

An Exploratory Investigation of Associations Between Personal and Social Identity Among White, Heterosexual, Cisgender Young Adults in the U.S.

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Abstract

The development of personal and social identity have been studied mostly in parallel, leaving a gap in how young people explore who they are as simultaneously an individual and social being. An exploratory convergent mixed-methods design involving latent profile analyses and content analysis was used to examine personal, racial, sexual orientation, and gender identity exploration engagement and identity content among 598 White, heterosexual, cisgender young adults in the U.S. (ages 18 to 25, Mage = 22.0, SDage = 2.2, 298 men). Reports of identity exploration across social and personal domains were not associated, but the meaning of social identity was related to personal identity in ways that suggest active exploration of social identities could be tied to personal identity. Women were more actively exploring gender and sexual orientation identities. Future research should shed light on the complex interplay between social and personal identity development in various social contexts.

Keywords

identity, personal and social identity, mixed methods, latent profile analysis, white heterosexual cisgender context

Introduction

Identity is one of the key constructs that psychologists have used to learn how people understand who they are as individuals in relation to other people and society (Erikson, 1968). While identity develops throughout the life span, its formation is particularly salient in young adulthood as autonomy and ensuing responsibilities increase with making important life decisions (Arnett, 2000). The sense of identity involves ideas about both who oneself is and where they are headed towards as an individual, and how they belong with others in society. Therefore, identity is a complex construct that encompasses all these aspects and serves as a foundational anchor for how a person will live their life (Erikson, 1968). To scrutinize identity which is a multidimensional construct, identity research has proceeded in segments that emphasize either personal or social identity (Vignoles, 2018). Personal identity refers to aspects of the self that pertain to individual characteristics and choices such as values and goals, whereas social identity refers to aspects of the self that pertain to social group memberships such as race, gender, and sexual orientation (Marcia, 1966; Tajfel & Turner, 1986). While such categorization of identity domains has been useful in simplifying the complexity of identity, examining identity *across* personal *and* social domains is equally necessary for a

comprehensive understanding of how this complex and important psychosocial concept develops.

The goal of this study was to address the gap in understanding identity development holistically. Namely, we studied whether and how personal and social domains of identity were explored simultaneously among White, heterosexual, cisgender (having a gender identity that corresponds with registered sex at birth) young adults in the U.S. As identity develops through an individual's interactions with their developmental ecology, it is essential to consider their sociocultural and historical context (Gallagher et al., 2017). The population of our study is characterized by belonging to privileged groups in terms of race, sexual orientation, and gender normativity, yet there is also heterogeneity within this

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group concerning gender and other factors. These positionalities create varying opportunities and restrictions between people that influence identity as individuals navigate the transition to adulthood. In the following sections, we summarize how the developmental processes defined in both the personal and social identity literature can occur simultaneously, and how they may manifest particularly within the population we studied.

Personal and Social Identity Development Processes

The development of personal and social aspects of identity has been studied mostly in parallel using different definitions, theories, operationalizations, and measures (Vignoles, 2018). In personal identity literature, personal identity is considered to consist of multitude of specific domains of identity that particularly pertain to individual beliefs, values, and goals in various areas of one's personal life such as career, education, finances, and close relationships (Johnson et al., 2022). Although research on specific domains of personal identity often addresses these specific developmental processes independently, broadly, personal identity has been theorized to develop through recurring cycles of exploration and commitment throughout the life span that allows a person to negotiate the self with societal norms, roles, and expectations in important areas of one's personal life (Erikson, 1968; Marcia, 1966). Personal identity exploration is typically defined in the identity research field as gathering information and reflecting on existing or potential identifications (Marcia, 1966). Commitment is defined as the selection and coordination of behaviors pertaining to an identification (Marcia, 1966). In recent extensions of the Eriksonian theory of identity, the recurring cycles involved in identity development have been theorized into dual-cycle models of identity, which explicitly delineate cycles of identity formation and identity evaluation (Crocetti et al., 2010; Luyckx et al., 2008). In the model by Luyckx and colleagues, identity exploration in breadth is used to denote the exploration involved in the initial formation of commitments; identity exploration in depth is used to denote the exploration involved in evaluations of existing commitments (Luyckx et al., 2008).

Because people are all members of multiple social groups, they develop corresponding social identities—such as racial, sexual orientation, and gender identities—based on these group affiliations. Social identity research outlines several main processes involved in the development of identities in these domains including the social categorization of the self into groups, social comparison between groups, and social identification as a means to derive meaning from and identify with the group membership (Tajfel & Turner, 1986). Considering the developmental context of youth in transition to adulthood, many social identity development studies particularly emphasize the importance of meaning-making regarding social group memberships during adolescence and young adulthood; this process is typically referred to as

“exploration.” For example, Umaña-Taylor and colleagues (2014) identified as a key process in ethnic-racial identity development, viewing the act of gathering information about one's ethnic-racial background to create personal meaning as central to ethnic-racial identity development.

Although personal and social identity development have been defined in different ways, they are closely interrelated because the attributes of a person's identity domains are not confined solely to private *or* social contexts. In other words, personal and social identity are not ontologically separate, but represent different standpoints that constitute a holistic identity. Erikson, whose work forms the foundation of identity research, defined identity as “a subjective sense of self ... that integrates personal experiences, desires and ideals, and social roles and expectations into a coherent sense of self (1968).” The same experiences or information can be classified as personal or social depending on whether they are negotiated primarily within a private or social setting. In other words, the content of what is classified as personal or social identity ultimately stems from identity-related experiences and information from the same ecological context. For example, life goals are typically viewed as part of personal identity, which highlights the importance of exploration and commitment, with a focus on internal factors such as aptitude and interest in their development. However, the experiences involved in exploring life goals are also shaped by social positions that influence the opportunities available to individuals (Park & Johnson, 2024). As a result, these experiences can contribute to the meaning-making processes of social identity as well.

There have been few studies that examined such interrelation between personal and social identities holistically. Azmitia and colleagues (2008) studied first-generation U.S. college students' narrative identities through an interdisciplinary lens that integrated personal identity theories emphasizing narratives and career formation, and social identity theories emphasizing the negotiation of racial, gender, and social class group membership. Their study reported several ways in which students made connections between their personal career identities and social identities, such as by understanding the opportunity disparities in career choices due to social backgrounds or consciously making a career choice to benefit their social group communities. Although the focal contextual factor in that study was social marginalization (rather than privilege), it still provides important insight into how there is much to be learned about what happens between social and personal domains of identity. Azmitia et al. (2008) found a gradual increase in making connections among personal and social identities in a longitudinal interview study with college students of various backgrounds as they began to think seriously about what they would do after graduation. Rogers (2020) studied the identity experiences of Black youth and argued that the process of resisting social stereotypes is crucial for the development of personal future goals. This suggests that considerations of social positionality are intertwined with considerations of personal interests.

To further shed light on the understudied simultaneity of personal and social identity development, we examined identity exploration across personal and social identity domains. Although exploration is defined differently in personal and social identity literature, they share the commonality of being a process of reflecting on the question of who oneself is through personal experiences. Young adults explore the meaning of their various experiences in relation to their personal goals and values as well as social group memberships. Simultaneous point-in-time exploration of various identity domains might be one way through which the process of navigating the multi-level context involving both personal and social factors can be observed. As such association between personal and social identity development processes has not been examined, we were curious whether and how such processes manifest.

To reflect the diversity of individual young people's configurations of personal identities, we examined aspects of personal identity broadly (instead of by specifying a few domains) and measured the intensity of exploration in breadth and depth. For aspects of social identity, we focused on race, sexual orientation, and gender identities as representative domains that are especially relevant to the social groups categories of the population of our study. As we were interested in the overlap between personal and social identity development, we measured racial, sexual orientation, and gender identity exploration as the information-gathering and meaning-making processes pertaining to those social group identifications.

Context of White, Heterosexual, Cisgender Young Adults in the US

The range of social groups to which individuals belong can significantly shape the pathways of their identity development. Identity development occurs through navigating one's surrounding social landscape, which is heavily influenced by one's social positionality (Bronfenbrenner, 1979; Galliher et al., 2017). Galliher and colleagues (2017) proposed a multilevel model of identity, highlighting the broadest level of influence as the cultural and historical context, which plays a crucial role in creating both dominant and marginalized positions through systems of power. These systems exert influence differently on various groups by unequally distributing resources, status, and authority. Intersectionality theories emphasize that individuals' experiences vary based on their intersecting memberships in privileged or marginalized groups (Crenshaw, 1991). Consequently, identity develops within this sociocultural framework, where individuals gather information about themselves, explore potential life choices, and interpret the meaning of their societal positions.

In our study, we considered the social context of power among White, heterosexual, cisgender men and women in the U.S. Members of these particular populations possess White, heterosexual, and cisgender privilege while varying in their

positionality regarding other dimensions of social privilege such as male privilege or class privilege." In the U.S., systems of racism, homophobia, and transphobia grant more power to White, heterosexual, and cisgender people (Galliher et al., 2017). As such, these aspects of the backgrounds of our study population confer authority, wealth, and status. The experiences and identities within privileged social groups are culturally normalized, rendering those positionalities invisible to those who benefit from the system (Pratto & Stewart, 2012). Research on identity in the context of privilege has repeated having minimal awareness of their social identity, frequently considering themselves as simply "normal" (e.g., Rivas-Drake et al., 2014). However, specific theories on racial and sexual orientation identity development delineate how White, heterosexual, cisgender individuals may reflect on their privilege. The White Racial Identity Development Model by Helms (1984) posits that many White people may acknowledge responsibility for racial injustices, understand their own racist socialization, and achieve an anti-racist identity that values and propels action toward racial justice. Worthington and colleagues' (2002) theory of heterosexual identity development suggests some heterosexual and cisgender people may actively question their attitudes towards sexual and gender minorities through which they may synthesize their individual sexual orientation with the meaning of privileged group membership into a harmonious overall sense of self. Together, these theories highlight that the contexts of privileged positionalities may be explored and integrated into people's sense of identity. Importantly, the meanings of social group membership that is explored through such processes are not limited to social identity domains, but also personal identity, such as through acknowledging the impact of privilege on their personal lives and creating personal goals, values, and attitudes against inequality (Diemer et al., 2017).

Although the population of our study shares positions of power across systems of race, sexual orientation, and gender normativity, there are other factors in the individual contexts that create within-group heterogeneity. Sexism is one of such sources of heterogeneity, due to which men are conferred power that women are not. The contrasting experience within the system of sexism can create different contexts for identity development, even among those who share several other positionalities (e.g., being White, heterosexual, and cisgender). A study of autobiographical reports around sex roles demonstrates how being a cisgender man or woman can situate individuals in different identity development contexts wherein women are more likely than men to have gender identity narratives that break sexist norms (McLean et al., 2017). As the marginalized group, women are more likely to experience sexism more saliently than men (McLean & Syed, 2015; Pratto, 1999), which can then lead to women recognizing and breaking the normativity of patriarchal views towards other women as well as themselves. As such, women may be more active in exploring the meaning of their gender (of being a cisgender woman compared to being a cisgender

man) for their identities. Moreover, the relative salience of gender inequality among women may sensitize them to notice and understand other forms of oppression (Spanierman et al., 2012). Furthermore, other psychosocial factors including individual differences (e.g., cognitive styles and curiosity; Berzonsky & Kuk, 2000; Way et al., 2018), relational differences (e.g., family processes and intergroup relationships; Kroger, 2017), and other social differences (e.g., social class; Hershberg & Johnson, 2019) may also give rise to different ways through which identity develops among White, heterosexual, cisgender young adults.

When exploring the process of identity development that includes both personal and social identities, we anticipated observing a range of different ways in which these domains are interconnected. For instance, many White, heterosexual, cisgender young adults may primarily engage in personal identity exploration but not think as much, or at all, about their racial, sexual orientation, or gender identities. Some who are learning about social group's positionality may be engaged in racial, sexual orientation, and/or gender identity exploration, but not together with personal identity. Yet, some others may be exploring their personal and social identities together, when they are acknowledging the privilege they have in their personal lives and are establishing personal goals and values in response to such acknowledgment. These patterns, if present, may emerge not only in reports of levels of engagement in identity exploration in different domains, but also in the descriptions of the meaning that one is currently ascribing to their social group memberships. As such, we used a mixed-method approach to identify different ways in which personal and social identities were explored together.

Current Study

The purpose of this study was to investigate whether and how White, heterosexual, and cisgender US young adults explore their sense of identities across personal and social domains. We used a mixed-method sequential exploratory design with previously collected quantitative data on personal, racial, sexual orientation, and gender identity exploration and qualitative data on the meanings ascribed to one's race, gender, and sexual orientation. A mixed-method sequential exploratory study proceeds through two phases: quantitative followed by qualitative (Creswell & Poth, 2018). The strength of this design is that, even without concrete expectations from the first quantitative phase, the results can be elaborated and through the next, elaborative phase. Following the sequential exploratory design, the goals of this study were twofold. First, in the profile identification phase, we aimed to investigate whether we could identify profiles of different levels and combinations of self-reported engagement in identity exploration across identity domains (which we term identity exploration profiles in this paper). Second, in the profile elaboration phase, we aimed to elaborate on the characteristics of each profile to investigate correlates of the heterogeneous associations of identity

domains. To meet this goal, we coded qualitative data on descriptions of meanings ascribed to one's race, sexual orientation, and gender for its overlap with personal identity content. Then, we analyzed those codes for the association with the identity exploration profiles. As gender (being a cisgender man or woman) influences identity development, we also examined gender differences in profile prevalence. The current study was an exploratory study wherein we did not have hypotheses about whether and what profiles we would identify.

Method

Procedure

The data used in this study were from the ACTION Project (Gee & Johnson, 2023), which was a cross-sectional investigation of the relationship between critical consciousness and identity development. Data collection for this project took place between February and April of 2019. The study used an online self-report survey, which consisted of both open- and closed-ended questions, through an online recruitment platform called Prolific (<https://prolific.ac/>).

Prolific has a pool of over 70,000 people registered to participate in research studies. When a person joins Prolific, they answer various demographic questions. Based on answers to those questions, researchers can set criteria for participants they would like to recruit. Participants who are eligible according to set criteria are "invited" by Prolific to participate. The research team collected data from young adults (18–25 years old in Prolific's database) who identified themselves as 1. White, 2. cis-gender men or women, 3. heterosexual, and 4. live in the U.S.

Individuals who were invited by Prolific to participate and were interested in completing the survey were directed to a survey on Qualtrics, an online survey program. Quantitative and qualitative data were collected simultaneously using the same survey in the same sample of participants. The average survey took approximately 45 minutes to complete, and participants were compensated \$6.50. Participants who completed more than half of the survey and missed fewer than two attention check questions (out of five) were compensated for their time. Due to a technical issue, 107 male participants did not receive some of the survey items including the attention check questions. For these participants, the research team conducted a manual data check to assess the trustworthiness of their data. The manual data check involved evaluating the quality of open-ended responses (e.g., whether the content of the response was relevant to the question that was asked), as well as making sure there were no obvious response style or response bias patterns in the quantitative data.

Participants

Originally, 600 people were recruited for this study. However, due to a technical error, two men who did not identify as White

completed the survey. Their responses were later removed, which resulted in a final analysis sample of 598 (298 cis-gendered men, 300 cis-gendered women). The average age was 22.01 ($SD = 2.23$), with a range from 18 – 25 years old (reflecting the eligibility criteria). The average participant-provided SES was 6.03 ($SD = 1.40$) on a 10-point scale, wherein a higher score indicated higher SES. All participants identified as White and heterosexual and reported that they lived in the U.S.

Measures

Personal Identity Exploration. To index the extent to which participants have explored their identity, we adapted questions from the exploration in breadth and exploration in depth subscales from the Dimensions of Identity Development Scale (Luyckx et al., 2008). The original measure contains five items in each subscale. However, we adapted three questions from each subscale to reduce the length of the overall survey. The three-item subscales were selected based on item response theory analysis and were found to perform very similarly to the original five-item subscales (see Johnson et al., 2022 for details). Sample items were “I think about the different directions I might take in my life (exploration in breadth) and “I think about the future plans I have already made (exploration in depth).” Psychometric properties were tested through confirmatory factor analysis (CFA) and measurement invariance testing (see Supplemental Material A). Given the acceptable psychometric properties of the items, scale scores were computed for personal identity exploration in-breadth (PEB) and personal identity exploration in-depth (PED) to reduce model complexity. For the 107 participants with missing values on two PED items, we used the score on the one item with existing data as the PED score.

Racial, Sexual Orientation, and Gender Identity Exploration. Degree of engagement in racial, sexual orientation, and gender identity exploration was gauged using 3 single items (one for each area), which were adapted from Gurin and Markus’s (1989) study. The item text was “In the past year how much have you explored or tried to learn about.....”? Racial identity exploration was particularly asked in the context of social issues because the ACTION Project (Gee & Johnson, 2023) was originally interested in White young adults’ racial identity in relation to their critical consciousness of social issues. The item was, “In the past year, how much have you explored or tried to learn about what it means to be White in the context of social issues?” Participants responded using a slider-bar scale from 0 = *Not at all* to 10 = *A lot*, with higher scores indicating higher levels of exploration.

Description of Meanings Ascribed to Racial, sexual Orientation, and Gender Identities. The ACTION research team created three new open-ended items to understand the meanings that participants ascribed to their racial, sexual orientation, and gender identities. The phrasing of the items was “Please describe what your [race/gender/sexual orientation] means to you”.

Data Analysis

Phase 1: Profile Identification. The aim of Phase 1 of the study was to identify profiles of identity exploration. We first conducted a series of latent profile analyses (LPAs) to identify the different ways in which participants were exploring their identities simultaneously across social and personal domains. We initially conducted LPAs using five measures of identity exploration: PEB, PED, racial identity exploration, sexual orientation identity exploration, and gender identity exploration. However, the resulting models did not exhibit variance in the levels of PEB and PED across the profiles (in other words, there were between-profile variations in social identity exploration, but the scores of PEB and PED were similar across profiles across all models we tested). For detailed information about the profile enumeration process for the five-variable LPAs, refer to Supplemental Material B. Therefore, we modified the quantitative phase to conduct LPAs using three items (rather than five): racial identity exploration, sexual orientation identity exploration, and gender identity exploration. We then investigated the association between the profiles of social identity exploration and personal identity exploration measures (i.e., whether there were mean-level differences on personal identity exploration between profiles). We also tested for potential differences between cis-gender men and women.

LPA. The LPA began with a profile enumeration process (i.e., deciding how many profiles provided the best fit to the data), which involved fitting a series of models beginning with models with one profile and estimating models with an additional profile until the models no longer converged. The number of start values used ranged from 1000 initial stage starts and 100 final stage optimizations to 5000 initial stage starts and 500 final stage optimizations. We conducted this model building process for each of four possible variance-covariance structures (i.e., different specifications of whether and how variances of each index of exploration, and the covariances between them, can vary; Masyn, 2013). These included: 1. Profile-invariant diagonal, in which the variances are constrained to be equal across profiles, and the exploration variables are not allowed to covary within the profiles; 2. Profile-varying diagonal, wherein each exploration variable may have a different amount of variation in each profile, but the exploration variables are not permitted to covary within profiles; 3. Profile-invariant unrestricted, in which the variances and covariances of the exploration variables are estimated but constrained to be equal across profiles; and 4. Profile-varying unrestricted, in which both the variances and covariances of the attributes are estimated separately in each profile.

We examined the fit indices of each model with different numbers of profiles to determine the number of profiles that provided the best fit to the data for each variance-covariance matrix specification. Three absolute fit indices were used to

consider the set of tested models as a whole within each variance-covariance structure: the loglikelihood, Bayesian Information Criterion (BIC) (Schwarz, 1978), and the Approximate Weight of Evidence Criterion (AWE) (Banfield & Raftery, 1993). For the loglikelihood, BIC, and AWE, the model that provides the best fit to the data is generally considered to be the one at which these indices reach the lowest observed value and thereafter begin to increase (Masyn, 2013). The correct model probability (cmP) was also calculated (Masyn, 2013). The cmP provides an estimate of the likelihood that each model was the correct one, under the assumption that the correct model was one of the models being compared (accordingly the cmP values within each set of comparisons sum to 1). The model with the largest cmP is considered to provide the best fit to the data.

Two relative fit indices that compare a model with a specific number of profiles to a model with one fewer profile were also examined. The adjusted Lo-Mendell-Rubin Likelihood Ratio Test (adj. LMR-LRT; Lo et al., 2001) *p*-value and the Bootstrap Likelihood Ratio Test (BLRT; Asparouhov & Muthén, 2012) *p*-value provided information as to whether a model with a particular number of profiles provided a statistically significant improvement in model fit compared to a model with one fewer profile. If the adj. LMR-LRT *p*-value or BLRT *p*-value of a model is bigger than .05, it means that the model did not provide a statistically significantly better fit than the model with one fewer profile.

If several models had similar fit indices, we examined the nature of the profiles in each model. If a newly added profile was highly similar to a profile that was already identified in the model with one fewer profile (e.g., a similar pattern of scores and only slightly higher or lower mean scores), it was considered that the newly added profile was not substantively different enough to warrant choosing that number of profiles. For parsimony, the model with the smallest number of profiles that were all substantively different was selected as providing the best fit to the data.

This process resulted in a smaller set of four candidate models that were again compared to determine the final model in the model comparison phase. The loglikelihood, BIC, and AWE of the four best-fitting models identified in the profile enumeration phase were compared against each other to select the model that was the best fitting overall. The cmP was recalculated between the four models as well. The final model was selected using the same criteria as within each variance-covariance specification.

Association With Personal Identity Exploration. After the final model was identified, we investigated relations between the identity exploration profiles and the PEB and PED scores using the Block, Croon, and Hageaars (BCH) method in Mplus. BCH tests differences between profiles on a continuous variable while incorporating uncertainty in profile membership (i.e., that all participants receive a probability of being assigned to each latent profile). The BCH method

provides the mean of the continuous variable within each of the profiles and estimates a series of chi-square comparisons for the differences in means.

Phase 2: Profile Elaboration. The aim of Phase 2 of the study was to investigate the characteristics of each of the profiles identified in Phase 1. Phase 2 involved a preparatory analysis and a series of main analyses. The preparatory analysis was a qualitative content analysis of the participants' responses to open-ended questions asking them to describe the meaning they attributed to their race, gender, and sexual orientation. The main analyses were quantitative analyses to investigate how the qualitative codes, as well as the participant's gender (cisgender man or woman), were related to participants' categorization into the identity exploration profiles.

Preparatory Analysis: Coding of Qualitative Data. We used content analysis (Creswell & Poth, 2018) to investigate the participants' responses to the open-ended items asking to describe the meanings that the participants ascribed to their racial, sexual orientation, and gender identities. Our coding focused on quantifying the responses that reflected overlaps with personal domains of identity, which could provide descriptive information on each of the identity exploration profiles in the integrative phase. Each participant was assigned one Personal Identity Connection code on each of the descriptions of meanings of race, sexual orientation, and gender (i.e., three codes). The Personal Identity Connection code indicated whether the participant mentioned a personal aspect of identity (coded 1) or did not mention a personal aspect of identity (coded 0). Examples of statements and how they were coded are given in the Results section.

Coding Process. Throughout the coding process, we engaged in several practices for rigor and research quality, including writing memos (Saldaña, 2016), double coding a subset of the data, and discussions among the coders and authors during the analytic process. The coding began with close interpretive reading of participant responses and note-taking by the first author, proceeding to the development of a list of characteristics showing cross-domain explorations of identity. The notes were used to create a preliminary codebook to base the assignment of codes on. The coding was an iterative process where new characteristics that arose during coding were discussed with the second author and integrated into the codebook.

After the initial coding, an external researcher who is familiar with the topic of identity used the codebook to code the open-ended responses from one-third of the participants as the second coder. As she coded the responses, the first and second coders discussed statements or themes that were confusing. Based on these discussions, the first coder revised the codebook to further clarify the instructions and themes in consultation with the second author. We carried out the revision until the first and second coders reached an agreement

on all codes. Once the codebook was finalized, the first author revised the codes for the full qualitative dataset.

To establish inter-rater reliability, an undergraduate research assistant coded one-third of the participants' open-ended responses. In this round of coding, the research assistant coded independently, and the first coder only answered clarification questions. Kappa inter-rater reliability was .67, .95, and .86 for descriptions of racial identity, sexual orientation identity, and gender identity respectively.

Main Analyses: Elaborating Profiles with Codes and Gender. We investigated the relations between the identity exploration profiles (from Phase 1) and the three Personal Identity Connection codes (coded 0 or 1 on each of the social identity descriptions). We used the 3-step method (Asparouhov & Muthén, 2013) in Mplus (Muthén & Muthén, 2018), which estimated a multinomial logistic regression with latent profile membership as the outcome variable. The 3-step method provides the odds and odds ratios of the categorical outcome variable for each categorical predictor variable. The value for the intercept (odds) reflects how likely membership is in a given profile compared to the reference profile, when the predictor variable for that analysis is zero (i.e., for participants in the reference group, which was, in our analysis, Personal Identity Connection code = 0). The coefficient value (odds ratio) indicates how likely membership is for a given profile compared to the reference profile, when comparing two values of the covariate (e.g., comparing the odds for Personal Identity Connection code 1 to 0, of being classified into a specific profile, compared to the reference profile). Because there were many predictors being investigated (i.e., multiple comparisons), we set the alpha level for statistical significance lower and only interpreted coefficients with a p -value less than .001. We also investigated the relations between the identity exploration profiles and participant's gender (man or woman) using the same 3-step method.

Results

Preliminary Analyses

Table 1 shows the means and standard deviations of the five quantitative variables. Participants scored higher on racial identity exploration than sexual orientation or gender identity exploration on average. Personal identity exploration scores were higher than social identity exploration scores on average. Table 2 shows the bivariate correlations between the five quantitative variables. There were moderate positive correlations between the social identity exploration scores, and between the two personal identity exploration scores. Moreover, there were weak positive correlations between PEB or PED and racial or sexual orientation identity exploration.

Phase 1: Profile Identification

In the profile enumeration process, we estimated models with up to 12 profiles within the profile-invariant diagonal specification,

up to five profiles within the class-varying diagonal specification, up to six profiles within the profile-invariant unrestricted specification, and up to five profiles for the profile-varying unrestricted specification. Fit indices of each model are presented in Table 3, and the number of profiles selected within each specification is outlined in the same table. After recalculating and comparing the fit indices of the selected four models, we ultimately selected the five-profile model in the profile-varying unrestricted specification because it had the lowest loglikelihood, BIC, and AWE, and the highest cmp value. The re-calculated model fit indices are provided in Table 4.

Table 1 describes the model-estimated profile proportions, within-profile means, and standard errors of each exploration variable. Figure 1 depicts the estimated means for each domain of social identity exploration from the five-profile model. Across all five profiles, the model-estimated means of each of the variables ranged from 0 to 6, with none reaching the high end of the response scale (10). One profile was characterized by moderate scores for all three social identity domains (labeled 'Active Multi-Domain Identity Exploration profile': 23.6% of the sample). Another profile was characterized by low scores for the three social identity domains (labeled 'Inactive Multi-Domain Identity Exploration': 9.0% of the sample). Three profiles had high mean scores on racial identity exploration (relative to the others) but varied patterns of scores related to the exploration of the other two social identities. One of those three profiles had very low scores of sexual orientation identity exploration and gender identity exploration (labeled 'Primary Exploration of Racial Identity profile': 14.7% of the sample). Another profile had moderate mean scores on sexual orientation identity exploration, but an average score of almost zero on gender identity exploration (labeled 'Primary Exploration of Racial and Sexual Orientation Identity profile': 36.7%). The last profile had moderate scores on gender identity exploration but low average scores on sexual orientation identity exploration (labeled 'Primary Exploration of Racial and Gender Identity profile': 16.0%).

Association With Personal Identity Exploration. Results of the BCH method analysis indicated that neither PEB nor PED average scores were statistically significantly different among the five identity exploration profiles. The means and standard errors of PEB and PED scores for each of the profiles are listed in Table 1.

Phase 2: Profile Elaboration

Preparatory Analysis. The criterion for assigning the Personal Identity Connection code was whether the participant clearly included an aspect of personal identity in the description of the meaning of each of their social identities. In some statements that were assigned code 1 (as making a connection to personal identity), participants specifically mentioned personal characteristics, values and goals, or roles or behaviors. In others,

Table 1. Estimated Means of the Five Profiles of Multi-Domain Identity Exploration and Associated Variables.

Profile	Estimated means (SD) of domain exploration				Average (SE) personal identity exploration in each profile				N of personal identity connection = 1 code (% in each profile)			
	N (%)	Race	Sex or	Gender	PEB	PED	N of women (% in each profile)	Race	Sex or	Gender		
Total	598	4.51 (3.22)	2.40 (2.69)	1.70 (2.57)	6.60 (2.15)	7.20 (1.78)	300 (50.0%)	135 (22.5%)	99 (16.5%)	283 (47.3%)		
Active	141 (23.6%)	5.86 (0.27)	5.04 (0.32)	4.11 (0.26)	6.81 (0.17)	7.54 (0.14)	79 (56.0%)	46 (32.9%)	22 (15.6%)	75 (53.6%)		
Inactive	54 (9.0%)	0.16 (0.05)	0.08 (0.03)	0.05 (0.02)	6.50 (0.31)	7.27 (0.28)	19 (35.2%)	4 (7.5%)	9 (17.0%)	21 (39.6%)		
Racial	88 (14.7%)	4.70 (0.37)	0.05 (0.02)	0.05 (0.03)	6.47 (0.24)	7.04 (0.22)	32 (36.4%)	9 (10.3%)	11 (12.6%)	34 (38.4%)		
Racial-sexual orientation	220 (36.7%)	4.56 (0.27)	2.76 (0.28)	0.27 (0.05)	6.68 (0.17)	7.28 (0.16)	116 (52.7%)	59 (26.8%)	40 (18.1%)	99 (45.0%)		
Racial-gender	96 (16.0%)	4.33 (0.41)	0.85 (0.16)	3.02 (0.48)	6.31 (0.30)	6.84 (0.24)	53 (55.2%)	17 (17.9%)	18 (18.8%)	55 (58.3%)		

Note. Active = Active Multi-Domain Identity Exploration, Inactive = Inactive Multi-Domain Identity Exploration, Racial = Primary Exploration of Racial Identity, Racial-Sexual Orientation = Primary Exploration of Racial and Sexual Orientation Identity, Racial-Gender = Primary Exploration of Racial and Gender Identity, PEB = Personal Identity exploration in-breadth, PED = Personal Identity exploration in-depth, Sex Or = Sexual Orientation. N was counted based on most likely profile membership.

Table 2. Bivariate Correlations of Study Variables.

	1	2	3	4
Multi-domain identity exploration				
1. Racial identity	-			
2. Sexual orientation identity	.313**	-		
3. Gender identity	.242**	.349**	-	
Future goal identity exploration				
4. Exploration in breadth	.128**	.114**	.012	-
5. Exploration in depth	.151**	.142**	.090*	.439**

Note. ** $p < .05$; * $p < .10$.

Table 3. Fit Indices From Class Enumeration Process and Comparison Across Variance-Covariance Specifications.

Specification	<i>k</i>	<i>LL</i>	<i>npar</i>	BIC	AWE	cmP	LMR (<i>p</i> -value)	BLRT (<i>p</i> -value)
Profile-invariant, diagonal	1	-4402.23	6	8842.83	8839.28	0.00		
	2	-4167.61	10	8399.17	8392.26	0.00	0.000	0.000
	3	-4041.86	14	8173.25	8162.99	0.00	0.009	0.000
	4	-3971.49	18	8058.10	8044.47	0.00	0.000	0.000
	5	-3916.55	22	7973.80	7956.81	0.00	0.038	0.000
	6	-3869.85	26	7905.97	7885.62	0.00	0.050	0.000
	7	-3841.74	30	7875.34	7851.63	0.00	0.130	0.000
	8	-3817.12	34	7851.68	7824.61	0.00	0.620	0.000
	9	-3782.10	38	7807.21	7776.77	0.00	0.078	0.000
	10	-3752.30	42	7773.21	7739.41	0.00	0.191	0.000
	11	-3735.09	46	7764.35	7727.20	0.00	0.357	0.000
	12	-3706.42	50	7732.61	7692.09	1.00	0.292	0.000
Profile-varying, diagonal	1	-4402.23	6	8842.83	8839.28	0.00		0.000
	2	-3695.84	13	7474.81	7465.39	0.00	0.000	0.000
	3	-3432.04	20	6991.98	6976.67	0.00	0.006	0.000
	4	-3395.30	27	6963.27	6942.08	0.00	0.226	0.000
	5	-3330.50	34	6878.43	6851.36	1.00	0.000	0.000
Profile-invariant, unrestricted	1	-4325.76	9	8709.08	8703.02	0.00		0.000
	2	-4116.13	13	8315.40	8305.97	0.00	0	0.000
	3	-4005.75	17	8120.22	8107.43	0.00	0.002	0.000
	4	-3939.52	21	8013.35	7997.20	0.00	0.040	0.000
	5	-3886.78	25	7933.44	7913.93	0.00	0.001	0.000
	6	-3850.95	29	7887.37	7864.50	1.00	0.033	0.000
Profile-varying, unrestricted	1	-4325.76	9	8709.08	8703.02	0.00		0.000
	2	-3643.80	19	7409.11	7394.64	0.00	0.000	0.000
	3	-3384.21	29	6953.87	6931.00	0.00	0.002	0.000
	4	-3316.95	39	6883.32	6852.04	0.00	0.293	0.000
	5	-3274.62	49	6862.61	6822.93	1.00	0.196	0.000

Note. Bolded lines indicate the model chosen within each variance-covariance matrix specification. An enclosed box around a line denotes the final chosen model. *k* = Number of profiles estimated, *LL* = Log-likelihood, *npar* = number of parameters estimated, BIC = Bayesian Information Criteria, AWE = Approximate Weight of Evidence Criterion, cmP = correct model probability, LMR = Adjusted Lo-Mendell-Rubin-Likelihood Ratio Test, BLRT = Bootstrap Likelihood Ratio Test.

participants made a link to aspects of personal identity without specifying them (e.g., It determines my attributes). There were also some descriptions of sexual orientation or gender identities that mentioned specific current relationships, and we coded those responses as 1 (making a connection). Statements that defined characteristics of the social group that the participants were part of were coded as 0. Examples of statements and how they were coded are given in Table 5. The codebook that was used to code participants' descriptions of racial,

sexual orientation, and gender identity is in Supplemental Material C.

The prevalence of Personal Identity Connection codes differed among the three social identities that were described: for racial identity content, 135 of 596 descriptions (22.5%) were coded as mentioning an aspect of personal identity, for sexual orientation identity content, the prevalence was 99 of 594 (16.5%), and for gender identity content, it was 284 of 594 (47.3%).

Table 4. Model Fit Indices for Comparison Among Best-Fitting Models From Each Variance-Covariance Matrix Specifications.

Variance-covariance matrix form	<i>k</i>	<i>npar</i>	<i>LL</i>	BIC	cmP	AWE
Profile-invariant, diagonal	12	50	−3706.42	7732.61	0.00	7692.09
Profile-variant, diagonal	5	34	−3330.50	6878.43	0.00	6851.36
Profile-invariant, unrestricted	3	17	−4005.75	8120.22	0.00	8107.43
Profile-variant, unrestricted	5	49	−3274.62	6862.61	1.00	6822.93

Note. *k* = number of profiles estimated, *LL* = Log-likelihood, *npar* = number of parameters estimated, BIC = Bayesian Information Criteria, cmP = correct model probability, AWE = Approximate Weight of Evidence Criterion.

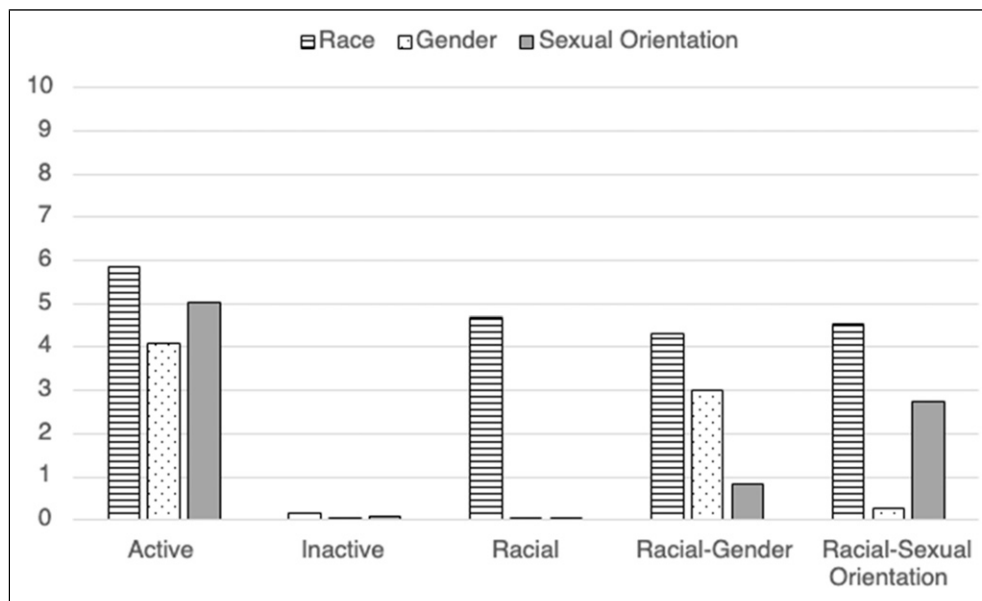


Figure 1. Estimated means for each domain of identity exploration from the five-profile model of multi-domain exploration. Note. Active = Active Multi-Domain Identity Exploration, Inactive = Inactive Multi-Domain Identity Exploration, Racial = Primary Exploration of Racial Identity, Racial-Sexual Orientation = Primary Exploration of Racial and Sexual Orientation Identity, Racial-Gender = Primary Exploration of Racial and Gender Identity.

Associations Between Identity Exploration Profiles and Personal Identity Connection Codes. Results of the 3-step method analysis indicated that whether participants mentioned aspects of their personal identity in descriptions of social identity was significantly associated with the likelihood of being categorized in specific identity exploration profiles. The full set of results is shown in Table 6. To aid in the interpretation of the coefficients, Table 1 includes cross-tabulations of the number of participants classified into each of the profiles with the different codes from the categorical covariates.

For racial identity meaning, participants who mentioned an aspect of personal identity were significantly more likely to be classified in the Active profile than the Inactive, Racial, and Racial-Gender profiles, when compared to participants who did not mention personal identity in their descriptions of the meaning of their racial identity. Also, participants who mentioned personal identity in their descriptions of racial identity meanings were more likely to be classified in the Racial-Sexual Orientation profile than the Inactive or Racial profiles.

For sexual orientation identity meaning, the presence of Personal Identity Connection codes was not significantly

associated with profile membership. In other words, the odds of being classified into one profile compared to another did not differ significantly for those who mentioned personal identity in their descriptions of the meaning of their sexual orientation compared to those who did not.

For gender identity meaning, participants who mentioned personal identity were significantly more likely to be classified in the Racial-Gender profile than the Racial profile, compared to those who did not mention an aspect of personal identity.

Associations Between Identity Exploration Profiles and Gender. Results of the 3-step method analysis indicated that participants' gender was significantly associated with the odds of membership in specific profiles. The full set of results is shown in Table 6. The percentages of women in each profile are shown in Table 1. Women were more likely than men to be categorized in the Active profile compared to the Inactive, Racial, or Racial-Gender profiles. They were also more likely than men to be categorized in the Racial-Sexual Orientation profile compared to the Racial profile, and in the Racial-Gender profile compared to the Inactive or Racial profile.

Table 5. Example Statements of Personal Identity Connection Codes.

Code	Example statement
0: Did not mention personal identity	(Racial identity) it doesn't really mean anything (Sexual orientation identity) it doesn't define me by any means, it is just who I am (Gender identity) I don't feel any deviation from my physical sex; I don't feel like I was born in the wrong body or anything, for example. So I don't think about it very much, and it doesn't really influence my personal identity
1: Mentioned personal identity	(Racial identity) being in control of my own life, having freedom to display who I am (Sexual orientation identity) my sexual orientation reflects how I feel inside and where my thoughts go. It reflects who I am attracted to and influences plans for my future (Gender identity) to be a woman, it means to me that I like to be very feminine at times and sensitive.; being a man means having integrity, humility, and persistence to help others and create good in the world

Table 6. Odds Ratios From Model Predicting Profile Membership From Personal Identity Connection Codes and Gender.

Predictor		Profile				
		1. Active	2. Inactive	3. Racial	4. Racial-sexual orientation	5. Racial-gender
Personal identity	1	Reference	0.151***	0.214***	0.761	0.352***
Connection code for	2	6.607	Reference	1.416	5.028	2.327
Racial identity	3	4.666*	0.716	Reference	3.551*	1.643
	4	1.314	0.199***	0.282***	Reference	0.463**
	5	2.839	0.430*	0.608	2.161	Reference
Personal identity	1	Reference	1.1243	0.776	1.209	1.306
Connection code for	2	0.875	Reference	0.679	1.058	1.143
Sexual orientation	3	1.289	1.473	Reference	1.558	1.684
Identity	4	0.827	0.946	0.642	Reference	1.081
	5	0.765	0.875	0.594	0.925	Reference
Personal identity	1	Reference	0.571**	0.535**	0.656**	1.292
Connection code for	2	1.752	Reference	0.938	1.159	2.264
Gender identity	3	1.868	1.066	Reference	1.226	2.413*
	4	1.524	0.870	0.816	Reference	1.969
	5	0.774	0.442**	0.414***	0.508**	Reference
Gender	1	Reference	0.419***	0.435***	0.860	0.965***
	2	2.388	Reference	1.040	2.055	2.304
	3	2.297	0.962	Reference	1.976	2.215
	4	1.162	0.487**	0.506***	Reference	1.121
	5	1.037	0.434***	0.451***	0.892	Reference

Note. Active = Active Multi-Domain Identity Exploration, Inactive = Inactive Multi-Domain Identity Exploration, Racial = Primary Exploration of Racial Identity, Racial-Sexual Orientation = Primary Exploration of Racial and Sexual Orientation Identity, Racial-Gender = Primary Exploration of Racial and Gender Identity, PEB = Personal identity exploration in-breadth, PED = Personal identity exploration in-depth, Sex Or = Sexual Orientation. *** $p < .001$, ** $p < .005$, * $p < .01$.

Discussion

Since identity encompasses both who I am as an individual and who I am in society, personal and social identities will develop together, interconnectedly. Yet, empirical studies on these processes have been scant, partly due to the limitations of research that focuses solely on specific personal or social identity domains (Vignoles, 2018). To address this gap, we conducted a mixed-method sequential exploratory study that examined whether and how identity exploration occurred across personal identity and multiple social identity domains among White, heterosexual, and cisgender young adults in the US. Results indicated that, at a single time point, personal and social identity exploration were

not significantly associated. However, there were several patterns of social identity exploration across racial, gender, and sexual orientation domains that were related to how their contents overlapped with personal aspects of identity.

Exploration Across Personal and Social Identity Domains

The intention of this study was to identify different ways that identity exploration occurs across social and personal domains. We conducted two analyses for this objective. In our initial latent profile analysis using five variables (racial, sexual orientation, gender identity exploration and personal identity

exploration in-breadth and in-depth), estimated levels of personal identity exploration were similar across the profiles that were identified. Despite there being more variation in the personal identity exploration variables on an overall level, the social identity exploration variables appeared to predominate in the identification of the latent profiles. Accordingly, we re-estimated the latent profiles with only three variables and then used the BCH method (Bakk et al., 2013) to examine if there were meaningful differences between the levels of personal identity exploration in each profile. That strategy also showed no significant mean differences in personal identity exploration between profiles. Bivariate correlations among social and personal identity exploration variables were also weak in magnitude.

These results may reflect at least in part the relative absence of restrictions in life opportunities due to social category memberships among White, heterosexual, and cisgender young adults in the U.S. This lack of restrictions may make exploration of personal future goals to not be consciously related to the exploration of meanings of social group memberships (Grossman & Charmaraman, 2009; McLean & Syed, 2015). However, the lack of association may also have been due to the limitation of the measures used to capture the process of exploration that occurs across personal and social domains. The personal identity exploration measures asked specifically about future goals, which is one specific aspect of personal identity. Other aspects related to present or past selves may have different associations with social identity exploration, especially given that many theories of social identity development among privileged groups suggest that individuals in positions of power may not demonstrate self-reflection on the unearned privileges that provided opportunities for personal development (Helms, 1984; Worthington et al., 2002).

Social Identity Exploration Profiles

Although they were not associated with personal identity exploration, we identified five patterns of exploration across racial, sexual orientation, and gender domains among our participants, which provided several insights about their identity development process. First, the profiles demonstrated heterogeneity of identity development patterns among White, heterosexual, cisgender young adults. Among the participants, some were actively exploring all three aspects of their social group memberships (Active profile), some were exploring a few aspects (Racial, Racial-Sexual Orientation, Racial-Gender profiles), and some were not engaged in exploration in any of the domains (Inactive profile). These profiles differed with respect to the combinations of domains that were being explored, rather than by the degree of engagement across the domains, implying the qualitatively different ways in which these young people engage in social identity exploration.

The participants in the present study have in common that their race, sexual orientation, and cisgender identification are

the dominant categories in U.S. society (Dillon et al., 2011; Grossman & Charmaraman, 2009; McLean & Syed, 2015). Still, there are many other factors that influence what and how individuals think about their social identities (Berzonsky & Kuk, 2000; Grotevant, 1987; Kroger, 2017), such as interactions with other social groups, socializing messages about systems of power, and experiences of marginalization in other social group categorizations (Cole, 2009; Tajfel & Turner, 1986). In our study, we examined one of such factors of identifying as either a cis-gendered man or a cis-gendered woman to explore whether different experiences related to male privilege could impact the exploration of gender identity, as well as other domains of social identity. The result of the 3-step analyses between profiles and gender showed that women were significantly more likely to be classified into profiles that were characterized by active exploration of gender and sexual orientation identities. This result was in line with previous theoretical and empirical work that suggests that women may be more perceptive to gender inequality and actively explore the meaning of their gender identities (McLean et al., 2017; McLean & Syed, 2015). Moreover, the association between gender and exploration of sexual orientation identities suggests that experiencing marginalization in the gender domain may be related to exploration of sexual orientation identity as a related social identity domain. However, this result is not conclusive, as the question regarding the exploration of gender identity did not specify whether it was referring to being cisgender (in comparison to identifying as trans) or about being a man or a woman within the category of being cisgender. Moreover, the responses to the sexual orientation identity exploration item could have been answered in multiple ways, such as regarding exploring their specific sexual orientation, or the meaning of their heterosexuality. Further research is needed with more detailed information on what about social identity domains are differently explored between men and women.

Second, a common context among the participants of our study was the low salience of their privilege. Social systems of power normalizes of the experiences of dominant social groups, which often makes those group memberships less noticeable from the perspective of considering one's identity (McLean & Syed, 2015; Pratto & Stewart, 2012). Theories of White racial identity, heterosexual identity, and transgender identity all point to this common context by positing that people who are members of privileged groups may easily be unaware of the power conferred to them (Diamond et al., 2011; Helms, 1984; Worthington et al., 2002). The Inactive identity exploration profile partially confirmed this expectation by showing that a portion (approximately 10%) of the White, heterosexual, and cisgender young adults in this sample was not actively engaged in racial, sexual orientation, or gender identity exploration. In addition, even in the profiles with reported engagement in exploration in one or more domains of social identity, the estimated means of reported social identity exploration were lower than 6 on a 0 to 10 scale. The absence

of a profile with high estimated means may reflect the overall low salience of these aspects of identity for this group of young adults.

Third, looking at the set of profiles as a whole, we observed a pattern related to the profiles wherein participants were exploring one or more domains: one of those domains was always racial identity. In other words, there were no profiles characterized by gender identity exploration or sexual orientation identity exploration that did not also have racial identity exploration. There are some potential reasons for this pattern. First, the racial identity exploration item was worded slightly differently than the other two social identity exploration items (referencing directly to being White), which may have prompted the participants to recall their thoughts on their racial identities more saliently. Second, socialization messages around systems of power likely differ between race, sexual orientation, and gender, which can create differences in how salient a social identity domain is (Kroger, 2017). For instance, political topics related to racial issues such as immigration policies may have emphasized race to be more salient in the perceptions of the participants. As processes of identity exploration are embedded in sociopolitical contexts (Bronfenbrenner, 1979; Rogers et al., 2020), considering prominent social issues may yield further insight into how the identities of young adults with social privilege develop.

Elaboration of Profiles with Identity Content

A richer understanding of the characteristics of each of the five social identity profiles was obtained through participants' descriptions of the personal meanings of racial, sexual orientation, and gender identities. The connections that were made to personal aspects of identity in the content of social identity provide an alternative perspective that was not captured with the quantitative exploration measures. Approximately half of the participants' descriptions of gender identity and one-fifth of their descriptions of racial and sexual orientation identity were coded to have mentioned an aspect of personal identity. There were common contents across racial, sexual orientation, and gender identities that were linked to personal identity, such as the sense of responsibility for injustices and goals for contributing to social justice. There were also contents that were more common in specific social identity domains. Sexual orientation and gender identities were often related to current relationships. Moreover, many participants mentioned personal characteristics or goals related to traditional gender stereotypes of femininity or masculinity in their gender identity content. These differences in the ways that the contents of social identity domains were connected to personal identity is rather obvious, because the categories of race, sexual orientation, and gender each involve different socialization processes despite commonalities of being related to systems of power.

A series of 3-step analyses examined associations between the process of exploring multiple social identity domains and

the content of social identity in relation to personal identity. Overall, the domains that were being actively explored in a profile were the domains that were likely to be described in connection to personal identity. In other words, when participants were exploring the meaning of their social group memberships, they were more likely to be describing the personal meanings of those social group memberships in relation to their personal identities. Although connections between social and personal identity exploration were not captured in the profiles of multi-domain social identity exploration, the open-ended questions about the meaning of social identities provided insights into other ways in which social and personal identity domains may be explored together. These results support the importance of using qualitative data in identity research, especially in an area that is underexamined such as social identity development of members of privileged groups, as it is well-equipped to explore the detailed meanings that people think about regarding their social group memberships (Rogers et al., 2020).

The differential relations between Personal Identity Connection codes and identity exploration profile membership can be further explored in future research by using more elaborate data on identity content. During the preparatory coding stage of the study, several descriptions of meanings ascribed to domains of social identity were vague as to whether they were simply stating their personal identity or if they reflected serious considerations of the implications of their social identity on their personal identity. For instance, when a participant wrote that their race is "part of who I am," it was unclear if it meant that their race explained only a small part of them and was unimportant, or if it meant that race was an important part of themselves. In addition, because gender and sexual orientation are often strongly related to close relationships, it was often ambiguous when coding Personal Identity Connection codes whether the descriptions were elaborating on their definitions of sexual orientation or gender, or if personal connections were being made. Data that can distinguish these nuances more concretely can add depth to the understanding of social identity exploration across domains and connections between different categories of identity.

An exception to the broad pattern in the results of the 3-step analyses was that people in the Primary Exploration of Racial Identity Profile were as unlikely to make connections between social identities and personal identities as those in the Inactive Profile. i.e., those who reported to be engaged in racial identity exploration only were making as few connections between their social positionalities and personal identities as those who weren't exploring their social identities at all. This deviation may in part be due to the different way that the racial identity exploration item was phrased compared to the items regarding sexual orientation and gender identity exploration. As mentioned earlier, racial identity exploration was asked directly in the context of social issues, which may have elicited different types of responses (e.g., a higher influence of social desirability bias). Future research should replicate our findings

using sets of items that are consistent in whether or not such a qualifying phrase is included.

Limitations and Future Directions

There were some limitations in the measures used in the current study. For social identity exploration, we used broadly phrased single-item measures, which may not have captured the full range of possible behavioral and cognitive engagement. Although standard in many areas of research on identity (e.g., [Duncan & Stewart, 2007](#)), single-item measures may have limited content validity. For instance, exploration of social identities may not only occur cognitively but also through activities such as attending events and talking to other people ([Douglass & Umaña-Taylor, 2015](#)). As such, there may have been aspects of identity exploration that were not captured in the single-item measures. Moreover, we were not able to ascertain whether the responses to the gender identity exploration item were about being cisgender or a man or a woman, or about being cisgender as opposed to being transgender or gender diverse. The personal identity exploration measure was focused on future-oriented identity but did not ask about considering past and present selves. Due to these limitations, there were ambiguities in the implications of the multi-domain identity exploration profiles. The use of open-ended responses on the content of social identities helped supplement such limitations of the quantitative measures. Future research considering these nuanced processes of identity development across social and personal domains should use multiple methods that intentionally capture the details of what it is i.e. being explored.

The Personal Identity Connection codes were not examined for interrater reliability for the full dataset. The second coder only coded one third of the descriptions of meanings of social identity domains to adjust the load of work. Although we coded through the whole dataset after revising the codebook for clarity after meetings with the second coder, examining the full dataset may assure stronger interrater reliability.

The current study did not account for regional differences or particular aspects of the places where participants lived. The cultural context of identity development may vary across different regions in the U.S. (e.g., [Vandello & Cohen, 1999](#)). Young adults may experience varying levels of exposure to diversity depending on where they are, such as in areas of the country with different concentrations of specific racial groups, which may influence their intergroup interactions and make specific social categories more salient domains for identity work. However, in our study, no information about where the participants were living were obtained, so regionality could not be taken into account in the analyses. Place of residence should be taken into consideration in future research for a more holistic understanding of identity processes and connections.

In addition to addressing the limitations, future studies of identity development across personal and social domains may

benefit from longitudinal data. The overlap between social identity content with personal identity suggests that, even though exploration was not observed across domains at a single time point, there are still interrelations between how young adults think about their personal identity choices and the meaning of their social identities. Longitudinal data may be better suited to demonstrate the process through which such connections are made. For instance, there may be patterns of sequence of personal and social identity development wherein people reflect on the privilege earned through social group membership (social identity exploration) and, subsequently, readjust their future goals and values in life to contribute to equality (personal identity exploration).

Furthermore, future research should be conducted with attention to the different historical periods in which it is situated, to address the evolving sociopolitical contexts that shape identity development processes. Although any study inevitably reflects the moment in which it was conducted, ongoing social changes can fundamentally alter how young people make meaning of their social identities in relation to their personal identities. For instance, our study relied on data collected in 2019; thus, young people's racial identities and the ways they connected these to their personal identities at that time may differ from how they would be shaped following the nationwide Black Lives Matter movement in 2020 or the re-election of Donald Trump in 2024 ([Rogers et al., 2020](#)). Consequently, cross-cohort studies that integrate these changing conditions can deepen our understanding of how historical forces intersect with identity processes.

Extending this holistic approach to identity development to people in marginalized social groups is another important next step. Although our study focused on individuals with social privilege regarding their race, sexual orientation, and gender normativity, the interconnectedness between personal and social identity is relevant to the understanding of identity development of all individuals. Although few in quantity, qualitative research has already demonstrated such interconnectedness among young people with marginalized social backgrounds ([Azmitia et al., 2008](#); [Rogers, 2020](#)). It is important to continue to build this literature of holistic identity development across personal and social aspects of identity to understand the identity experiences of individuals in different contexts of marginalization or dominance. As the specific circumstances of researchers and the population being studied pose different restrictions and possibilities regarding methodology, the approach of the current study may be applied or adapted for further contribution to identity research.

Lastly, alternative approaches may be used to measure exploration in personal and social domains of identity to investigate their interrelations. Collecting identity narratives is an example that can capture how individuals construct and interpret their life stories by weaving together personal experiences and social contexts into a coherent sense of self ([McLean et al., 2015](#)). The narrative identity approach can be especially useful in illuminating the nuanced ways individuals

integrate social identities (e.g., race, gender, sexual orientation) into their evolving personal narratives, providing richer insights into the complexities of identity formation. As such, identity narratives can be instrumental in addressing the limitation of our study of how general our measures of identity exploration were – allowing us to gain a more specific picture of what is being explored.

Conclusion

The dominant approach to identity research that focus on either personal or social domains of identity render fragmented understandings of identity development experiences. Our study used a novel method using a holistic lens on identity to examine the exploration of personal and multiple social identity domains. We identified five qualitatively different profiles of exploration that were meaningfully associated with how the content of social identity was connected to personal aspects of the self. Although, on average, White, heterosexual, and cisgender young adults were not highly engaged in exploring their social identities, the cross-domain and mixed-method approach showed that, to many individuals, positions of privilege had both social and personal meanings. Efforts should continue to shed light on how people understand who they as simultaneously an individual and social being.

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Open Science Statement

The raw data, analysis code, and supplemental materials are available at https://osf.io/xb863/files/osfstorage?view_only=54407e4106ff4a3880ee239ece22f521. The study materials can be obtained by from the corresponding author. No aspects of the study were pre-registered.

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Supplemental Material

Supplemental material for this article is available online.

References

- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55(5), 469–480. DOI:10.1037//0003-066X.55.5.469
- Asparouhov, T., & Muthén, B. (2012). Using Mplus TECH11 and TECH14 to test the number of latent classes. *Mplus Web Notes: No. 14*. <https://www.statmodel.com/examples/webnotes/webnote14.pdf>
- Asparouhov, T., & Muthén, B. (2013). Auxiliary variables in mixture modeling: A 3-step approach using Mplus.
- Azmitia, M., Syed, M., & Radmacher, K. (2008). On the intersection of personal and social identities: Introduction and evidence from a longitudinal study of emerging adults. *New Directions for Child and Adolescent Development*, 2008(120), 1–16. <https://doi.org/10.1002/cd.212>
- Bakk, Z., Tekle, F. B., & Vermunt, J. K. (2013). Estimating the association between latent class membership and external variables using bias-adjusted three-step approaches. *Sociological Methodology*, 43(1), 272–311. <https://doi.org/10.1177/0081175012470644>
- Banfield, J. D., & Raftery, A. E. (1993). Model-based Gaussian and non-Gaussian clustering. *Biometrics*, 49(3), 803–821. <https://doi.org/10.2307/2532201>
- Berzonsky, M. D., & Kuk, L. S. (2000). Identity status, identity processing style, and the transition to university. *Journal of Adolescent Research*, 15(1), 81–98. <https://doi.org/10.1177/0743558400151005>
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Cole, E. R. (2009). Intersectionality and research in psychology. *American Psychologist*, 64(3), 170–180. <https://doi.org/10.1037/a0014564>
- Crenshaw, K. (1991). Mapping the margins: Intersectionality, identity politics, and violence against women of color. *Stanford Law Review*, 43(6), 1241–1299. <https://doi.org/10.2307/12>
- Creswell, J. W., & Poth, C. (2018). *Qualitative inquiry and research design* (4th ed.). Sage Publications.
- Crocetti, E., Schwartz, S. J., Fermani, A., & Meeus, W. (2010). The utrecht-management of identity commitments scale (U-mics): Italian validation and cross-national comparisons. *European Journal of Psychological Assessment*, 26(3), 172–186. <https://doi.org/10.1027/1015-5759/a000024>
- Diamond, L. M., Pardo, S. T., & Butterworth, M. R. (2011). Transgender experience and identity. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 629–647): Springer. https://doi.org/10.1007/978-1-4419-7988-9_26
- Diemer, M. A., Rapa, L. J., Park, C. J., & Perry, J. C. (2017). Development and validation of the critical consciousness scale. *Youth & Society*, 49(4), 461–483. <https://doi.org/10.1177/0044118X14538289>
- Dillon, F. R., Worthington, R. L., & Moradi, B. (2011). Sexual identity as a universal process. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles (Eds.), *Handbook of identity theory and research* (pp. 649–670). Springer. https://doi.org/10.1007/978-1-4419-7988-9_27
- Douglas, S., & Umaña-Taylor, A. J. (2015). A brief form of the ethnic identity scale: Development and empirical validation. *Identity*, 15(1), 48–65. <https://doi.org/10.1080/15283488.2014.989442>

- Duncan, L. E., & Stewart, A. J. (2007). Personal political salience: The role of personality in collective identity and action. *Political Psychology*, 28(2), 143–164. <https://doi.org/10.1111/j.1467-9221.2007.00560.x>
- Erikson, E. H. (1968). *Identity: Youth and crisis*. W. W. Norton & Company.
- Galliher, R. V., McLean, K. C., & Syed, M. (2017). An integrated developmental model for studying identity content in context. *Developmental Psychology*, 53(11), 2011–2022. <https://doi.org/10.1037/dev0000299>
- Gee, M. N., & Johnson, S. K. (2023). Why do young people engage in some civic actions and not others? Exploring the roles of individual and collective civic efficacy. *Journal of Community & Applied Social Psychology*, 33(2), 356–373. <https://doi.org/10.1002/casp.2661>
- Grossman, J. M., & Charmaraman, L. (2009). Race, context, and privilege: White adolescents' explanations of racial-ethnic centrality. *Journal of Youth and Adolescence*, 38(2), 139–152. <https://doi.org/10.1007/s10964-008-9330-7>
- Grotevant, H. D. (1987). Toward a process model of identity formation. *Journal of Adolescent Research*, 2(3), 203–222. <https://doi.org/10.1177/074355488723003>
- Gurin, P., & Markus, H. (1989). Cognitive consequences of gender identity. In S. Skevington & D. Baker (Eds.), *The social identity of women* (pp. 152–172). Sage.
- Helms, J. E. (1984). Toward a theoretical explanation of the effects of race on counseling a Black and White Model. *The Counseling Psychologist*, 12(4), 153–165. <https://doi.org/10.1177/0011000084124013>
- Hershberg, R. M., & Johnson, S. K. (2019). Critical reflection about socioeconomic inequalities among White young men from poor and working-class backgrounds. *Developmental Psychology*, 55(3), 562–573. <https://doi.org/10.1037/dev0000587>
- Johnson, S. K., De Moor, E. L., Chung, J. M., Den Boer, L., & Klimstra, T. A. (2022). An item response theory analysis of two frequently used measures of identity development. *Psychological Assessment*, 34(11), 1047–1061. <https://doi.org/10.1037/pas0001171>
- Kroger, J. (2017). *Identity development in adolescence and adulthood*. Oxford Research Encyclopedia of Psychology.
- Lo, Y., Mendell, N., & Rubin, D. (2001). Testing the number of components in a normal mixture. *Biometrika*, 88(3), 767–778. <https://doi.org/10.1093/biomet/88.3.767>
- Luyckx, K., Schwartz, S. J., Berzonsky, M. D., Soenens, B., Vansteenkiste, M., Smits, I., & Goossens, L. (2008). Capturing ruminative exploration: Extending the four-dimensional model of identity formation in late adolescence. *Journal of Research in Personality*, 42(1), 58–82. <https://doi.org/10.1016/j.jrp.2007.04.004>
- Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, 3(5), 551–558. <https://doi.org/10.1037/h0023281>
- Masyn, K. E. (2013). Latent class analysis and finite mixture modeling. In T. D. Little (Ed.), *The Oxford Handbook of Quantitative Methods* (2). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199934898.013.0025>
- McLean, K. C., Shucard, H., & Syed, M. (2017). Applying the master narrative framework to gender identity development in emerging adulthood. *Emerging Adulthood*, 5(2), 93–105. <https://doi.org/10.1177/2167696816656254>
- McLean, K. C., & Syed, M. (2015). Personal, master, and alternative narratives: An integrative framework for understanding identity development in context. *Human Development*, 58(6), 318–349. <https://doi.org/10.1159/000445817>
- McLean, K. C., Syed, M., Syed, M., & McLean, K. C. (2015). The future of identity development research. In K. C. McLean & M. Syed (Eds.), *The oxford handbook of identity development*. Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199936564.013.011>
- Muthén, L. K., & Muthén, B. O. (2018). *Mplus user's guide* (8th ed.). Muthén & Muthén. <https://www.statmodel.com/html Ug.shtml>.
- Park, Y., & Johnson, S. K. (2024). A theoretical framework of the role of racism in adolescent personal identity development: Applications to racially marginalized youth in the USA. *Human Development*, 68(1), 44–60. <https://doi.org/10.1159/000536141>
- Pratto, F. (1999). The puzzle of continuing group inequality: Piecing together psychological, social, and cultural forces in social dominance theory. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (31, pp. 191–263). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60274-9](https://doi.org/10.1016/S0065-2601(08)60274-9)
- Pratto, F., & Stewart, A. L. (2012). Group dominance and the half-blindness of privilege. *Journal of Social Issues*, 68(1), 28–45. <https://doi.org/10.1111/j.1540-4560.2011.01734.x>
- Rivas-Drake, D., Seaton, E. K., Markstrom, C., Quintana, S., Syed, M., Lee, R., Schwartz, S., Umaña-Taylor, A., French, S., Yip, T., & Ethnic and Racial Identity in the 21st Century Study Group. (2014). Ethnic and racial identity in adolescence: Implications for psychosocial, academic, and health outcomes. *Child Development*, 85(1), 40–57. DOI:10.1111/cdev.12200
- Rogers, L. O. (2020). “I Just Can’t Be Nothin’”: The role of resistance in the development of identity and purpose. In A. L. Burrow & P. L. Hill (Eds.), *The ecology of purposeful living across the lifespan* (pp. 165–181). Springer International Publishing. https://doi.org/10.1007/978-3-030-52078-6_10
- Saldaña, J. (2016). *The coding manual for qualitative researchers* (3rd ed.). Sage.
- Schwarz, G. (1978). Estimating the dimension of a model. *Annals of Statistics*, 6(2), 461–464. <https://doi.org/10.1214/aos/1176344136>
- Spanierman, L. B., Beard, J. C., & Todd, N. R. (2012). White men’s fears, White women’s tears: Examining gender differences in racial affect types. *Sex Roles*, 67(3), 174–186. <https://doi.org/10.1007/s11199-012-0162-2>
- Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behavior. In S. Worchel & W. Austin (Eds.), *Psychology of intergroup relations* (pp. 7–24). Nelson-Hall.
- Umaña-Taylor, A. J., Quintana, S. M., Lee, R. M., Cross, W. E., Rivas-Drake, D., Schwartz, S. J., Syed, M., Yip, T., Seaton, E., & Ethnic and Racial Identity in the 21st Century Study Group. (2014). Ethnic and racial identity during adolescence and into young adulthood: An integrated conceptualization. *Child Development*, 85(1), 21–39. <https://doi.org/10.1111/cdev.12196>

- Vandello, J. A., & Cohen, D. (1999). Patterns of individualism and collectivism across the United States. *Journal of Personality and Social Psychology*, 77(2), 279–292. <https://doi.org/10.1037/0022-3514.77.2.279>
- Vignoles, V. L. (2018). Identity: Personal and social. In K. Deaux & M. Snyder (Eds.), *The oxford handbook of personality and social psychology* (pp. 288–316). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780190224837.013.12>
- Way, N., Ali, A., Gilligan, C., & Noguera, P. (Eds.), (2018). *The crisis of connection: Roots, consequences, and solutions*. NYU Press. <https://www.jstor.org/stable/j.ctv12pnr8w>
- Worthington, R. L., Savoy, H. B., Dillon, F. R., & Vernaglia, E. R. (2002). Heterosexual identity development: A multidimensional model of individual and social identity. *The Counseling Psychologist*, 30(4), 496–531. <https://doi.org/10.1177/00100002030004002>

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