# UC Santa Barbara

**Title**

Considering Immigration Disrupts Children's Essentialist Beliefs about National Identity

**Permalink**

https://escholarship.org/uc/item/57r89989

**Author**

Sodhi, Shreya

**Publication Date**

2022

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA

Santa Barbara

Considering Immigration Disrupts Children's Essentialist Beliefs about National Identity

A Thesis submitted in partial satisfaction of the

requirements for the degree Master of Arts

in Psychological & Brain Sciences

by

Shreya Sodhi

Committee in charge:

Dr. Zoe Liberman, Chair

Dr. Heejung Kim

Dr. Hongbo Yu

June 2022

The thesis of Shreya Sodhi is approved.

_____

Heejung Kim

_____

Hongbo Yu

_____

Zoe Liberman, Committee Chair

June 2022

# ACKNOWLEDGEMENTS

ABSTRACT


Considering Immigration Disrupts Children's Essentialist Beliefs about National Identity


by


Shreya Sodhi


   Children think of national identity as a core part of identity: previous research finds that

children are more likely to expect people from the same country to share preferences than

people of the same gender (Hussak & Cimpian, 2019). However, do children truly believe

that where someone is born defines them in important (and unchanging) ways? In the

present set of studies, we extend the study by Hussak and Cimpian (2019) by including

targets who are immigrants. In Study 1, we find that children believe that national identity is

less stable when considering immigrants compared to nonimmigrants and are willing to state

that an individual could maintain two national identities. In Study 2, we replicate past work

on an inductive potential task that contrasts national identity with gender when reasoning

about nonimmigrants: children were more likely to generalize preferences based on shared

national identity than shared gender. When considering immigrants, however, children's

responses were more mixed. Children relied on gender when the gender-match also lived in

the same country that the immigrant target moved to, but were at chance when having to

choose between a gender-match who lived in the immigrant's heritage country compared to

a non-gender match living in the host country. Thus, rather than essentializing national

identity, children may care more about where one lives than where they were born when

generalizing preferences. These findings suggest that children expect immigrants to assimilate to and adopt the preferences of their new culture.

# TABLE OF CONTENTS

**Considering Immigration Disrupts Children's Essentialist Beliefs about National Identity**

As of 2018, there were nearly 44.8 million immigrants in America, accounting for 13.7% of the United States population, and this number is continuing to increase (Budiman, 2020). This growing demographic has also resulted in a rise of anti-immigrant biases, particularly under the 45th President of the United States (Anti-Defamation League, 2018; Young, 2017). Importantly, negative attitudes towards immigrants can develop in American children as early as kindergarten (Brown, 2011). Negative attitudes towards immigrants have been found to be associated with strong nationality-based essentialist beliefs (Bastian & Haslam, 2008), but it is unclear how essentialist beliefs are impacted when directly considering immigration as a shift in national identity. Therefore, in order to understand how anti-immigrant biases may develop early in childhood, it is critical to first understand how children reason about immigration and its effects on national identity. The present set of studies aimed to understand how introducing immigration to young children affects their essentialist beliefs about national identity in order to determine whether children conceptually understand immigration as a change in social category membership.

**Social Essentialism**

Psychological essentialism refers to the notion that people or creatures have internal and stable 'essences' that dictate their identity (Gelman, 2004). Essentialism is a naïve theory of categorization that allows for humans to draw inferences about individuals within a group based on characteristics of that group. In classic switched-at-birth tasks, which measure *innate potential*, children will state that a baby pig that is adopted by cows will still grow up to be a pig; there is something inherent that makes a pig a pig. In addition,

categories that are essentialized have *inductive potential*: information about one member of that category can be inferred as representative of other members of that category. For example, when asked to make novel inferences (e.g., preferences) about a pig based on information provided about a different pig and a cow, children will generalize the information from one pig to another based on their shared group membership.

Children's essentialist beliefs extend to social categories as well. Essentialist reasoning about social categories, otherwise known as folk sociology, is argued to be an important approach that children take to reason about their social world (Hirschfeld, 2001). For example, gender has high inductive potential for young children: they expect people of the same gender to have the same preferences (Shutts et al., 2013; Taylor et al., 2009). Similar results have been found for various other social categories, such as race and ethnicity (Birnbaum et al., 2010; Rhodes & Gelman, 2009) and language (Kinzler & Dautel, 2012). In each of these situations, children believe that belonging to these social categories is a meaningful aspect of an individual: they expect people within the same groups to have similar characteristics due to these shared 'essences' that compose the social categories.

Importantly, recent research has found evidence of essentialist beliefs about national group membership as well (Davoodi et al., 2020). In a key study (Hussak & Cimpian, 2019), American children participated in various tasks that measured nationality-based essentialist beliefs. Across these various tasks, children believed that nationality can be used to draw inferences about a person. For example, children generally believed that nationality is stable and is unlikely to change. In addition, children also viewed nationality as an informative social category; they expected to people of the same nationality to share toy preferences on an inductive potential task. Similar results were replicated in a Canadian sample (Siddiqui et

al., 2020), emphasizing that children view nationality as an informational aspect of one's identity.

Inductive potential tasks also have the ability to contrast multiple categories in order to determine which social categories are most meaningful and informative for children. Gender appears to be a strongly used category in these tasks. For example, when comparing gender and race separately, children used gender, but not race, to guide inferences (Shutts et al., 2013). Similarly, a study conducted in the United States and in Turkey presented children with essentialism tasks about five separate social categories and found that gender was the most strongly essentialized social category in both cultural contexts (Davoodi et al., 2020). However, categories can also be contrasted by presenting two characters at a time: one that matches a target character on one dimension, and one that matches the target character on a different dimension. For example, Hussak and Cimpian (2019) presented children with a task in which they had to decide whether a target character was more similar to someone of the same gender (who was from a different country), or someone who was from the same country (but was a different gender). In this task children were more likely to choose a character of the same nationality (but different gender), suggesting that national identity may be an even more informative category to children than the highly essentialized category of gender.

Although social essentialism can be helpful, as forming these arbitrary boundaries around groups can allow for children to make sense of their social world, essentialism may have negative outcomes as well. Children's essentialist beliefs about social categories, such as race, are associated with stereotyping, prejudice, and negative intergroup interactions (Apfelbaum et al., 2010; Mandalaywala et al., 2018; Pauker et al., 2016; Rhodes &

Mandalaywala, 2017). Similarly, negative attitudes towards immigrants in adults are associated with strong nationality-based essentialist beliefs (Bastian & Haslam, 2008). Thus, it is important to understand how such essentialist beliefs in children can be impacted by directly considering the stability of immigrants' national identities.

**Children's Conceptions of Immigration**

Although prior research suggests that children essentialize nationality, understanding the features of nationality that children attend to can help us determine how they conceptualize the effects of immigration on national identity. Children appear to have specific views on what factors are important to maintain a specific national identity. Children have strong ideas about what it means to be American: Americans should love America and live by its rules (Brown, 2011), speak English (DeJesus et al., 2018), and maintain positive values, such as being good and nice (Hussak & Cimpian, 2019). However, this notion of national identity (social and cultural features) may differ from their reasoning about nationality in the legal sense (e.g., one's citizenship). While immigration may lead to a change in nationality, we are primarily interested in how children reason about potential changes to national identity – how immigrants maintain elements of their heritage country and/or adopt elements of their host country. Therefore, in order to understand how children reason about national identity, it is critical to test their expectations for immigrants whose identities may be multifaceted.

Currently, research on children's reasoning on national identity essentialism has focused on nonimmigrants. On the other hand, research on how children think about immigrants has focused on attitudinal measures. Negative attitudes about immigrants emerge early: by kindergarten, children report that immigrants who enter the country

illegally should be punished (Brown, 2011). Additionally, children prefer immigrants who

assimilate (adopt the norms of their host culture entirely) over those who integrate (combine

the norms of their heritage and host cultures) or separate (maintain the norms of their

heritage culture rather than adopting norms of their host culture; Verkuyten et al., 2014).

In addition, a recent study confirmed that children do believe that immigrants have

both the ability and desire to change (Dunlea et al., 2022), suggesting that there is a potential

for children to consider national identity to be a flexible. Although previous work has

suggested that children do hold essentialist beliefs about national identity and has

demonstrated its inductive potential (Hussak & Cimpian, 2019), this recent work on

children's understanding of immigrants provides evidence that children's essentialist beliefs

are subject to influence when provided with more information. Thus, while children may

still consider national group membership to be an informative aspect of one's identity, it is

possible that they do not actually consider it to be as stable and inherent as previously

established.

Additionally, it is unclear whether children consider immigrants to maintain dual

national identities (i.e., sharing characteristics with both members of their heritage and host

countries), or whether they believe that they only maintain the identity of one country.

While children do prefer those who assimilate (Verkuyten et al., 2014), is this a result of

them simply expecting immigrants to only adopt the identity of their host country? Or do

children believe that people *can* maintain a dual identity, but do not accept them as much?

Therefore, the present set of studies aim to investigate whether children maintain essentialist

beliefs about national identity when they are directly asked to consider immigration, or

whether children adopt a dual identity perspective instead.

## Current Studies

In both studies presented, we replicate and adapt various tasks used by Hussak and Cimpian (2019) that measure essentialist thinking in order to investigate whether children expect that immigrants will maintain the identity of their heritage country, adopt the identity of their host country, or maintain a dual identity, in which they share characteristics with people from both their heritage and host countries. In Study 1, we extend three tasks that measure children's understanding of the (1) stability, (2) inductive potential, and (3) meaning of national identity when hearing about immigrants from America and Andorra. In Study 2, we aim to clarify findings from Study 1 by further investigating how children consider the inductive potential of national identity compared to gender when hearing about immigrants from fictional countries.

Across both studies, we hypothesized that children would continue to maintain essentialist beliefs about national identity when considering nonimmigrants, but that these beliefs would be disrupted when considering immigrants. While we expected to replicate findings from Hussak and Cimpian (2019) for nonimmigrants, such that children believe one's national identity of their heritage country is stable and has high inductive potential (even relative to gender in Study 2), we hypothesized that for immigrants, children would show different patterns. If children do view people's national identity based on their heritage country to be important and innate, it is possible that we will continue to see that they expect immigrants to maintain the identity of their heritage country, but to a lower extent than for nonimmigrants. However, if children recognize how immigration causes a change in national identity, it is possible that children will endorse either a dual identity perspective (i.e., the immigrants will be like people from both their heritage country and host country),

or will expect immigrants to assimilate (i.e., be more similar to people from their host country instead).

<div align="center">**Study 1**</div>

**Method**

*Participants*

Seventy-two 5- to 11-year-old American children participated in Study 1 (41 females; $M_{age}$ = 8;4; range = 5;0-11;10). Most children were White (56.9% White, 5.6% Hispanic and/or Latino, 5.6% South Asian, 2.8% East or Southeast Asian, 2.8% Black/African-American, 26.4% Multiracial). All participants were tested remotely via live Zoom videoconferencing and were recruited from across the country via Facebook. Two additional children were tested but were excluded from analyses due to parental interference (1) or for residing outside of the U.S. (1).

*Procedure*

Children were first introduced to characters from two countries (America and Andorra) and the flags of their respective countries. All characters presented in the study were gender-matched to the child based on the gender indicated by their parent on a demographic survey. All children then participated in three tasks in the same order.

**Task 1: National Identity Belonging and Stability.** First, we were interested in whether children thought that national identity was more stable for nonimmigrants compared to immigrants. All children answered stability questions for two characters (within-subjects): one non-immigrant (from America) and one immigrant (who was born in Andorra but moved to America).

Characters' national identity/identities were indicated with two flags above their heads to illustrate where they were born (on the left) and where they live now (on the right; i.e., the nonimmigrant was presented with an American flag pointing to another American flag, whereas the immigrant was presented with an Andorran flag pointing to an American flag). Children were asked a series of three to four questions about each national identity for each character. The first questions asked whether each character was American/Andorran. For the non-immigrant, these were check questions. Children who answered incorrectly on their first attempt were prompted again, and their second responses were kept for analysis. Then, children were asked questions 2-4 based on their responses (see Figure 1). Questions 2a, 2b, and 3 were used to determine children's inferences about the stability of national identity. The order in which the American versus Andorran questions were asked was counterbalanced. Children were then asked two additional check questions about where the immigrant character was born and where they live now before moving to task 2.

**Figure 1**

*Flowchart of questions from Task 1 of Study 1.*

**a) Nonimmigrant Character**

```
1) Is this child        2a) Will they always be        If yes:                              3) Can they stop being
   American?                American?                    2b) Will they stay                    American?
                                                          American if they move
                                                          far, far, away?

                                                         If no:
                                                          3) Can they stop being
                                                             American?
```

```
1) Is this child Andorran?    2) Have they ever been        3) Can they do something
                                 Andorran?                      to become Andorran?
```

**b) Immigrant Character**

```
                                           If yes:                              If yes:                              3) Can they stop being
                                           2a) Will they always be              2b) Will they stay                      [American / Andorran]?
                                           [American / Andorran]?               [American / Andorran] if
                                                                                they move far, far, away?

1) Is this child                                                                If no:
   [American / Andorran]?                                                        3) Can they stop being
                                                                                 [American / Andorran]?

                                           If no:                               If yes:
                                           2) Have they ever been                3) Can they stop being
                                           [American / Andorran]                 [American / Andorran]?

                                                                                If no:
                                                                                 3) Can they do something
                                                                                 to become [American /
                                                                                 Andorran]?
```

**Task 2: Inductive Potential.** For this task, children were asked whether immigrant target characters were similar to others from their heritage and/or host country. The design was within-subjects such that all children viewed targets who were born in America or Andorra but moved to the opposite country. For each trial, children could indicate whether the target was similar (or not similar) to someone from their heritage country, *and* whether the target was similar (or not similar) to someone from their host country. Children saw the trials in one of two counterbalanced orders.

Specifically, children viewed four critical trials that varied in the information being generalized: toy preference, food, holiday, clothing. For each trial, children saw two test characters at the top of the screen (one from America and one from Andorra) and an immigrant target character at the bottom of the screen. For each trial, children were separately introduced to each test character (e.g., "This girl is American. She was born in America, and was raised in America. She likes to play the game, Gorp, at recess. This girl is Andorran. She was born in Andorra, and was raised in Andorra. She likes to play the game, Quid, at recess."). Then, they were introduced to the target character (e.g., "Here is another girl. She was born in Andorra, but her family moved, so now she lives in and was raised in America."). Next, children were asked if they thought that the target shared the same preference as each test character (e.g., "Do you think she likes to play the game, Gorp, at recess, like the American girl?"). Participants were asked about each test character separately, so it was possible for them to say that the target was similar to one test character, both test characters, or neither test character. Children also viewed two control trials that included properties that are not expected to be associated with national identity to ensure that children understood the inductive potential task (handedness, gender of sibling).

**Task 3: Meaning of National Identity**. Children were asked open-ended questions at the end of the study. First, children were asked "What does it mean to be American?" Responses were coded in the same way as Hussak & Cimpian (2019): responses that indicated essentialism (using values or feelings, no formal requirements of citizenship) were coded as a 1, whereas other responses or responses that used citizenship-based reasoning were coded as a 0 (interrater agreement = 81%). Next, children were asked if they thought someone could be both American and Andorran. After providing a yes or no answer, they

were asked to verbally explain their answer. Based on recurring themes that emerged, three category codes were created to categorize children's reasoning: biological (having one American and one Andorran parent), citizenship (living in a certain country), and cultural (learning/knowing the customs of a country). Verbal responses were assigned a 1 or 0 for each of the three codes (interrater agreement = 90%). Discrepancies in interrater coding for all verbal responses were resolved by a third coder.

**Results**

      **Task 1: National Identity Belonging and Stability.** For the national identity belonging question, we examined whether children believed that the targets (nonimmigrant vs. immigrant) belonged to each of the two countries (America vs. Andorra). We present findings for each of the targets separately below.

      *Do children understand that nonimmigrants to hold one national identity?* We were first interested in whether children expected the nonimmigrant to be American, and only American. This set of responses would indicate that children understood the task, since the non-immigrant was born in America and had always lived in America. As expected, all children (100%) said that the nonimmigrant was American. In addition, a single-samples t-test found that children were below chance (4%) at saying that the nonimmigrant was Andorran, $t(71) = -19.33$, $p < .001$. A binomial test found that this difference was significant, $p < .001$, as children were more likely to say that the nonimmigrant target belonged to their heritage country (America) than the other country (Andorra).

      *Do children expect immigrants to hold more than one national identity?* We next analyzed this same set of questions for the immigrant target, who was born in Andorra, but lived in America. Separate single-samples t-tests found that children were above chance

11

(77.8%) at saying that the target was Andorran, $t(71) = 5.63$, $p < .001$, but at chance (45.8%) at saying that the target was American, $t(71) = -0.70$, $p > .05$. Combined, 25% of children overall said that the target was both American and Andorran. Because there was some variability in children's responses (unlike in the case of the nonimmigrant), we were next interested in understanding whether children's responses shifted across development. To do so, we ran a binomial generalized mixed model on children's responses about the immigrant's national identity (1 = yes, 0 = no) with the following predictors: country (America vs. Andorra), age in years (continuous), the interaction between both predictor variables, and a random effect of subjects. There was a significant effect of country, $X^2(1) = 7.51$, $p = .006$, as children were more likely to say that the immigrant target belonged to their heritage country (Andorra) than their host country (America). In addition, there was a significant interaction of country and age, $X^2(1) = 13.91$, $p < .001$, indicating that this pattern of response became stronger with age (see Figure 2). In fact, with age, children became significantly more likely to say that the immigrant target was Andorran ($r = 0.36$, $p = .002$), and marginally less likely to say that the target was American ($r = -0.23$, $p = .05$). Thus, national identity-based essentialist beliefs increased with age: older children were more likely to say that the immigrant target belonged to their heritage country, but not their host country.

**Figure 2**

*Age-related changes in the proportion of participants who said that the immigrant target*

*belonged to each country.*
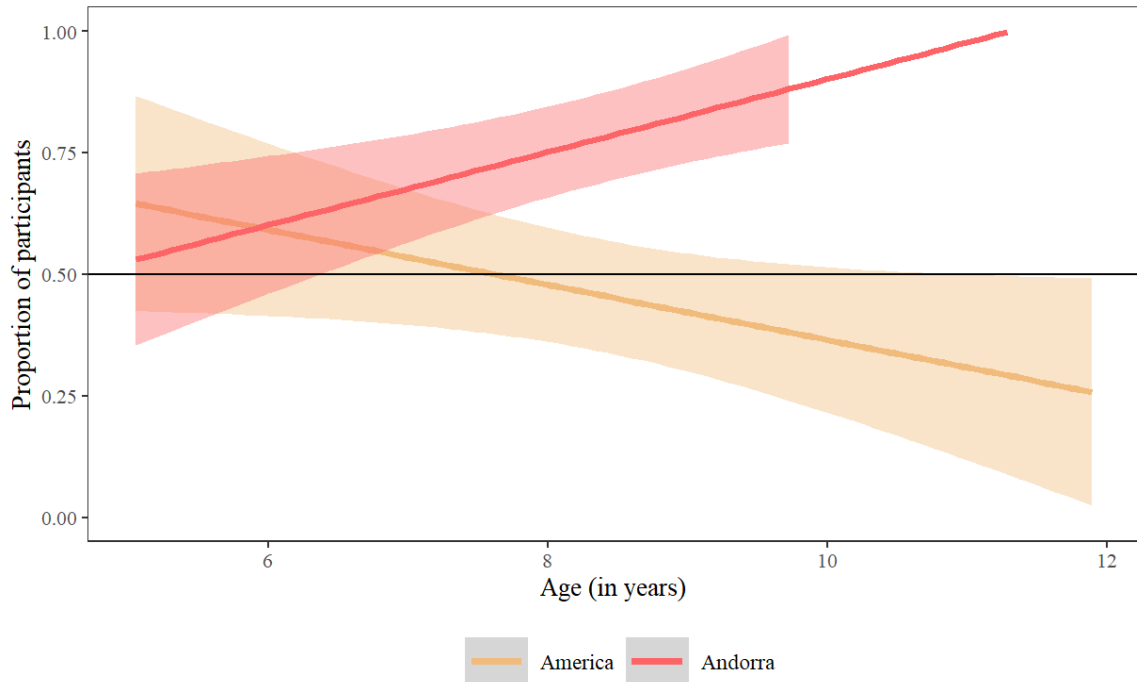


***Do children's expectations about national identity belonging differ for***

***nonimmigrants and immigrants?*** An exact McNemar's test was conducted to compare

children's responses for nonimmigrant targets and immigrant targets. There was a

statistically significant difference, as shown in Figure 3 below: children were more likely to

say that the targets belonged to their heritage country, but this effect was more pronounced

for nonimmigrant targets, $X^2(1) = 45.82$, $p < .001$. Thus, children were less reliant on the

heritage country as the only source of national identity for immigrants compared to

nonimmigrants.

**Figure 3**

*Proportion of participants who said that each target belonged to each country.*
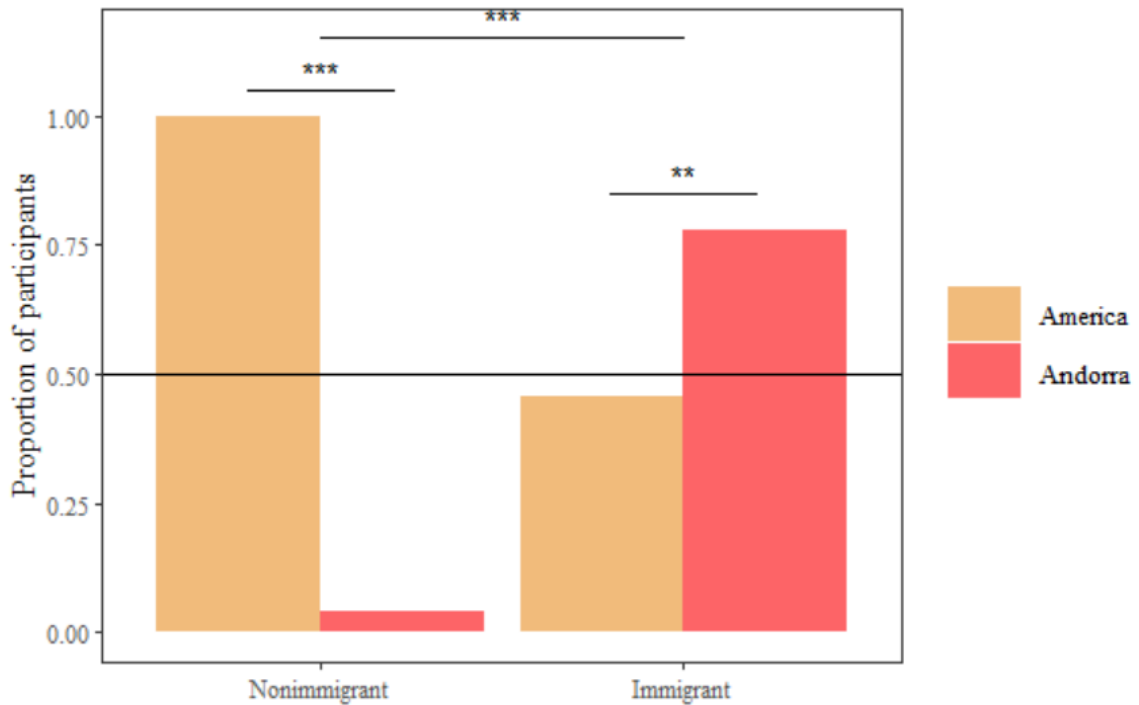


***Do children's expectations for the stability of national identity differ for***

***nonimmigrants and immigrants across development?*** To answer this question, we created a

composite score by averaging the responses for questions 2 to 4. Scores ranged from 0 to 1,

where higher numbers indicated that national identity was more stable. Responses for each

question were coded as a 1 if they indicated that national identity was stable and could not

change or as a 0 if they indicated that they could change. A general linear regression

analysis was conducted on stability scores with the following predictors: target immigrant

status (nonimmigrant vs. immigrant), country (America vs. Andorra), age (continuous in

years), and the interactions between all three variables. Together, the predictors explained

approximately 38% of the variance in stability scores [$R^2 = 0.382$, $F(7,280) = 24.73$, $p <$

.001]. There was only one significant main effect: stability scores increased with age, $\beta =$

0.46, $p < .001$. There were also significant two-way interactions between immigrant status and age, $\beta = -1.03$, $p = < .001$, and between country and age, $\beta = -0.67$, $p = .022$. Critically, these were qualified by a significant three-way interaction between immigrant status, country, and age, $\beta = 1.39$, $p = < .001$, as shown in Figure 4 below. To better understand the three-way interaction, separate general linear regression analyses were conducted on stability scores at each level of target immigrant status (nonimmigrant vs. immigrant) with the following predictors: country (America vs. Andorra), age (continuous in years), and the interactions between the two variables.

**Figure 4**

*Age-related changes in stability scores for each national identity by target immigrant status.*
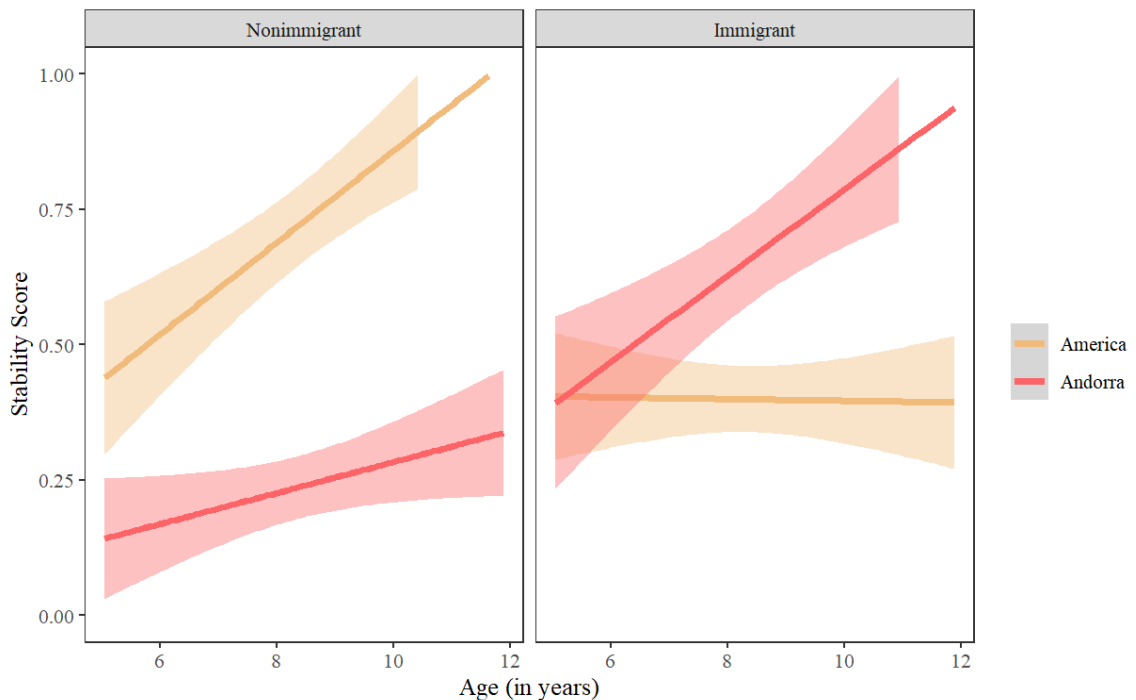


For the analysis conducted on the nonimmigrant target, there was a significant main effect of age, such that stability scores increased with age, $\beta = 0.44$, $p = < .001$. In addition, there was a significant interaction of country and age, $\beta = -0.64$, $p = .017$. While stability

scores increased overall with age, this effect was stronger when considering the nonimmigrant target's American identity. For the analysis conducted on the immigrant target, there was only a significant interaction of country and age, $\beta = 1.03$, $p = .002$. Stability scores increased with age for the immigrant target's Andorran identity, but not for the target's American identity.

In summary, we find that for both targets, older children (compared to younger children) believe that the national identity for the targets' heritage countries are highly stable. For the nonimmigrant, older children were slightly more likely than younger children to consider their Andorran identity as stable; in this case, they were less likely to believe that the target could become Andorran, suggesting greater national identity-based essentialist beliefs with age. However, there were no age-related changes when considering the host country for the immigrant target. Across the board, children viewed the immigrant's American identity as relatively stable.

**Task 2: Inductive Potential.** First, to ensure that children understood the task, we tested whether children used national identity to generalize information on the control trials. As expected, binomial tests showed that children were equally likely to say on control trials that the target was like the characters from both their heritage country and host country, $p >$ .05, as well as the characters from both America and Andorra, $p > .05$, so further analyses focus on the critical trials only.

***Do children use heritage country or host country when making inferences about immigrant targets?*** A binomial generalized mixed model was conducted on children's responses (1 = yes, 0 = no) with the following predictors: national identity (heritage country vs. host country), country (America vs. Andorra), and age in years (continuous). Interactions

between all three predictor variables as well as a random effect of subject were included in the model as well.

There was no effect of national identity, $X^2(1) = 0.48$, $p > .05$; children were above chance at saying that the test characters to be similar to both targets from their heritage country (69.8%) and targets from their host country (74.7%; $ps < .001$). However, there was a significant effect of country, $X^2(1) = 6.40$, $p = .011$. Children were more likely to say that the target character was similar to the test character from Andorra (76.0%) than America (68.4%), regardless of whether Andorra was the target character's heritage country or host country, suggesting that children appeared to pay more attention to the specific country in their responses rather than the direction of the target's immigration. There was also a significant interaction between country and age, $X^2(1) = 9.83$, $p = .002$, as shown in Figure 5, suggesting that greater expectations of similarity to the Andorran character became more likely with age. All other effects and interactions were nonsignificant, $ps > .05$.

Taken together, these results suggest that children were willing to endorse a dual identity perspective: they expected immigrant targets to preserve characteristics from their heritage country while also adopting characteristics from their host country. However, there were potential confounds in the study given the significant effect of country and interaction between country and age.

17

**Figure 5**

*Age-related changes in saying that the target character was like the test character from each country.*
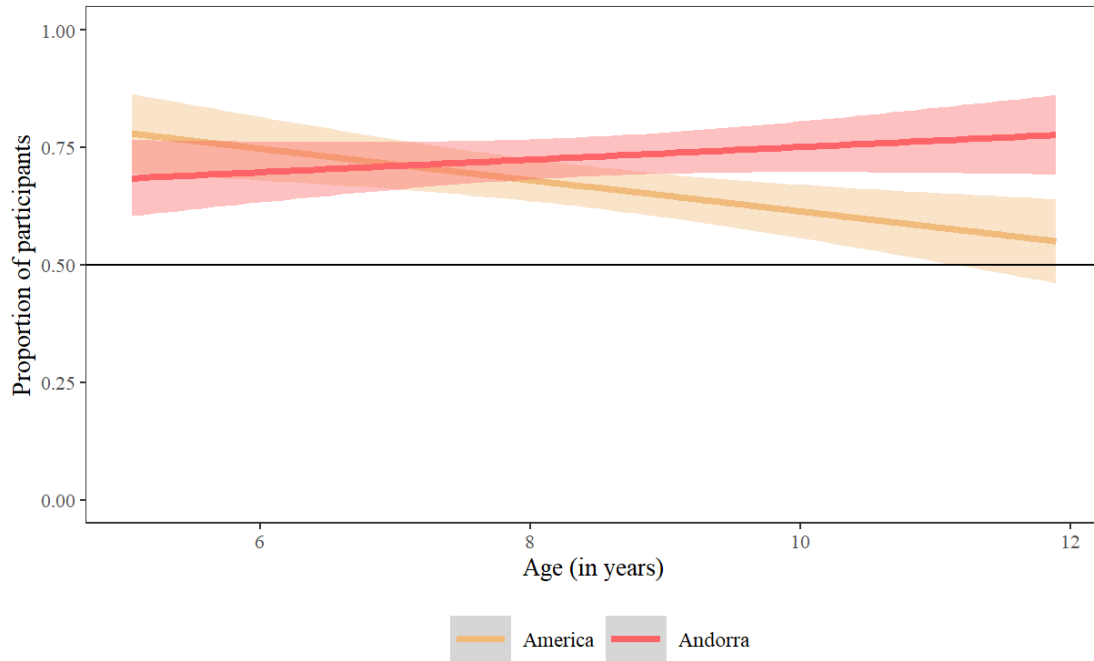


**Task 3: Meaning of National Identity.**

*What reasons do children use to explain what it means to be American?* When asked what it means to be American, a binomial test found that only 11% of children used essentialist reasons rather than citizenship-based reasons, $p < .001$. This was in contrast to Hussak and Cimpian (2019), who found that children were more likely to use essentialist reasons than citizenship-based reasons.

*Do children believe that people can maintain a dual national identity?* When asked if someone could be both American and Andorran, a binomial test found that children were more likely to say yes (72.2%) than no, $p < .001$, suggesting evidence for children's willingness to endorse a dual identity perspective. For children who said yes, the most common reason they provided was due to citizenship ($N = 29$), followed by biological ($N =$

18), and then cultural ($N = 7$). It is important to note that, for both questions, many children used the language of the inductive potential task to when providing their answers. Thus, it is possible that the results may have differed if this task was presented in the beginning of the study.

**Discussion**

Overall, Study 1 finds that children understand that national identity differs for immigrants relative to nonimmigrants. Specifically, although children expect immigrants to remain members of their heritage country, they are also willing to be more flexible in their reasoning. In task 1, while children were more likely to say that immigrants belonged to their heritage country, and that their identity in respect to their heritage country was still stable, this was lowered in comparison to nonimmigrants, suggesting that children may be attending to immigrants' dual national identities. Additionally, there were age-related changes, as older children were more rigid in their reasoning about immigrants compared to younger children: older children were more likely to state that their identity was based on their heritage country. Similarly, in task 3, we find that a majority of children endorsed a dual identity perspective and believed that people could maintain multiple national identities at once.

In task 2, we find that children may believe that an immigrant target character shares the identity of test characters from both their heritage and host country, which could suggest that children believed that the target maintained dual identities. However, we also find that children were more likely to say that the target was more similar to the Andorran test character than the American test character. For all critical trials, children heard novel words

(e.g., Gorp and Quid) and may have associated the unfamiliar word with the unfamiliar country, suggesting a possible confound of familiarity.

Given the unexpected country effects for task 2, we decided to conduct a second study to address possible confounds in the inductive potential task. In this study, we make four key changes to the inductive potential task from Study 1. In order to eliminate any potential effects of familiarity (i.e., matching unfamiliar terms to the singular unfamiliar country), we introduced two fictional countries (Cortania and Tamsena) that would be equally unfamiliar rather than using one familiar and one unfamiliar country (America and Andorra). We also modified the task to more closely resemble the task used by Hussak and Cimpian (2019). Rather than continuing to use a free-choice paradigm, we reverted to a forced-choice paradigm: children were asked to choose which of the two test characters they thought was most like the target character. We also included both nonimmigrant and immigrant target characters to directly replicate the nonimmigrant results from the original study and to compare how children reason about national identity based on immigration. Lastly, as in Hussak & Cimpian, (2019), we introduced gender as a comparison variable. Despite that fact that gender has high inductive potential (Shutts et al., 2013), Hussak & Cimpian, (2019) found that children were more reliant on national identity than gender when making inductive inferences about nonimmigrants. Thus, by directly pitting national identity and gender against each other, we aim to understand whether children's national identity-based essentialist beliefs continue to be stronger than their gender-based essentialist beliefs when reasoning about immigrants.

**Study 2**

**Method**

*Participants*

One hundred and twenty-nine American children participated in Study 2 (47 females; $M_{age}$ = 7;2; range = 4;0-11;8). Most children were White (55.8% White, 9.3% East or Southeast Asian, 3.9% South Asian, 3.9% Middle Eastern/North African, 2.3% Black/African-American, 1.5% Hispanic and/or Latino, 0.8% Native Hawaiian or Pacific Islander, 22.5% Multiracial). The study was created in Qualtrics and was hosted on the Princeton and NYU Discoveries in Action Lab (*PANDA*; Rhodes et al., 2020). Thus, the study was self-administered and conducted remotely, and required a computer with a webcam and WiFi. Five additional children were tested but excluded from analyses due to technical issues that prevented them from completing the study (3), having participated in Study 1 (1), or having a diagnosis of autism spectrum disorder (1).

*Procedure*

All children viewed the same introduction and answered practice questions before being randomly assigned to see counterbalanced trials in this mixed factorial design. Factors included target immigrant status as a within-subjects factor (3: *nonimmigrant* vs. *immigrant: heritage-gender match* vs. *immigrant: host-gender match*) and participant age as a between-subjects factor (continuous in years).

Children were first introduced to characters from two fictional countries (Cortania and Tamsena) and shown their flags (created using an online flag designer; Ruoff, n.d.). In order to ensure that children understood how to correctly use the flags, children participated in two sets of flag check questions: one with a nonimmigrant female character from

21

Tamsena, and one with an immigrant male character who moved from Cortania to Tamsena. Nonimmigrant characters were depicted with a singular flag above them, while immigrant characters were depicted with the flag of their heritage country with an arrow pointing to the flag of their host country. For each character, children were asked to identify where the child was born (Cortania or Tamsena) and were then asked to identify where she lives now (Cortania or Tamsena) by clicking on one of the two flags. Children had two attempts to answer each question correctly; if they were incorrect the second time, they were shown the correct answer before proceeding to the next question. All children accurately identified where both targets were born, and a majority (98.4%) accurately identified where the targets live now.

Following the flag check questions, children participated in an inductive potential task practice trial. They were introduced to two test characters: a dog who likes bones and a cat who likes fish. Then, they were introduced to a target character: a different dog. Children were asked to choose which of the two test characters was like the target character; they were again allowed two attempts to answer the question correctly, and were shown the correct answer if they were incorrect the second time. All children accurately chose the dog test character.

Following the practice trial, children viewed nine trials of the inductive potential task. The task was set up in a similar way as Task 2 from Study 1. Children saw two test characters and one target character, and were asked to make a forced choice about which of the two test characters the target character was like. For *nonimmigrant* trials, the target character was from the same country as one test character and was the same gender as the second test character (e.g., if the target character was a girl from Cortania, the two test

22

characters would be a boy from Cortania and a girl from Tamsena). Children saw two types of immigrant trials: the character who matched the target's gender either shared the same heritage country as the target (*immigrant: heritage-gender match)* or lived in the same host country (*immigrant: host-gender match)*. The non-gender match was from the opposite country. Examples of how each of the three types of trials were presented are shown in Figure 6 below. Having two types of immigrant trials was important since the immigrant target would share national group membership with both test characters; changing the gender-match thus allows us to determine if gender or heritage country are still important categories when considering immigration.

**Figure 6**

*Examples of each type of immigrant status used in Study 2. Example a) shows a* nonimmigrant *trial, example b) shows an* immigrant: heritage-gender match *trial where the gender-match is from the heritage country, and example c) shows an* immigrant: host-gender match *trial where the gender-match is from the host country.*
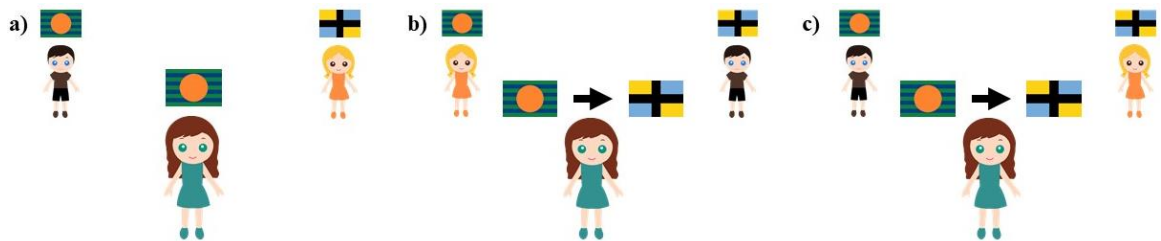


The nine trials fell into three trial categories: preference trials, culture trials, and control trials. The preference trials were based on the trials used by Hussak and Cimpian (2019) and included recreational based preferences (toys, games, and puzzles), such as liking to play the game Gorp or Quid at recess, that are independent of culture or national identity. The culture trials were included as a comparison to the preference trials, as cultural elements (music, food, and language) are often closely associated with national identity,

such as eating the food Blick vs. Zav at home. The control trials were included to ensure that children understood the inductive potential task, and included properties that are not expected to be associated with either gender or national identity (handedness, older vs. younger sibling, taller vs. shorter than best friend). Trials were counterbalanced across the target character's heritage country (Cortania vs. Tamsena) and the order in which the two elements (e.g., Gorp vs. Quid) were paired with the two test characters. Children were randomly presented a counterbalanced version of each of the nine trials, and the order in which they saw the trials was randomized.

**Results**

First, to ensure that children understood the task, we tested whether children used national identity to generalize information on the control trials. As expected, a single-samples t-test showed that children were at chance at making same-gender matches for control trials, $t(385) = -0.71$, $p > .05$, so they were not included in the analyses.

*Do children prioritize national identity or gender on an inductive potential task?*
We were first interested in children's base level choices across the three immigrant status conditions. Separate single sample t-tests were conducted for each level of target immigrant status to compare the likelihood of children choosing the gender-matched character to an average of 0.5. For *nonimmigrant* targets, children were below chance (14.4%) at choosing the gender-matched character, $t(256) = -16.23$, $p < .001$; children expected the target to be more similar to the test character from the same country instead, replicating previous results (Hussak & Cimpian, 2019).

On *immigrant: host-gender match* trials, if children are continuing to attend to the character's heritage country in the same way that they do for *nonimmigrant* trials (i.e.,

24

essentializing national identity), they should be below chance at choosing the gender-matched character. However, children were above chance (61.2%) at choosing the gender-match, $t(257) = 3.70$, $p < .001$. When gender was compounded with host country, children were above chance at choosing that character. Thus, in both *nonimmigrant* and *immigrant: host-gender match* trials, children prioritized choosing the character from the country where the target currently lives rather than the country where they were born, regardless of whether that character was the same gender as the target.

On *immigrant: heritage-gender match* trials, if children are attending to the character's heritage country, they should be above chance at choosing the gender-matched character. On these trials, however, children were at chance (49.8%) at choosing between the same-gender character from the target's heritage country and the opposite-gender test character from their host country, $t(258) = -0.06$, $p > .05$. When gender was not compounded with host country, children seemed to choose both characters equally. The two types of immigrant trials suggest that children may consider national identity to be flexible, and instead attend to both gender and the targets' host country, rather than their heritage country.

***How do children's inductive inferences about national identity vary based on immigrant status across development?*** Next, we were interested in whether these patterns varied with age and whether there were significant differences between the three immigrant status conditions. A binomial generalized mixed model was conducted to examine the predictors of choosing a gender-matched character for only the critical (preference and culture) trials. Character choice was entered as a binary variable (0 = choosing the opposite-gender character, 1 = choosing the gender-match test character). Predictor variables included target immigrant status as a within-subjects categorical factor and age (in years) as a

25

continuous variable. Interactions between the two predictor variables and a random effect of subject were included in the model as well. Trial category (preference vs. culture) was initially included in the model, but resulted in no significant main effects or interactions (*ps* > .05), so it was subsequently removed for final analyses.

Replicating our initial analyses, we found a significant effect of target immigrant status, $X^2(2) = 6.58$, $p = .037$, as shown in Figure 7. Separate binomial tests were conducted to compare each level of target immigrant status. Children were significantly less likely to choose the gender-match for *nonimmigrant* trials than for immigrant trials, regardless of which type of immigrant trial was being considered, *ps* < .001. There was no significant difference between the two types of immigrant trials, *p* > .05.

**Figure 7**

*Proportion of participants who made same-gender matches for each immigrant status condition.*
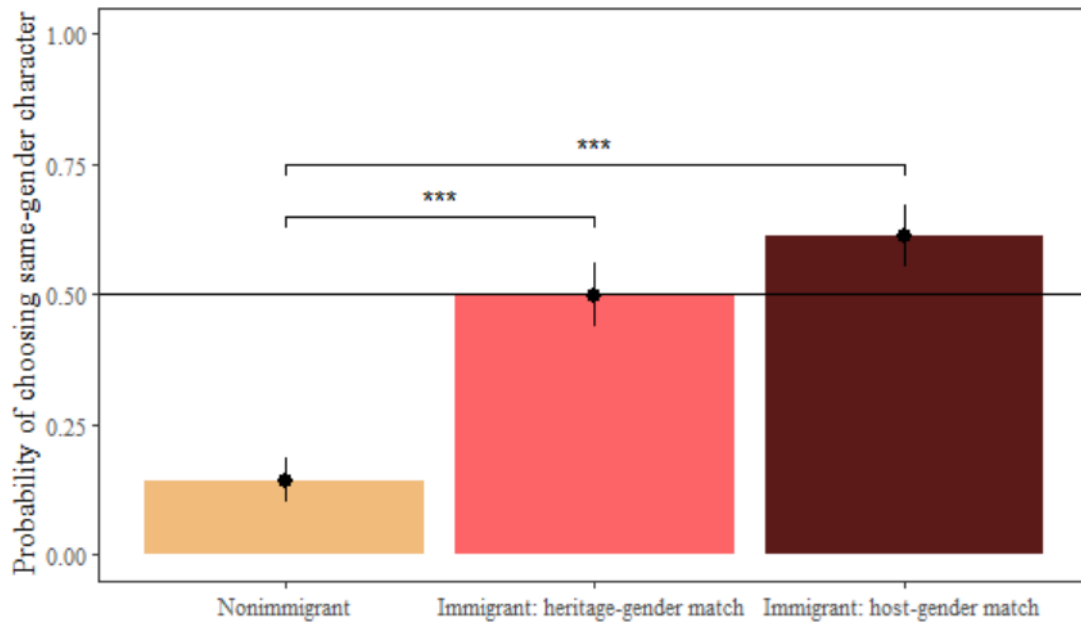


There was also a significant effect of age, $X^2(1) = 19.89$, $p < .001$; children were less likely to choose the gender-match with age. There was also a significant interaction between

age and target immigrant status, $X^2(2) = 17.46$, $p < .001$, as shown in Figure 8. Age effects were strongest in the two conditions in which children were more likely to choose the test character from the same host country as the target (*nonimmigrant*: $r = -.30$, $p < .001$; *immigrant: host-gender match*: $r = -.17$, $p = .008$) compared to the *immigrant: heritage-gender match* ($r = .00$, $p > .05$) condition. All other effects and interactions were not significant, $ps > .05$.

**Figure 8**

*Age-related changes in making same-gender matches by immigrant status condition.*
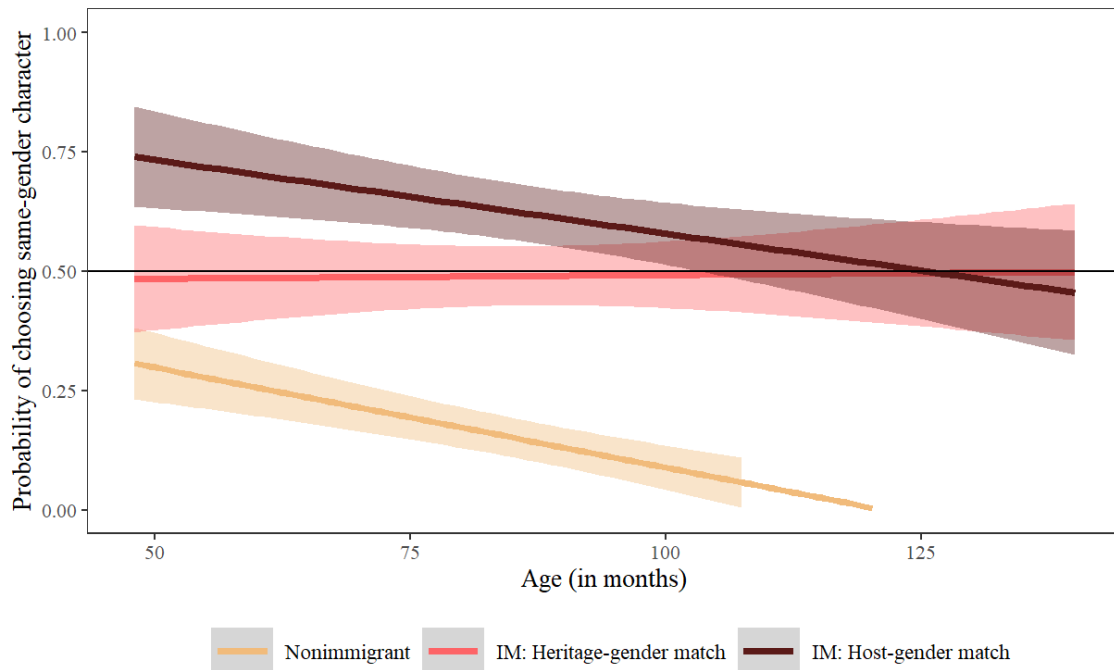


**Discussion**

Overall, in Study 2, we find that, in an inductive potential task, children prioritize the country where one lives over the country where one was born. Though inductive potential tasks have been used to understand how children generalize information based on national identity, our design is the first to test how children make inferences about immigrants'

multiple national identities. This design allows us to clearly investigate whether children truly do attend to one's country of birth as an important identity marker – more so than gender. While we replicate previous results that children use national identity more often than gender to make inferences about nonimmigrant targets (Hussak & Cimpian, 2019), the results from the immigrant trials indicate that these findings do not actually suggest that children have essentialist beliefs about national identity. Children were more likely to say that the immigrant target was like the test character that shared the same host country when that test character was also a gender-match (i.e., the target shared two characteristics with the test character from their host country), but were at chance when the test character from their heritage country was the gender-match. In this case, it appears that children were having to choose between gender and host country. Thus, rather than essentializing national identity, children may care more about where one lives than where they were born when generalizing preferences.

In addition, we find different age-related changes by condition. When the target was a *nonimmigrant*, children were less likely to choose the gender-matched test character with age: older children prioritized national identity more frequently compared to younger children. For *immigrant: host-gender match* trials where the same-gender character was from the target's host country, children were also less likely to choose the gender-matched test character with age. However, in this case, younger children appeared to be above chance at choosing the gender-match, whereas older children appeared to be at chance – in the same way as in *immigrant: heritage-gender match* trials. Thus, while younger children may be prioritizing host country when considering immigrants, older children may not be differing between heritage country and host country. Instead, older children may be taking a dual

identity perspective, in which they expect immigrants to maintain aspects of both national identities.

## General Discussion

Across both studies, we find that introducing immigration into previously established tasks that measure essentialism disrupts essentialist beliefs about national identity. Although we replicated prior work and supported our hypotheses for nonimmigrant targets (children appear to essentialize national identity for nonimmigrants), we also find evidence in support of dual identity and assimilationist perspectives for immigrants, rather than essentialism. In Study 1, across various tasks, we find that while children do expect immigrants to maintain the national identity of their heritage country to some extent, they are also able to endorse a dual identity perspective for immigrants and believe that an individual can maintain membership in multiple national groups. In Study 2, we find that while children do consider national identity to be an important social category marker, they prioritize an immigrant's host country over their heritage country in an inductive potential task. While previous research implied that children's responses on an inductive potential task that contrasted nationality and gender indicated essentialist reasoning about nationality (Hussak & Cimpian, 2019), the findings from this study suggest that children may actually care more about where one lives, and older children may actually be endorsing a dual identity perspective. Rather than viewing national group membership as an immutable aspect of one's identity, they instead expect people to adopt the customs or norms of the people from where they live, regardless of if they currently live in the same place where they were born. Thus, children may actually have a more complex understanding of national identity than previously understood, and are perhaps able to comprehend the notion of biculturalism that

accompanies immigration. These results are in line with research about children's expectations of immigrants to be able to and to want to adopt the norms of their new country (Dunlea et al., 2022) as well as other acculturation research that suggests that children prefer immigrants who assimilate (Verkuyten et al., 2014). This is a crucial finding: if children expect that immigrants will be – and want them to be – similar to people from their host country, this contributes to our understanding of the mechanisms that preempt anti-immigrant biases. Negative attitudes may stem from instances in which immigrants choose to not fully assimilate.

Across both studies, we also find that national identity-based essentialist beliefs may increase with age. This is counter to previous findings (Hussak & Cimpian, 2019) that indicate that younger children are more likely to essentialize national identity compared to older children. However, other forms of social essentialism, such as with race (Pauker et al., 2016, 2020) and even caste (Mahalingam, 2007), emerge with age, particularly with those with limited diverse exposure. It is possible that, while the introduction of immigration disrupted national identity-based essentialism overall, it may have actually solidified the notion in older children that national identity is stable for nonimmigrants.

**Limitations and Future Directions**

We analyzed the data as a whole to first get a general understanding of children's reasoning about national group membership when considering immigration. However, it is possible that children's personal experiences with immigration or exposure to diversity can predict their responses on the tasks used in this research. For example, participants with direct experience with immigration (e.g., being an immigrant or child of immigrants) may be more flexible with their understanding of national identity, even when viewing

nonimmigrant targets. Additionally, increased exposure to diversity can decrease racial essentialism (Mandalaywala et al., 2018; Pauker et al., 2016), suggesting that diverse exposure may also decrease national identity-based essentialist beliefs. For both studies, we collected demographic information from parents, including immigration information and their primary zip codes. While a majority of children were born in the United States, many children (Study 1 $N = 23$, Study 2 $N = 41$) had at least one parent who was born outside of the United States. In addition, we can use Census data from the zip codes provided by parents to determine the racial, linguistic, and citizenship diversity in the participants' neighborhoods and how their exposure to diversity predicts their reasoning about immigrants' national identities. Investigating individual differences may uncover an additional mechanism for the development of attitudes towards immigrants, and future analyses can take into account social networks and familiarity with immigration.

Additionally, future research can further delve into children's expectations for acculturation strategies. In the inductive potential tasks used in this study, the questions were framed as relatively objective: children were asked which of the two test characters was most like the target character. However, framing the question in a different manner may help uncover other aspects of children's expectations for immigrants. For example, we can consider asking which of the two test characters *should* the target character be like. Given that children do expect immigrants to adopt the norms of their new country (Dunlea et al., 2022), framing the question to be more in terms of norms (what they should do) rather than essences (what they are like) may yield even stronger results showing that children expect immigrants to be like people from their host country, rather than their heritage country. Including an attitudinal measure towards immigrants in conjunction with these tasks to

determine how expectations align with preferences could also help determine whether essentialist reasoning or expectations for assimilation are the mechanisms behind the emergence of negative attitudes towards immigrants.

Lastly, in order to understand children's reasoning about immigration on a cognitive level, the studies presented used novel terms (e.g., Gorp and Quid) as well as fictional countries in Study 2. While this was critical in understanding how children abstractly conceptualize the effects of immigration on national group membership and national identity-based essentialist reasoning, this is not representative of how immigration occurs in our real world. Immigration is significantly more complex and it is crucial to consider the intersectionality of immigration and race: the vast majority of immigrants in the United States are also members of marginalized racial groups, with 28% of immigrants originating from Asia and 25% originating from Mexico (Budiman, 2020). In fact, some research indicates that children's negative attitudes towards immigrants stem from racial differences (Brown, 2011). Thus, it is important to consider the tasks used in this study in a manner that is more representative of real life. For example, we can incorporate racial differences into the tasks to see if children continue to prioritize national identity as a social category, or if race is more indicative of shared preferences and norms.

**Conclusion**

Overall, we find evidence that introducing immigration to children allows them to consider national identity to be a flexible social identity. These studies contribute to current theory by replicating the finding that children have essentialist beliefs about national identity for nonimmigrants and extending this literature to show that children are flexible with such beliefs when considering immigration. This research makes important contributions to our

theoretical framework about how children's beliefs about national identity may not be as rigid as previous work suggests, and that factors such as immigration may affect children's cognitive flexibility. Finally, this research contributes to a growing literature on children's essentialist beliefs and inductive inferences beyond national identity, as this has implications for how considering unstable identities can disrupt essentialism more broadly.

# References

Anti-Defamation League. (2018). *Mainstreaming Hate: The Anti-Immigrant Movement in the U.S.*

Apfelbaum, E. P., Pauker, K., Sommers, S. R., & Ambady, N. (2010). In blind pursuit of racial equality? *Psychological Science*, *21*(11), 1587–1592. https://doi.org/10.1177/0956797610384741

Bastian, B., & Haslam, N. (2008). Immigration from the perspective of hosts and immigrants: Roles of psychological essentialism and social identity. *Asian Journal of Social Psychology*, *11*(2), 127–140. https://doi.org/10.1111/J.1467-839X.2008.00250.X

Birnbaum, D., Deeb, I., Segall, G., Ben-Eliyahu, A., & Diesendruck, G. (2010). The development of social essentialism: The case of Israeli children's inferences about Jews and Arabs. *Child Development*, *81*(3), 757–777. https://doi.org/10.1111/J.1467-8624.2010.01432.X

Brown, C. S. (2011). American elementary school children's attitudes about immigrants, immigration, and being an American. *Journal of Applied Developmental Psychology*, *32*(3), 109–117. https://doi.org/10.1016/j.appdev.2011.01.001

Budiman, A. (2020). *Key findings about U.S. immigrants*. Pew Research Center. https://www.pewresearch.org/fact-tank/2020/08/20/key-findings-about-u-s-immigrants/

Davoodi, T., Soley, G., Harris, P. L., & Blake, P. R. (2020). Essentialization of social categories across development in two cultures. *Child Development*, *91*(1), 289–306. https://doi.org/10.1111/CDEV.13209

DeJesus, J. M., Hwang, H. G., Dautel, J. B., & Kinzler, K. D. (2018). "American = English Speaker" before "American = White": The development of children's reasoning about

nationality. *Child Development*, *89*(5), 1752–1767. https://doi.org/10.1111/cdev.12845

Dunlea, J. P., Wolle, R. G., Heiphetz, L., Apastalatos, C., Barshay, J., Bowen, J., Charles,
S., Ding, G., Fel, J., Goel, D., Goolsby, L., Herman, M., Macleod, I., Mclaughlin, A.,
Parincu, Z., Subia, E., Suresh, S., Vanden-Eijnden, C., & Ward, H. (2022). The essence
of an immigrant identity: Children's pro-social responses to others based on perceived
ability and desire to change. In K. Tobia (Ed.), *Identity and the Self*. Bloomsbury
Publishing Inc. https://philpapers.org/rec/DUNTEO-29

Gelman, S. A. (2004). Psychological essentialism in children. *Trends in Cognitive Sciences*,
*8*(9), 404–409. https://doi.org/10.1016/j.tics.2004.07.001

Hirschfeld, L. A. (2001). On a folk theory of society: Children, evolution, and mental
representations of social groups. *Personality and Social Psychology Review*, *5*(2), 107–
117. https://doi.org/https://doi.org/10.1207/S15327957PSPR0502_2

Hussak, L. J., & Cimpian, A. (2019). "It feels like it's in your body": How children in the
United States think about nationality. *Journal of Experimental Psychology: General*,
*148*(7), 1153–1168. https://doi.org/10.1037/xge0000567

Kinzler, K. D., & Dautel, J. B. (2012). Children's essentialist reasoning about language and
race. *Developmental Science*, *15*(1), 131–138. https://doi.org/10.1111/J.1467-
7687.2011.01101.X

Mahalingam, R. (2007). Essentialism, power, and the representation of social categories: A
folk sociology perspective. *Human Development*, *50*(6), 300–319.
https://doi.org/10.1159/000109832

Mandalaywala, T. M., Ranger-Murdock, G., Amodio, D. M., & Rhodes, M. (2018). The
nature and consequences of essentialist beliefs about race in early childhood. *Child*

*Development*, *90*(4), e437–e453. https://doi.org/10.1111/cdev.13008

Pauker, K., Tai, C., & Ansari, S. (2020). Contextualizing the development of social

essentialism. *Advances in Child Development and Behavior*, *59*, 65–94.

https://doi.org/10.1016/BS.ACDB.2020.05.003

Pauker, K., Xu, Y., Williams, A., & Biddle, A. M. (2016). Race essentialism and social

contextual differences in children's racial stereotyping. *Child Development*, *87*(5).

https://doi.org/10.1111/cdev.12592

Rhodes, M., & Gelman, S. A. (2009). A developmental examination of the conceptual

structure of animal, artifact, and human social categories across two cultural contexts.

*Cognitive Psychology*, *59*(3), 244–274.

https://doi.org/10.1016/J.COGPSYCH.2009.05.001

Rhodes, M., & Mandalaywala, T. M. (2017). The development and developmental

consequences of social essentialism. *Wiley Interdisciplinary Reviews: Cognitive

Science*, *8*(4), e1437. https://doi.org/10.1002/WCS.1437

Rhodes, M., Rizzo, M. T., Foster-Hanson, E., Moty, K., Leshin, R. A., Wang, M., Benitez,

J., & Ocampo, J. D. (2020). Advancing developmental science via unmoderated remote

research with children. *Journal of Cognition and Development*, *21*(4), 477–493.

https://doi.org/10.1080/15248372.2020.1797751

Ruoff, L. (n.d.). *Scrontch's Flag Designer*. https://flag-designer.appspot.com/

Shutts, K., Roben, C. K. P., & Spelke, E. S. (2013). Children's use of social categories in

thinking about people and social relationships. *Journal of Cognition and Development*,

*14*(1), 35–62. https://doi.org/10.1080/15248372.2011.638686

Siddiqui, H., Cimpian, A., & Rutherford, M. D. (2020). Canadian children's concepts of

national groups: A comparison with children from the United States. *Developmental Psychology*, *56*(11), 2102–2109. https://doi.org/10.1037/DEV0001103

Taylor, M. G., Rhodes, M., & Gelman, S. A. (2009). Boys will be boys; cows will be cows: Children's essentialist reasoning about gender categories and animal species. *Child Development*, *80*(2), 461–481. https://doi.org/10.1111/J.1467-8624.2009.01272.X

Verkuyten, M., Thijs, J., & Sierksma, J. (2014). Majority children's evaluation of acculturation preferences of immigrant and emigrant peers. *Child Development*, *85*(1), 176–191. https://doi.org/10.1111/CDEV.12111

Young, J. G. (2017). Making America 1920 again? Nativism and US immigration, past and present. *Journal on Migration and Human Security*, *5*(1), 217–235. https://doi.org/10.1177/233150241700500111