moving beyond the examination of stability and change, the present study has discovered the existence of two distinctive patterns in the level of ethnic/racial self-labeling elaboration over time. The majority of adolescents demonstrated low levels of elaboration, while some others displayed high levels of elaboration. The finding of these two patterns through a person-centered approach suggests that examining ethnic/racial self-labeling elaboration by the *number* of self-labels may hold its own meaning that is different from the implications made by studies that looked at stability versus change in self-labeling contents (e.g., national heritage, panethnic, or American label).

Additionally, as suggested by various studies conducted in the past (Fuligni et al. 2008; Kiang 2008), we found that both patterns were represented by a diverse sample of adolescents. Some degree of common processes may be at play during adolescence across various ethnic/racial groups when considering a highly personal, fluid, and contextualized construct of ethnic/racial self-labeling. Particularly, this was one of the few studies that looked at ethnic/racial self-labeling of adolescents who primarily identify themselves as White (Nishina et al. 2010). The White adolescents, too, were relatively equally represented in the two patterns indicating that there was heterogeneity in the patterns of self-labeling elaboration over time even among the White adolescents. For example, in "low elaboration," an adolescent reported "White" at all three time points, while another adolescent in "high elaboration" reported "White" at Time 1 and "German, Dutch, Czech" at Time 3. Whereas many of the previous studies overlooked the importance of ethnic/racial self-labeling among White adolescents, the results of our study highlight the significance and salience of self-labels among them that need to be addressed further in future studies.

Individual Factors

Although in the absolute sense, both foreign-born and native-born adolescents were more likely to be identified with "low elaboration" than "high elaboration," foreign-born and native-born adolescents were represented differently within each class. In line with our hypothesis, we found that the probability of belonging to "low elaboration" was higher for foreign-born adolescents (foreign-born = 90%, native-born = 73%), and the probability of belonging to "high elaboration" was higher among native-born adolescents (foreign-born = 10%, native-born = 27%). Our results somewhat provide support for previous studies that found second generation youths to be more likely than foreign-born youths to include "American" in their ethnic/racial self-labeling (Kiang et al. 2011), although some adolescents added labels that were not "American." The differences in the degree of acculturation provide clues to explain this finding (Schwartz et al. 2010). Due to their experience in the country of origin, foreign-born adolescents may be more resistant to add the American or collective panethnic labels (e.g., "Hispanic" and "Asian"). Another reason may be that the foreign-born adolescents were unfamiliar with common racial/ethnic terms in the United States if they were coming from less diverse countries in which panethnic terms are not used as frequently. Therefore, they could be less likely to incorporate these

terms into their ethnic/racial self-labels in addition to the label for their national country of origin.

Also, although the absolute level of probability indicated that both low and high ethnic/racial identity exploration adolescents were more likely to be in “low elaboration” than “high elaboration,” adolescents with low ethnic/racial identity exploration had higher probability of belonging to “low elaboration” than those with high ethnic/racial identity exploration (low = 86%, high = 66%). On the other hand, adolescents with high ethnic/racial identity exploration had higher probability of belonging to “high elaboration” than those with low ethnic/racial identity exploration (low = 14%, high = 34%). This contrasts to our hypothesis and a previous study that suggested a negative association between the level of elaboration and ethnic/racial identity exploration (Fuligni et al. 2008). The difference may be explained by the fact that whereas Fuligni et al. (2008) considered changes in the content by the addition of an “American” label, the current study was more flexible about the content of self-labels and took into account the addition of labels that were not necessarily “American.” For example, one adolescent reported “Brazilian” at Time 1, which changed to “Brazilian and Italian” at Time 3. Such response would not have been captured by observing only the addition of an “American” term. This result suggests that higher levels of ethnic/racial self-labeling elaboration examined through the number may have unique and positive implications for ethnic/racial identity exploration that are distinguished from the effect of self-labeling contents (e.g., addition of an “American” label).

Although the use of hyphenated-American terms may indicate an acceptance of the widely-used terms in the American society without having put much effort into exploring one’s ethnic/racial identity, when the addition of labels other than the “American” term is considered, higher levels of elaboration may indicate a more complex process of ethnic/racial identity exploration. Indeed, adolescence is a period of identity exploration; ethnic/racial identity exploration during this developmental period is not uniform across individuals (Phinney 2006). As evidence suggests that ethnic/racial identity exploration in adolescence is generally the highest prior to 10th grade (Pahl and Way 2006), some adolescents transitioning from 9th to 10th grade are likely to consider all available social reference groups, including panethnic, national origin, and American terms (Kiang et al. 2008), which can be represented by an increased level of elaboration.

Contextual Factors

Contextual factors also played important roles in the development of ethnic/racial self-labeling. Adolescents in high diversity schools had the highest probability of belonging to “low elaboration” group (lowest diversity school = 62%, highest diversity school = 91%), whereas adolescents in low diversity schools had the highest probability of belonging to “high elaboration” group (lowest diversity school = 38%, highest diversity school = 9%). When adolescents were in a school with a relatively low probability of intergroup contact, regardless of whether they were the majority or minority, they tended to display high levels of ethnic/racial self-labeling elaboration.

The optimal distinctiveness theory (Brewer 1991) helps explain this phenomenon by asserting that individuals are driven by a desire for both distinctiveness and similarity within

social groups; individuals constantly strive to find a balance between being similar and different. The theory has implications for social identities and the distinctiveness of a specific social identity, which is always in reference to the context. In the current study, this context corresponds to the ethnic/racial composition of the student body at school. When school context is diverse, there is already enough individual distinctiveness each adolescent perceives, leading to a less desire for further elaboration. However, when there are generally lower chances of intergroup contact, each adolescent may have desired for more elaborate self-labeling that extends beyond a single label to achieve the balance between distinctiveness and similarity. In a previous study (Nishina et al. 2010), an association between lower elaboration and one's majority status was implied. However, the findings of the present study suggest that one's majority/minority status and overall diversity may have different implications for adolescents' ethnic/racial identification development. Additionally, results should be interpreted with the fact that this study was conducted in a relatively diverse city with a long immigration history. The diversity scores of the low diversity schools in this sample were still higher than the city, state and national average scores, which should be considered for the interpretation of these results and future investigation.

Individuals in Context

The ethnic/racial self-labeling elaboration by school diversity was manifested differentially based on adolescents' nativity. In line with optimal distinctiveness theory (Brewer 1991), native-born adolescents' probability of belonging to "low elaboration" increased with higher levels of school diversity. In other words, native-born adolescents who were in higher diversity schools were more likely than the native-born adolescents in lower diversity schools to belong to "low elaboration" group. However, different patterns were found among the foreign-born adolescents. Their probability of belonging to "low elaboration" was almost equal across all of the four schools regardless of school diversity. How, then, does optimal distinctiveness theory explain these findings? When considering foreign-born adolescents' ethnic/racial self-labeling choices, the lens that accompanies the status of being foreign-born should be considered. The foreign-born adolescents may already be perceived and/or perceive themselves as different regardless of school diversity. By virtue of being foreign-born and possibly being non-native English-speakers, motivations for distinctiveness may be overridden by motivations for similarity, given that they are already different by being born outside of the United States. As Brewer (1999) noted, "[d]efining one's ingroup at the intersection of multiple category distinctions creates a high degree of distinctiveness or exclusiveness at the cost of meeting needs for inclusion" (p.441). In low diversity settings, foreign-born adolescents would experience a less desire to find further distinctiveness since they are already labeled as different by clearly being born outside of the United States, leading to lower elaboration in ethnic/racial self-labeling. In high diversity settings, where differences among people are more common, both foreign-born and native-born adolescents are likely to feel different enough, again, leading them to be less elaborate in their ethnic/racial self-labeling.

Additionally, we found an interaction effect of school diversity and adolescents' ethnic/racial identity commitment on class membership to "low elaboration." The probability of belonging to "low elaboration" increased with higher levels of school diversity for

adolescents with high ethnic/racial identity commitment at a steeper rate than those of low ethnic/racial identity commitment. Also, the probability of belonging to "high elaboration" decreased among high ethnic/racial identity commitment adolescents at a steeper rate than those with low ethnic/racial identity commitment. In other words, adolescents with *high* ethnic/racial identity commitment were more likely to display "*low* elaboration" in *high* diversity than low diversity schools, while they were more likely to display "*high* elaboration" in *low* diversity than in high diversity schools. The patterns were similar among adolescents with low ethnic/racial identity commitment but they occurred at a rate that was less steep than high ethnic/racial identity commitment adolescents. The high ethnic/racial identity commitment adolescents seemed to be affected more by school diversity levels than low ethnic/racial identity commitment adolescents.

Considering that high levels of ethnic/racial identity commitment have generally been found to be beneficial for development (Phinney et al. 2001), high levels of elaboration may hold different meanings and implications in high diversity versus low diversity schools. When adolescents have achieved high levels of ethnic/racial identity commitment in highly diverse schools, they may not feel the need to attach additional labels to their ethnic/racial description. In line with the literature supporting the need to develop an integrated self-concept (Donahue et al. 1993; Vallacher et al. 2002), when high levels of commitment are achieved in high diversity contexts adolescents may integrate and simplify their self-labeling. However, in low diversity schools, adolescents with high commitment levels may find benefits of associating themselves with more ethnic/racial categories and label themselves with more elaborate descriptions that distinguish themselves from others, supporting the argument made by optimal distinctiveness theory (Brewer 1991). The results demonstrate how individual differences such as the levels of ethnic/racial identity commitment can be manifested in different ways depending on the structural factors such as school diversity. Furthermore, the findings also suggest that school diversity is an important context that interacts with and contributes to adolescents' ethnic/racial identity development.

Limitations

While the current study makes a significant contribution to our understanding of the development of ethnic/racial self-labeling and how it varies by individual and contextual differences, limitations remain. By examining elaboration there is some loss of specificity in the content of ethnic/racial self-labels. While patterns of elaboration discuss the number and changes in the number of ethnic/racial self-labels, they do not address variability within single or multiple labels. For example, change from a panethnic term of "Hispanic" to a national origin term of "Mexican" was not captured in the current study. One could argue that the adolescent is moving from a less to a more defined category label, a sign of developmental specificity. However, the diversity of the current sample precluded the systematic analyses at this level of specificity. Likewise, examining ethnic/racial self-labeling elaboration does not capture the changes from "Hispanic" to "Mexican American" and "Hispanic" to "Hispanic-Mexican," despite the fact that these changes may represent significant shifts in an adolescent's self-perception. Therefore, the changes not only in the number, but also in the content needs to be addressed in future studies. Additionally, the current study does not look at individual student's probability of exposure to diversity in the

complete spectrum of settings, such as classrooms and neighborhoods, which is a limited representation of adolescents' everyday experiences. The holistic understanding of a wider range of diversity settings within peer groups, classrooms, schools, and neighborhoods will provide a more accurate depiction of how ethnic/racial self-labeling develops in context. Finally, how these different patterns relate to various developmental outcomes both in the short-term and long-term need to be addressed in future studies.

Conclusion

The current study provides a novel way of examining ethnic/racial self-labeling by considering the concept of elaboration, specifically focusing on the number of ethnic/racial self-labels. Our findings suggest that self-labeling elaboration in the number of self-labels has unique implications among ethnically/racially diverse adolescents. These findings extend the previous literature that focused on the content of ethnic/racial self-labels separately for one or two ethnic/racial group(s), rarely addressing White adolescents (Fuligni et al. 2008; Kiang and Witkow 2018; Nishina et al. 2010; Nishina et al. 2018). Through a person-centered approach, we have found heterogeneity in the ethnic/racial self-labeling elaboration patterns from freshman to sophomore year of high school. Most adolescents in our study demonstrated low levels of ethnic/racial self-labeling elaboration, while about a quarter displayed high levels. We were able to attribute these differences to individual factors, such as nativity and ethnic/racial identity exploration, and a contextual factor, school diversity. Furthermore, the finding that ethnic/racial self-labeling elaboration may be manifested differently by school diversity, particularly for native-born adolescents and those reporting high levels of ethnic/racial identity commitment, highlights the importance of person-by-context interaction in adolescents' development of ethnic/racial self-labeling.

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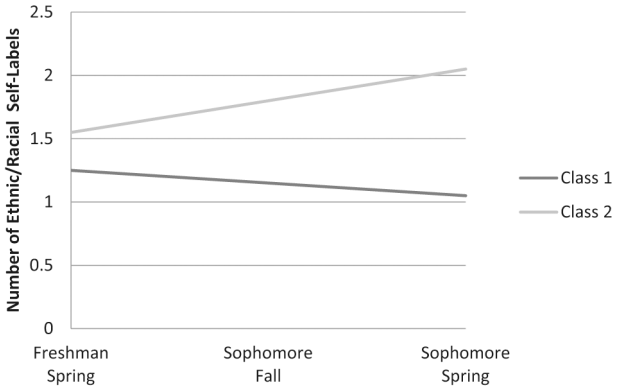

Fig. 1.

Latent class trajectories for elaboration of ethnic/racial self-labeling. Class 1 = low elaboration, Class 2 = high elaboration

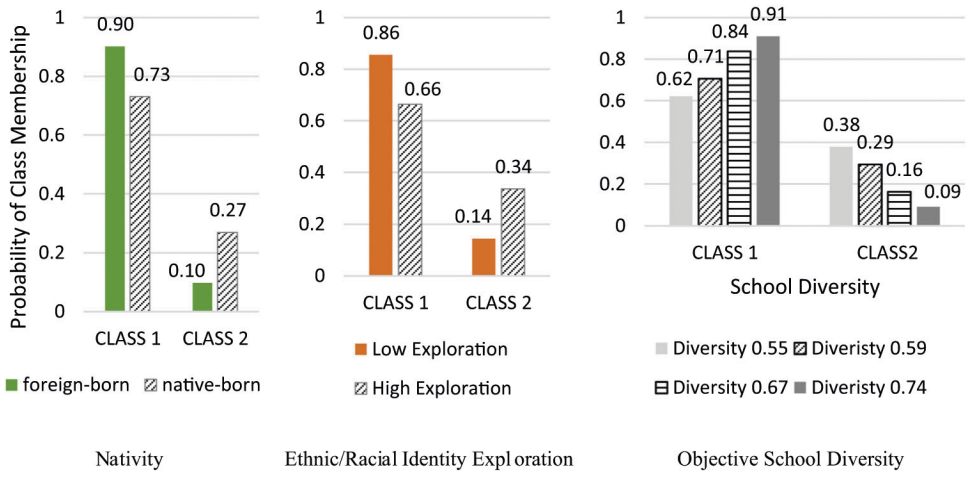

Fig. 2.

Main effects of nativity, ethnic/racial exploration, and objective school diversity on probability of latent class membership. Low and high ethnic/racial identity exploration is graphed as +1 and −1 SD around the mean. CLASS 1 = low elaboration, CLASS 2 = high elaboration

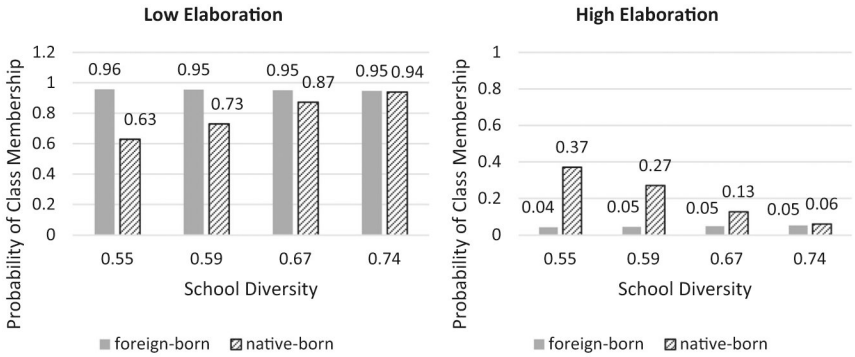

Fig. 3.

Cross-level interaction of nativity and objective school diversity on probability of class membership

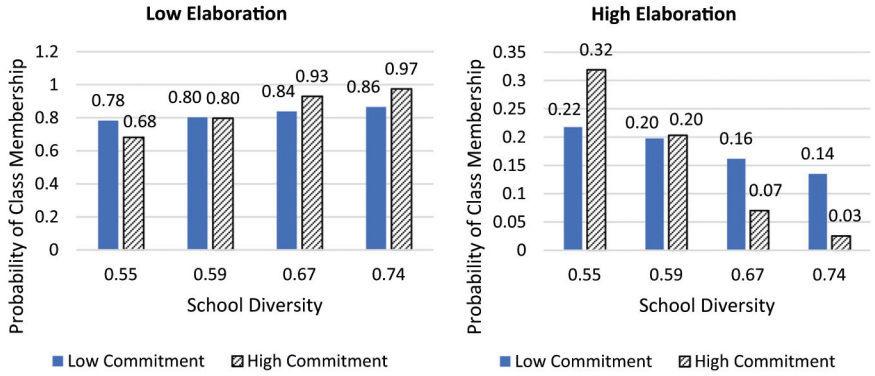

Fig. 4.

Cross-level interaction of ethnic/racial identity commitment and school diversity on probability of class membership. Low and high ethnic/racial identity commitment is graphed as +1 and −1 SD around the mean

Table 1

Descriptive statistics of main variables by cohort, gender, and school

	Cohort 1	Cohort 2	Male	Female	School 1	School 2	School 3	School 4
Ethnic/racial identity	*Mean (SD)*							
Exploration	2.68 (.55)	2.62 (.59)	2.63 (.66)	2.67 (.51)	2.77 (.51)	2.74 (.53)	2.60 (.61)	2.60 (.57)
Commitment	2.98 (.46)	2.93 (.37)	2.94 (.48)	2.97 (.39)	3.02 (.40)	2.94 (.45)	2.94 (.45)	2.94 (.40)
Nativity	*n* (%)							
Foreign-born	32 (19.3)	23 (17.6)	24 (24.3)	31 (15.7)	12 (38.2)	17 (34.0)	25 (36.2)	36 (29.3)
US-born	134 (80.7)	108 (82.4)	75 (75.8)	167 (84.3)	43 (78.2)	40 (80.0)	60 (87.0)	99 (80.5)
Primary Ethnic/Racial Self-Labeling *n (%)*								
Asian	71 (42.8)	40 (30.8)	31 (31.3)	80 (40.6)	34 (61.8)	4 (8.0)	27 (39.1)	46 (37.7)
Black	14 (8.4)	17 (13.1)	10 (10.1)	21 (10.7)	4 (7.3)	9 (18.0)	5 (7.2)	13 (10.7)
Hispanic/Latinx	38 (22.9)	31 (23.8)	24 (24.2)	45 (22.8)	7 (12.7)	31 (62.0)	7 (10.1)	24 (19.7)
White	38 (22.9)	34 (26.2)	28 (28.3)	44 (22.3)	9 (16.4)	3 (6.0)	27 (39.1)	33 (27.0)
Other	5 (3.0)	8 (6.2)	6 (6.1)	7 (3.6)	1 (1.8)	3 (6.0)	3 (4.3)	6 (4.9)
Gender *n (%)*								
Male	68 (41.0)	31 (23.7)	–	–	21 (38.2)	17 (34.0)	25 (36.2)	36 (29.3)
Female	98 (59.0)	100 (76.3)	–	–	34 (61.8)	33 (66.0)	44 (63.8)	87 (70.7)
Diversity score (0~1)	0.59	0.55	0.67	0.74				
Students in families with income below federal poverty level (%)	17.9%	22.9%	13.1%	21.5%				
Student achievement (1~5)	4.72	3.08	4.40	4.64				
Collaborative teachers (1~5)	3.06	3.59	4.59	3.55				
Supportive environment (1~5)	4.27	3.65	4.11	4.28				
Total (*n*)	166	131	99	197	55	50	69	123

Table 2

Correlations between main variables

	1	2	3	4
1. Gender	–			
2. Nativity	.104	–		
3. ERI - Exploration	.043	−.101	–	
4. ERI - Commitment	.029	−.131 *	.610 **	–
5. Objective school diversity	.058	.017	−.121 *	−.029

* $p < .05$,

** $p < .01$

Table 3

Fit indices for GMM models with 1–3 classes

	1 Class Model	2 Class Model	3 Class Model
AIC	1248.83	929.80	935.76
BIC	1271.53	963.03	980.13
ABIC	1248.83	934.49	942.07
Entropy	_[a]	.95	.82
BLRT	_[a]	$p < .001$	$p > .05$

AIC Akaike Information Criterion, *BIC* Bayesian Information Criterion, *ABIC* Sample Size Adjusted BIC, *BLRT* Bootstrap Likelihood Ratio Test

[a]Entropy and BLRT not available for the one-class model

Table 4

Logistic regression estimates

Variables	Model 1 *b (SE)*	Model 2 *b (SE)*	Model 3 *b (SE)*
Class membership (Intercept)	2.42 (1.11)*	1.08 (0.00)	1.08 (0.00)
Objective School Diversity		9.55 (2.62)***	−19.71 (16.34)
School: Student achievement		0.30 (0.63)	−2.95 (1.94)
School: Students living below federal poverty level		2.14 (4.95)	−3.26 (6.09)
School: Supportive environment		−1.63 (0.97)	6.65 (4.74)
Gender	0.31 (0.30)	0.24 (0.31)	0.26 (0.31)
Hispanic/Latinx	0.43 (0.47)	0.76 (0.54)	0.69 (0.56)
Asian	−0.63 (0.37)	−0.51 (0.39)	−0.69 (0.40)
Black	−0.82 (0.49)	−0.67 (0.54)	−0.84 (0.55)
Other	−0.74 (0.70)	−0.73 (0.74)	−0.84 (0.75)
Nativity	−1.23 (0.45)**	−1.34 (0.48)**	−9.62 (4.22)*
X Objective School Diversity			12.81 (6.30)*
Exploration	−0.98 (0.34)**	−0.92 (0.36)*	4.92 (3.46)
X Objective School Diversity			8.97 (5.28)
Commitment	0.83 (0.44)	0.81 (0.47)	−8.49 (4.34)
X Objective School Diversity			14.32 (6.65)*

*$p < .05$,

**$p < .01$,

***$p < .001$