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Navigating race in a racially diverse environment: An experience sampling study on the daily use of race in conversations within Hawaii

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ABSTRACT

As the United States grows more racially diverse, it is imperative to understand whether being in a racially diverse environment impacts conversations about race. This study examines whether exposure to, and interactions with racially diverse others relate to whether people talk about race, the frequency with which people talk about race, and their comfort with doing so within the racially diverse context of Hawaii. We employed experience sampling to measure whether people had conversations about race, how frequently conversations about race occurred and their comfort in those conversations, and whether their exposure to and interactions with racially diverse others predicted these behaviors. Exposure to and interactions with racially diverse others were not significant predictors of race-related conversations (and their comfort with said conversations). However, interactions with racially diverse *friends* was related to greater likelihood of discussing race, more frequent discussions of race, and more comfort with race-related conversations. These findings illustrate the importance that interactions with cross-race friends have for improving intergroup relations.

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Racial diversity; experience sampling; intergroup relations; interracial interactions

The U.S. is one of the world's most diverse Western countries, yet it is on the precipice of a major demographic change, whereby minority racial groups will surpass the majority group (White individuals). This shift to a majority-minority nation, raises a looming question about the dynamics of race-relations in this demographic landscape. Racial diversity has been shown to have a number of positive benefits, such as improving creativity and cognitive flexibility and increasing support for multicultural ideologies (see, Crisp & Turner, 2011 for a review; Pauker et al., 2017; Ramos et al., 2016; Sommers, 2006; Stevens et al., 2008), but it also has been shown to be related to lower ingroup belonging and interracial trust (Rudolph & Popp, 2010; Wu et al., 2011). Research surrounding intergroup contact has increasingly moved past the question of the merits of engaging in contact to instead focus on what happens when contact does occur. The purpose of the current paper is to examine how people in a racially diverse environment navigate race on a daily basis, by measuring their daily contact with racially/ethnically different others, whether and how often people have race-related conversations, and their comfort with said conversations. We use experience sampling to capture this day-to-day navigation as it unfolds across a person's day, rather than relying on surveys that effectively require participants to average their experiences and treat these experiences as trait-like variables.

Intergroup contact and communicating about race

The *contact hypothesis*, which purports that intergroup contact is one of the best ways to improve intergroup relations, has been investigated thoroughly in social psychological research in efforts to improve race-relations (Allport, 1954; Bowman, 2012; Bowman & Denson, 2012; Cook, 1978; Dovidio et al., 2003; Fischer, 2008; Killen et al., 2007; Margie et al., 2005; McGlothlin & Killen, 2005; McGlothlin et al., 2005; Munniksma et al., 2013; Pettigrew, 1998; Pettigrew & Tropp, 2000, 2006). The purpose of the current paper is to examine various levels of intergroup contact and how they may predict comfortable conversations about race. One possibility is that intergroup contact exacerbates intergroup anxiety. Intergroup anxiety (Stephan & Stephan, 1985) can develop based on the anticipated negative consequences from intergroup interactions, such as being perceived as prejudiced. Consequently, one way to mitigate intergroup anxiety in cross-race interactions is to adopt strategic colorblindness. Colorblindness (i.e., the avoidance of acknowledging race) is often strategically employed to ease anxiousness surrounding interactions where race is involved (Apfelbaum et al., 2008; Rattan & Ambady, 2013; Richeson & Nussbaum, 2004; Wolsko et al., 2000). Unfortunately, using strategic colorblindness to ease anxiety and avoid appearing prejudiced can backfire and actually make people appear more anxious, unfriendly, and prejudiced (Apfelbaum et al., 2008; Norton et al., 2006; Pauker et al., 2015). Furthermore, racial minorities who come into contact with White people who employ strategic colorblindness can experience negative consequences. For students of color, the colorblind behavior of their White peers led to feelings of frustration, pain, and isolation (Lewis et al., 2000), and reduced cognitive functioning (Holoien & Shelton, 2012). In sum, adopting a colorblind approach to race may hinder positive intergroup contact despite the goal of easing anxiety. Thus, intergroup contact could lead to less conversations about race and less comfort with conversations about race because intergroup anxiety could activate strategic colorblindness.

Alternatively, cross-race interactions may potentially encourage conversations about race, particularly within racially diverse contexts. Recent work within the racially diverse context of Hawaii found that participants readily acknowledged race in a lab task due to its functional nature (i.e., it was useful in interactions) and actually perceived that talking about race was *not* an indicator of prejudice (compared to samples in majority White contexts; Meyers et al., 2021). Thus, we wanted to examine how intergroup contact in a racially diverse context would impact whether people mentioned race in conversations, and particularly their comfort with those conversations. Furthermore, most of the intergroup contact literature focuses on the experience and behaviors of White individuals in racially homogenous contexts (Richeson & Sommers, 2016). Literature that does focus on racial minorities' intergroup contact and anxiety is still typically examined within majority-White contexts, which would likely entail contact with White individuals (e.g., Holoien et al., 2015). The purpose of the current paper is to examine how intergroup contact may be related to comfort with race-related conversations within 1) a racially diverse context, 2) a sample of predominantly People of Color, and 3) where cross-race interactions are not characterized solely as interactions between People of Color and White people.

Racial diversity and communicating about race

While racially diverse environments offer opportunity to engage in more intergroup contact, it does not guarantee that intergroup contact will occur, nor that such contact is positive. Thus, while racial diversity may have effects on intergroup outcomes through fostering increased intergroup contact, the presence of racial diversity does not mean intergroup contact will occur (see, Carey et al., 2022). Consequently, research that examines these ideas at multiple-levels is needed to understand how racial diversity impacts everyday interactions, including conversations about race. The current research examines whether conversations about race happen, their frequency, and how comfortable these conversations are in contexts in which encountering racially diverse others is the norm.

Studies have been conducted examining how neighborhood or contextual racial diversity may promote positive outcomes, such as increasing prosocial behaviors (Nai et al., 2018), promoting greater social cohesion (Sturgis et al., 2014), and facilitating greater social trust for people living within these environments (Hou & Wu, 2009; Schmid et al., 2014). While this research highlights the importance and value of living in a racially diverse environment for social relations broadly, there is less work on whether living in a racially diverse environment (i.e., neighborhood or contextual racial diversity) impacts race-related outcomes specifically. Some research has found that the greater proportion of racial minorities living within a city or region has been related to increased interracial trust, and more positive outgroup attitudes, *when* individuals also have high, compared to low, interracial contact (Rudolph & Popp, 2010; Stein et al., 2000). Thus, this research suggests that having a diverse environment may not be enough, but positive interracial outcomes may depend on individuals' actual contact with individuals outside of their own racial group. However, most of this research has focused on racial diversity's impact on *attitudes* (e.g., Oliver & Wong, 2003; Stein et al., 2000), and less has focused on racial diversity's impact on actual *behavior*. As our society grows more racially diverse, it will be essential to understand how people communicate with each other regarding race and how to foster positive interracial communication.

Racially diverse contexts may play an important role in fostering opportunities for both quantity and quality of intergroup contact. Importantly, Christ et al. (2014) found that when individuals lived in contexts where, on average, people had more positive intergroup contact, engaging in positive contact was normative, and this reduced negative outgroup attitudes above and beyond other factors. Research has also shown that greater outgroup contact is linked to greater success in initiating cross-race friendships (Vorauer & Sakamoto, 2006). Furthermore, Antonio (2001) found that a racially/ethnically diverse campus environment increased engagement with racially diverse others, and that perceiving that various racial groups were highly integrated conveyed the importance of fostering more positive intergroup interactions. Overall, cross-race friendships that happened in more racially diverse contexts predicted greater interest in interracial interaction outside of these specific friendships, suggesting that the interaction between the context and contact quality may have helped to establish a norm that encourages interactions with diverse others and promotes racial awareness (Antonio, 2001).

If racially diverse contexts communicate a norm for positive intergroup interactions (Christ et al., 2014), we might expect those living in these environments to interact frequently with racially/ethnically diverse others and feel at ease when talking about race. Typically, individuals (especially White individuals) avoid talking about race and find these conversations difficult and uncomfortable (Trawalter & Richeson, 2008). Correspondingly, interracial interactions are often reported as more anxiety-provoking than same-race interactions (Plant, 2004; Trail et al., 2009). Having more race-related conversations, and particularly exhibiting comfort in these conversations, may be an important first step to improving intergroup relations (Harries, 2014). Past work in a racially diverse context found that participants willingly talked about race in a lab task and this was related to their perceptions that talking about race was not prejudiced and their perceptions of a lack of colorblind norms (Meyers et al., 2021). Since social norms in racially diverse contexts may actually foster mentioning race in conversations and because cross-race friendships can lead to more comfort in interracial interactions (Paolini et al., 2004; Van Laar et al., 2005), we predict that having frequent and meaningful contact (i.e., friendships) with those outside of a person's racial ingroup would increase the likelihood of people feeling comfortable talking about race.

Current study

While there has been much discussion about how the U.S. population shift from majority-White to majority-minority will impact race relations, the reality is that many of our major metropolitan cities already have majority-minority populations (U.S. Census Bureau, 2017). Consequently, examining cities where a majority-minority context already exists may provide insight into people's behavior in

racially diverse contexts when it comes to discussing race. Thus, we examined people's exposure to and interactions with racially/ethnically diverse others within the racially diverse context of Hawaii, and the extent to which these social interactions impact people's use of race in conversations and their comfort doing so. Only about 22% of the population in Hawaii is comprised of White individuals, drastically lower than any other state in the U.S, with California trailing the lead with a population of about 37% non-Hispanic, White individuals. Investigating this context may allow us to examine race-related behaviors of those in racially diverse contexts more closely, and to gain insight into the nature of race relations that may manifest when our society becomes more racially diverse. Furthermore, we hope to extend research on intergroup contact to examine groups beyond the White vs. Black/POC dichotomy, and examine the extent to which intergroup contact may lead to positive race-related outcomes across a variety of racial/ethnic groups.

The goal of this study was to examine whether individuals mention race in their everyday conversations, the frequency with which they do so, and their comfort with mentioning race in these conversations among those residing in the racially diverse context of Hawaii. We used an experience-sampling methodology in order to naturalistically capture whether, and how frequently, people mentioned race in their everyday conversations and how comfortable they felt in these conversations over the course of a week. We also examined whether other individual difference measures commonly linked with promoting intergroup contact in past research (e.g., lower interracial anxiety, positive outgroup attitudes, friendship diversity, social dominance orientation, and racial identity) would predict people's use of race in conversations and comfort with these conversations. Particularly, we were interested in whether individuals' exposure to and interactions with racially/ethnically diverse others predict whether they talk about race, the frequency with which they talk about race, and their comfort doing so. We hypothesized that being exposed to and interacting with racially/ethnically diverse others would be related to a greater likelihood of having race-related conversations and a greater frequency of race-related conversations. Furthermore, when race is a more pervasive topic in daily conversations, we expected individuals to experience more ease and comfort with the topic. Lastly, we examined whether other individual differences (e.g., friendship diversity, racial attitudes, etc.) related to individuals' discussion of race in conversations, the frequency of their race-related conversations, and their comfort with those conversations.

Research has demonstrated a clear relationship between intergroup contact, interracial anxiety, and outgroup attitudes (Islam & Hewstone, 1993); therefore, we chose to include measures of outgroup attitudes and interracial anxiety. Furthermore, cross-race friendships have been shown to reduce intergroup anxiety (Page-Gould et al., 2008) and promote greater sense of identity with the outgroup (Page-Gould et al., 2010), so we also examined participants' diversity of their social network, their strength of identity, and sense of belonging with other racial groups. Lastly, research has suggested that individual predictors, such as social dominance orientation (SDO) may moderate the relationship between intergroup contact and reduction of prejudice (Kteily et al., 2017), and thus, we also included a measure of SDO.

Method

We used experience sampling in order to best capture the daily experience of individuals living in a racially diverse context. As most people take their smartphones with them everywhere they go, using a smartphone application (ExperienceSampler; Thai & Page-Gould, 2017) to distribute the questionnaires enabled the ability to capture individuals' everyday experiences more readily. Some benefits to utilizing an experience sampling methodology include its ability to track and record data outside of the laboratory, therefore increasing ecological validity. Furthermore, experience sampling allows researchers to examine within-persons processes, and the contingencies of behavior, such as capturing the person by situation nuances of specific behaviors. Lastly, by using experience sampling methods, we can reduce the bias that might occur from global self-report data, particularly in reference to memory or accuracy deficits in the recall of behaviors (see, Scollon et al., 2003 for a review). The full list of

measures used in this study are openly available in Open Science Framework at <https://doi.org/10.17605/OSF.IO/S248G>.

Participants and procedure

Based on past experience sampling studies (e.g., D. Sanchez & Garcia, 2009; Yip, 2009), we aimed to collect a sample of 100 participants. We recruited 103 participants from the undergraduate participant pool at the University of Hawaii to take part in a week-long study. This study was conducted across the months of March-December 2016. Participants were pinged twice a day for seven days and were systematically asked about their exposure to racially/ethnically¹ diverse others and their conversations with them. Following the experience-sampling portion of the study, participants were invited to participate in an online survey measuring related intergroup constructs and individual differences. A total of 57 participants completed this final survey and our primary analyses focus on this subset of the sample.

This study was administered on students' smartphones via a customized smartphone application and they received extra-credit for participating. Participants were incentivized to complete the week-long study and backend survey with a \$5 gift card. The diversity of the sample reflects the diversity of the broader population of Hawaii (U.S. Census Bureau, 2017). Our participants included 47 women and 10 men, ranging from 17–47 years-old ($M = 20.10$, $SD = 4.11$). We had 31 Asian, 8 Multiracial, 10 White, 1 Hispanic, 5 Native Hawaiian, and 2 Black participants. On average, participants had resided in Hawaii for about 13 years ($M = 12.50$, $SD = 8.94$). Sensitivity analyses using Monte Carlo simulations with 5000 resamples revealed that we had at least 80% power to detect an effect size of $r = .21$ (for within-person effects) and $r = .50$ (for between-person effects).

Measures

Daily questionnaire

We chose to use interval-contingent sampling for our study where participants were notified twice daily to complete a questionnaire (at noon and at 8 pm). We chose these two time points in order to capitalize on when participants were most likely to have interactions (e.g., typical lunch and dinner hours). Specifically, participants were asked the following questions: (1) the proportion of individuals that they saw that were of a different race or ethnicity than their own background (0%, 25%, 50%, 75%, 100%), (2) the proportion of these individuals they interacted with (0%, 25%, 50%, 75%, 100%), (3) the proportion of these interactions that were with close friends (0%, 25%, 50%, 75%, 100%), (4) if they mentioned race in any of their conversations (*yes or no*), (5) how was race used in the conversation (1 = *to identify someone*, 2 = *to talk about their/my background*, 3 = *to make a joke*, 4 = *to connect to someone*, 5 = *current events*, 6 = *other*), (6) how often they mentioned race in their conversations (1 *time*, 2–3 *times*, 4+ *times*), and (7) how comfortable they felt using race in these conversations (1 = *Extremely uncomfortable* to 6 = *Extremely comfortable*). Participants completed these questions two times a day for 7 days continuously. Questions were prefaced by the instruction “Since your last survey,” in order to account for the two distinct time-points in the day and prevent double-counting of their responses. In order to ensure participants did not fixate on the racial/ethnic aspect of these questions, an identical set of questions were asked about their exposure to and interactions with those of a different sexual orientation than their own, and their conversations and comfort with talking about sexual identity. These questions were included as filler questions and this data was not analyzed for the purposes of this study.

Final survey

At the end of the week-long daily questionnaires, participants were invited to a final survey that included the following measures:

Ingroup and outgroup attitudes. In order to measure participants' general attitudes toward various racial groups, we used feeling thermometers. Participants were asked to indicate their feeling toward different racial groups (Black, White, Asian, Hispanic, Pacific Islander, Native Hawaiian, and Multiracial) using a feeling thermometer that ranged from 1 (*extremely cold*) to 10 (*extremely warm*), $\alpha = .89$. We calculated participants' feeling thermometer score toward their ingroup and outgroups by averaging the items for each participants' respective in/outgroups (e.g., if a participant identified as Hispanic, their outgroup scores would be comprised of their responses to Black, White, Asian, Pacific Islander, Native Hawaiian, and Multiracial). This gave us two new variables: Ingroup Attitude and Outgroup Attitude, where higher scores indicated greater warmth toward the group.

Sense of belonging. To measure sense of belonging we used two items from AhnAllen et al. (2006) that asked the extent to which participants felt like they belonged with ($\alpha = .73$) and were excluded from ($\alpha = .84$) various racial groups (Black, White, Asian, Hispanic, Pacific Islander, Native Hawaiian, and Multiracial) on a scale of 1 (*not at all*) to 7 (*extremely*). We calculated participants' feelings of belonging with and exclusion from their ingroup and outgroups by averaging the items for each participants' respective in/outgroups (e.g., if a participant identified as Hispanic, their outgroup scores would be comprised of their responses to Black, White, Asian, Pacific Islander, Native Hawaiian, and Multiracial). This gave us four new variables: Ingroup Belonging, Outgroup Belonging, Ingroup Exclusion, and Outgroup Exclusion. Greater scores indicated feeling more belonging with or exclusion from their ingroup or outgroup.

Strength of identity. Considering Hawaii's multi-ethnic population, we measured participants' strength of and attachment to their ethnic identity by using Phinney's (1992) Multiethnic Identity questionnaire (MEIM). For example, "I feel a strong attachment towards my own ethnic group," on a scale of 1 (*very strongly disagree*) to 6 (*very strongly agree*). Items were averaged together, and a higher score indicated greater strength of identity ($\alpha = .91$).

Social network diversity. Because we are interested in interactions with racially diverse others, we also collected information on the diversity of participants' social network. Participants were asked to list their five closest friends, then subsequently to list each of those friend's racial and/or ethnic background (to the best of their knowledge). We calculated the proportion of friends they listed that were of a different racial/ethnic group than the participants' self-reported race/ethnicity.

Social dominance orientation. We measured participants' social dominance orientation (SDO) with Pratto et al.'s (2013), pp. 4-item scale, with items such as "Superior groups should dominate inferior groups" on a scale of 1 (*extremely oppose*) to 10 (*extremely favor*). An average of the items was created, with higher scores indicating greater social dominance orientation, ($\alpha = .71$).

Intergroup anxiety. To measure intergroup anxiety, we used an adapted version of Stephan's and Stephan's (1985) Intergroup Anxiety Scale, which includes instructions to imagine a scenario where the participant is interacting with 5 peers who are of a different race/ethnicity than themselves. Participants are asked items such as "I would feel anxious" on a scale of 1 (*strongly disagree*) to 6 (*strongly agree*). Items were averaged to create a score of intergroup anxiety, with higher scores indicating greater anxiety ($\alpha = .85$).

Results

Given the nested nature of the data, we used multilevel modeling (MLM) to take into consideration time nested within individuals (Raudenbush & Bryk, 2002). All covariates and predictors were grand-mean centered prior to being included in the model. We used the *lme4* (Bates et al., 2015) function of R to run a 2-level model with a random intercept for each participant²

and calculated bootstrapped confidence intervals for these models with 5000 resamples. We assumed random coefficients were correlated and used an unstructured covariance structure.³ We collected 1470 observations, and the compliance rate was 61.30% (median = 64.29%, $SD = 22.17\%$). On average, each participant completed about 8 surveys ($M = 8.51$, $SD = 3.19$, $range = 1-14$). In our analyses, we also included other control variables: Gender (effect coded as Men “-1” vs. Women “1”), Race (effect coded as White “-1” vs. Persons of Color “1”), Age, and Time lived in Hawaii, in our model. Additionally, survey number was included as fixed effects in the model to control for any time-related effects. Level 1 predictors were: Exposure, Interactions, and Friend Interactions. Level 1 predictors were person-centered to examine within-person effects. We also entered the person-means of these Level 1 predictors to explore between-person effects of these variables. Other Level 2 predictors were: Social Network Diversity, Outgroup Exclusion, Ingroup Exclusion, Outgroup Belonging, Ingroup Belonging, Outgroup Attitudes, Ingroup Attitudes, SDO, Anxiety, and MEIM. All predictors were entered into the models simultaneously. Missing data from Level 2 predictors were handled using listwise deletion. Consequently, any participants who did not complete the final survey were omitted from our analyses.⁴ See, [Table 1](#) for correlation table across all predictors. The data that support the findings of this study are openly available in Open Science Framework at <https://doi.org/10.17605/OSF.IO/S248G>.

Mentioning race in everyday conversations

Using a baseline random-intercept logistic multilevel model, we found that on average, participants were 23.53% likely to mention race throughout the 7-day period. We then examined whether our control variables, Level 1 predictors, and Level 2 predictors influenced mentions of race. We included both the person mean variable and person-centered variable of Level 1 predictors. There was a significant within-person effect of Friend Interactions. During surveys when participants reported greater interaction with cross-race close friends than usual, participants were more likely to mention race (within-person effect), $b = 1.52$, 95% CI [0.09, 3.17], $SE = 0.77$, $z = 1.97$, $p = .048$, *Odds Ratio* = 4.58:1. In addition, lower intergroup anxiety predicted a greater likelihood of mentioning race in conversations, $b = -0.73$, 95% CI [-1.25, -0.25], $SE = 0.26$, $z = 2.82$, $p = .005$, *Odds Ratio* = 0.48:1. No other effects were significant, $ps > .06$. See, [Table 2](#) for all parameter estimates.

For exploratory purposes, we also asked participants how they used race in their conversations. Across all participants and timepoints, 22.31% of conversations were used to identify someone, 21.92% were used to talk about their own racial group, 20.77% were used to talk about current events, 19.62% were used to make jokes, 8.46% were used as a way to connect with another person, and 6.92% conversations included idiosyncratic uses of race, such as discussing race in the classroom or as related to music or television shows.⁵

Frequency in talking about race

We used a random-intercept cumulative linked mixed model to analyze our ordinal outcome of race frequency with our control variables, Level 1 predictors, and Level 2 predictors. We included both the person mean variable and person-centered variable of Level 1 predictors. There was a significant effect of the within-person effect of interactions with friends, such that on days when participants interacted more with their friends, they mentioned race more frequently, $b = 1.49$, 95% CI [.03, 2.94], $SE = 0.12$, $z = 2.00$, $p = .045$, *Odds Ratio* = 4.42:1. There was also a significant effect of outgroup attitudes, such that more positive attitudes toward outgroups predicted mentioning race less frequently, $b = -.25$, 95% CI [-.50, -.009], $SE = 0.74$, $z = 2.03$, $p = .042$, *Odds Ratio* = 0.78:1. Finally, there was a significant effect of intergroup anxiety: People who were higher in intergroup anxiety mentioned race less frequently, $b = -.65$, 95% CI [-1.19, -.11], $SE = 0.28$, $z = 2.35$, $p = .019$, *Odds Ratio* = 0.52:1. All other controls and predictors in the model were non-significant, $ps > .05$. See, [Table 3](#) for parameter estimates.

Table 1. Correlation coefficients across level 1 and 2 predictors.

	M	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1 Exposure	.46 (.33)	-														
2 Interactions	.38 (.33)	0.67***	-													
3 Friend Interactions	.16 (.24)	0.44***	.68***	-												
4 Mention Race	.29 (.45)	.13***	.13***	.15***	-											
5 Race Frequency	1.66 (.69)	0.07	0.08	.15*	-0.02	-										
6 Race Comfort	4.68 (1.44)	0.11	0.1	.14*	-0.002	.22**	0.14	-								
7 Outgroup Friends	.54 (.33)	.23***	.21***	.24***	.09*	.22**	0.002	.11**	-							
8 Outgroup Exclusion	3.66 (1.54)	-.11*	-.08	-.12**	-.08	-.21**	0.002	.11**	0.01	-						
9 Ingroup Exclusion	2.35 (1.89)	-.06	0.02	0.08	.11*	0.02	-.28***	.14***	0.07	.14***	-					
10 Outgroup Belonging	2.86 (1.26)	-.02	0.004	-.10*	0.02	-.04	-.08	-.09*	-.02	-.30***	-.10**	-				
11 Ingroup Belonging	6.35 (1.07)	0.03	0.001	0.002	-.003	0.15	.28***	-.09*	-.09*	0.05	-.10**	0.05	-			
12 Outgroup Attitudes	6.97 (2.12)	-.04	-.02	-.16***	-.09*	-.32***	0.02	-.24***	.12***	-.11**	.22***	.55***	.35***	-		
13 Ingroup Attitudes	9.09 (1.37)	.11**	.13**	.14***	0.02	0.03	.28***	-.19***	.12***	-.17***	0.01	-.27***	.14***	.28***	-	
14 SDO	2.18 (1.33)	-.18***	-.15***	-.19***	-.004	-.27***	-.07	-.17***	0.006	.17***	-.23***	-.07*	-.36***	-.15***	.21***	-
15 Anxiety	2.31 (.88)	-.08	-.15***	-.05	-.12**	0.10	-.36***	-.03	-.02	.14***	-.23***	-.41***	-.06	-.23***	-.11**	-.20***
16 MEIM	4.19 (.70)	-.04	-.07	-.05	0.06	.17*	.18*	-.12***	.08*	-.12***	-.03	.41***	-.06	.23***	-.11**	-.20***

Standard deviations are in parentheses. * $p < .05$. ** $p < .01$ *** $p < .001$

Table 2. Parameter Estimates for “Mention Race” Model.

Predictor	Outcome = Mention Race (logit)			
	$N_{\text{participants}} = 55^7$ $N_{\text{observations}} = 513$			
	<i>b</i>	95% CI	<i>SE</i>	<i>OR</i>
Intercept	−2.20***	[−3.46, −1.04]	0.60	0.11
Time	−0.04	[−0.10, 0.02]	0.03	0.96
Race	0.22	[−0.67, 1.09]	0.42	1.25
Gender	−0.10	[−0.61, 0.49]	0.27	0.90
Age	0.005	[−0.15, 0.12]	0.05	1.00
Time in HI	0.005	[−0.05, 0.07]	0.03	1.01
Exposure (Between)	2.73	[−1.48, 6.67]	2.15	15.33
Interactions (Between)	−0.50	[−4.83, 3.93]	2.43	0.60
Friend Interactions (Between)	0.76	[−3.77, 5.37]	2.39	2.17
Exposure (Within)	0.73	[−0.31, 1.87]	0.56	2.07
Interactions (Within)	−0.72	[−2.05, 0.41]	0.61	0.49
Friend Interactions (Within)	1.52*	[0.09, 3.17]	0.77	4.58
Social Network Diversity	−0.10	[−1.46, 1.21]	0.66	0.90
Outgroup Exclusion	−0.07	[−0.33, 0.19]	0.13	0.93
Ingroup Exclusion	0.24	[−0.03, 0.51]	0.13	1.27
Outgroup Belonging	−0.10	[−0.31, 0.38]	0.26	1.02
Ingroup Belonging	0.02	[−0.62, 0.40]	0.17	0.90
Outgroup Attitudes	−0.21	[−0.47, 0.003]	0.12	0.81
Ingroup Attitudes	0.09	[−0.29, 0.49]	0.20	1.09
Social Dominance Orientation	0.21	[−0.13, 0.55]	0.17	1.24
Anxiety	−0.73**	[−1.25, −0.25]	0.26	0.48
MEIM	0.64	[−0.14, 1.43]	0.39	1.89

* $p < .05$, ** $p < .01$, *** $p < .001$. OR = Odds Ratio. Between = Between-person effect. Within = Within-person effect.

Table 3. Parameter Estimates for “Race Frequency” Model.

Predictor	Outcome = Race Frequency (ordinal)			
	$N_{\text{participants}} = 55$ $N_{\text{observations}} = 511$			
	<i>b</i>	95% CI	<i>SE</i>	<i>OR</i>
Time	−0.03	[−0.09, 0.03]	0.03	0.97
Race	0.20	[−0.69, 1.10]	0.46	1.22
Gender	−0.21	[−0.77, 0.36]	0.29	0.81
Age	−0.002	[−0.11, 0.11]	0.06	1.00
Time in HI	0.004	[−0.06, 0.07]	0.03	1.00
Exposure (Between)	2.16	[−2.38, 6.71]	2.32	8.69
Interactions (Between)	0.60	[−4.56, 5.76]	2.63	1.82
Friend Interactions (Between)	−0.13	[−5.20, 4.95]	2.59	0.88
Exposure (Within)	0.72	[−0.36, 1.80]	0.55	2.06
Interactions (Within)	−0.70	[−1.90, 0.49]	0.61	0.50
Friend Interactions (Within)	1.49*	[0.03, 2.94]	0.74	4.42
Social Network Diversity	0.05	[−1.36, 1.46]	0.72	1.05
Outgroup Exclusion	−0.11	[−0.38, 0.17]	0.14	0.90
Ingroup Exclusion	0.25	[−0.04, 0.53]	0.14	1.28
Outgroup Belonging	0.05	[−0.31, 0.40]	0.18	1.05
Ingroup Belonging	−0.09	[−0.64, 0.46]	0.28	0.91
Outgroup Attitudes	−0.25*	[−0.50, −0.009]	0.12	0.78
Ingroup Attitudes	0.09	[−0.32, 0.51]	0.21	1.10
Social Dominance Orientation	0.14	[.21, 0.49]	0.18	1.15
Anxiety	−0.65*	[−1.19, −.11]	0.28	0.52
MEIM	0.67	[−0.15, 1.50]	0.15	1.96

* $p < .05$, ** $p < .01$, *** $p < .001$. Between = Between-person effect. Within = Within-person effect.

Table 4. Parameter Estimates for “Race Comfort” Model.

Predictor	Outcome = Race Comfort			
	$N_{\text{participants}} = 43^8$ $N_{\text{observations}} = 155$			
Predictor	<i>b</i>	95% CI	<i>SE</i>	<i>r</i>
Intercept	4.85***	[4.05, 5.67]	0.41	.93
Time	0.01	[−0.04, 0.06]	0.03	.03
Race	0.26	[−0.34, 0.84]	0.29	.17
Gender	0.50*	[0.11, 0.88]	0.18	.54
Age	0.02	[−0.05, 0.09]	0.03	.12
Time in HI	0.04	[0.002, 0.08]	0.02	.44
Exposure (Between)	0.27	[−2.35, 2.98]	1.33	.06
Interactions (Between)	−2.74	[−5.78, 0.31]	1.55	.42
Friend Interactions (Between)	4.50**	[1.50, 7.42]	1.50	.60
Exposure (Within)	−0.40	[−1.32, 0.50]	0.46	.08
Interactions (Within)	0.05	[−1.00, 1.14]	0.54	.01
Friend Interactions (Within)	1.81*	[0.28, 3.23]	0.73	.21
Social Network Diversity	0.48	[−0.35, 1.30]	0.42	.32
Outgroup Exclusion	0.08	[−0.10, 0.25]	0.09	.22
Ingroup Exclusion	−0.23*	[−0.39, −0.07]	0.08	.63
Outgroup Belonging	−0.03	[−0.25, 0.20]	0.19	.05
Ingroup Belonging	−0.03	[−0.40, 0.34]	0.12	.04
Outgroup Attitudes	0.13	[−0.01, 0.27]	0.07	.42
Ingroup Attitudes	0.14	[−0.15, 0.41]	0.14	.23
Social Dominance Orientation	0.14	[−0.08, 0.36]	0.11	.28
Anxiety	−0.41*	[−0.73, −0.07]	0.17	.50
MEIM	0.41	[−0.13, 0.95]	0.27	.36

* $p < .05$, ** $p < .01$, *** $p < .001$. Between = Between-person effect. Within = Within-person effect.

Comfort in talking about race

We examine “Race Comfort” as our outcome in the following models. On average, participants were generally comfortable in talking about race, $M = 4.92$, 95% CI [4.70, 5.13], $SE = 0.11$ (out of a 6-point scale).⁶

There was a significant within-person effect of Friend Interactions, $b = 1.81$, 95% CI [0.28, 3.23], $SE = 0.73$, $p = .015$, $r = .21$. When participants interacted with cross-race close friends more often than they usually do, they felt more comfortable talking about race. There was also a significant between-person effect of Friend Interactions, $b = 4.50$, 95% [1.50, 7.42], $SE = 1.50$, $p = .008$, $r = .60$. Participants who interacted with cross-race close friends more often, relative to other participants, were more comfortable talking about race. In addition, the effect of Ingroup Exclusion was significant, such that the less exclusion they reported feeling from their own racial/ethnic group, the more comfort they felt talking about race, $b = -0.23$, 95% CI [−0.39, −0.07], $SE = 0.08$, $p = .012$, $r = .63$. There was also a significant gender effect, $b = 0.50$, 95% CI [0.11, 0.88], $SE = 0.18$, $p = .015$, $r = .54$: Women felt more comfortable talking about race than men. Finally, there was a significant effect of intergroup anxiety, such that the less anxiety they reported, the more comfort they felt talking about race, $b = -0.41$, 95% CI [−0.73, −0.07], $SE = 0.17$, $p = .031$, $r = .50$. All other controls and predictors in the model were non-significant, $ps > .05$. See, Table 4 for all parameter estimates. We explore the interpretation of these findings in the Discussion.

Participant race exploratory analyses

Finally, we explored whether participant’s race predicted their mention of race and comfort talking about race in daily conversations, while controlling for time to account for any third variables that may covary with time. We found that 4 White and 21 racial minority participants did not mention race once during the week. A 2-level logistic multilevel model revealed that there was no effect of race on likelihood of using race in daily conversations, $b = -0.26$, 95% CI [−0.73, 0.19], $SE = 0.23$, $p = .266$,

Odds Ratio = 0.77:1. There was also no effect of race on frequency of mentioning race, $b = -.63$, 95% CI $[-1.60, .34]$, $SE = .49$, $p = .201$, *Odds Ratio* = 0.86:1. We also found no effect of race on comfort with using race in daily conversations, $b = -0.08$, 95% CI $[-0.44, 0.29]$ $SE = 0.19$, $p = .678$, $r = -.16$.

Discussion

Our findings show that exposure to and interactions with racially/ethnically diverse others did not predict mention of race in daily conversations. Only interactions with close friends of different racial/ethnic backgrounds and low intergroup anxiety significantly predicted whether or not people used race in their conversations and how frequently they did so. We found similar results regarding factors that influenced people's comfort in using race in their conversations. People in the racially diverse context of Hawaii were generally comfortable when they talked about race, but specifically, we found that more interactions with racially/ethnically diverse friends (both within-person and between-person) and lower intergroup anxiety was related to greater reported comfort when having conversations that included race. Two unexpected findings were that more negative outgroup attitudes were related to greater frequency of race-related conversations, and feeling less excluded by your ingroup was also related to greater comfort in conversations about race.

An important finding that was not directly hypothesized was the relationship between opportunity for contact with racially/ethnically different others and actual contact ($r = .67$; see, Table 1). This means opportunity for contact explained about 45% of the variance in actual contact, suggesting that opportunity for contact is very important but is only about half of the story. These findings may be reflective of experiences in racially diverse contexts, where people may be reporting more opportunities for contact on average than less racially diverse contexts. Future work should be conducted in less racially diverse contexts to examine the relationship between opportunity for interracial contact and actual contact to test whether this is a unique function of racially diverse contexts.

It is no surprise that more interactions with racially/ethnically diverse friends related to mentioning race in conversations and greater comfort in those conversations. Intergroup contact, specifically with cross-race friends, has been shown to reduce intergroup anxiety (Page-Gould et al., 2008), and thus, we would expect intergroup contact should facilitate people mentioning race in conversations and their comfort when talking about race. Importantly, we found that interactions with racially/ethnically diverse *close friends* predicted a greater likelihood of having a race-related conversation, having them more frequently, and comfort with race in such conversations beyond just exposure and general interactions with racially/ethnically diverse people. Having a conversation with a stranger or acquaintance who is of a different race/ethnicity might encourage colorblind conversations for fear of awkwardness, misunderstandings, or negative judgments (e.g., that one is prejudiced). Conversely, having a conversation with a close friend, who is of a different race/ethnicity may naturally encourage the topic of race to occur. Cross-race friendships may be one way *relational diversity* (i.e., two different groups that feel equally welcome and accepted; Gurin et al., 2002) can exist, and as such both parties may feel more comfortable to have discussions that pertain race. Furthermore, there is support that *relational diversity*, in the form of cross-race friendships, may be important for individuals in racially diverse contexts. Previous research conducted in Hawaii found that participants who had more racially diverse *friends* were lower on levels of race essentialism endorsement. Additionally, an increase in acquaintances that were of a different race predicted a reduction in participants' race essentialism endorsement (Pauker et al., 2017). These findings support previous work in the intergroup contact literature which posits that meaningful contact is essential for mitigating negative intergroup attitudes and behavior (Page-Gould, 2012; Pettigrew & Tropp, 2006). Conversely, when individuals only engage in intergroup contact through exposure to or interactions with people whom they are not friends with, they may purposefully avoid conversations about race in order to appear nonprejudiced in these cross-race interactions (e.g., Apfelbaum et al., 2008). One alternative explanation for our results is that because the current study included a racially diverse sample (opposed to a primarily White one), the majority of our participants perhaps felt more comfortable talking about race because of their own

background. Past research has found, for example, that White individuals tend to find interracial interactions and race-related discussions more stressful than Black individuals (Trawalter & Richeson, 2008). However, our findings persist even when controlling for participant race, suggesting that both White and racial minority participants reported no significant difference in their comfort discussing race in their conversations. Furthermore, even when we examined race as the focal predictor, we found no differences between White and racial minority participants on whether they mentioned race in their daily conversations, how frequently they occurred, nor their comfort using race in their daily conversations. Thus, regardless of an individual's racial identity, the development of cross-race friendships seems to be important when it comes to increasing the comfort people have in engaging in race-related discourse. Given these findings, it is possible that these results would replicate in contexts with less racial diversity, so long as individuals were able to foster close friendships with people of a different race/ethnicity than themselves.

Intergroup anxiety was also strongly linked to mentioning race in conversations and subsequent comfort in those conversations. Participants who reported low levels of intergroup anxiety were more likely to have race-related conversations, have them more often, and feel comfortable doing so. Work in this area finds that individuals high on intergroup anxiety tend to avoid situations where they may need to engage in cross-race interactions (both real and imagined; Stephan & Stephan, 1985). Thus, we would expect that these same individuals would likely avoid opportunities to discuss race, and would feel uncomfortable in these types of conversations. Conversations where race is involved are often fraught with the possibility of misunderstandings or social transgressions. Individuals who already report high levels of intergroup anxiety are likely not inclined to seek out conversations where these transgressions might occur. Indeed, past work has found that White individuals exhibit significantly more anxious behavior in race-related conversations as compared to race-neutral conversations (Trawalter & Richeson, 2008). Thus, many White people strategically avoid mentioning race (Apfelbaum et al., 2008). However, recent work has found that both White and Asian individuals in the racially diverse context of Hawaii do not hesitate to discuss race (Meyers et al., 2021). So, we initially expected race-related conversations to be frequent and comfortable in our sample from Hawaii. Interestingly, our findings suggest that even in a racially diverse context where the social norms regarding race may be less colorblind, intergroup anxiety is still strongly linked to whether or not people engage in race-related conversations. It may be that even in contexts that foster race-conscious norms, and are racially diverse, people will vary on their level of comfort with interracial interactions. While not examined in the scope of this paper, it might suggest that these findings would replicate in contexts that are less racially diverse.

An intriguing finding was that a greater frequency of conversations about race was related to less positive outgroup attitudes. One possible explanation is that conversations about race may reinforce differences. Conversations about race may be highlighting group differences, or race-based harm such as inequality or discrimination. For example, Sanchez et al. (2022) found that while there are benefits to race-related conversations, Black participants were especially concerned about the risks in these conversations with White partners. It may be that having conversations about race daily may make racial minorities (who were a large proportion of our sample) anticipate more experiences with discrimination, which could lead to more unfavorable attitudes toward outgroup members. In our sample, those who mentioned race four times or more in their conversations throughout a day reported talking about race in relation to making jokes or discussing current events slightly more than other reasons (although not significant). Making jokes about race often highlight group differences in negative ways, and the current events of 2016 surrounding race were likely often centered around racial injustice and discrimination. Alternatively, it is possible that some participants already had more negative outgroup attitudes prior to participating in our study, and those that did engaged in more discussions about race. Future research should aim to disentangle the directionality of this effect. Unexpectedly, we found that ingroup exclusion was also related to individuals' comfort with race-related conversations. Given that our sample was itself very racially diverse, it may be that to feel comfortable speaking about race-related topics, one must feel like a *true* member of a racial group. Atypical group members can face negative

consequences such as less perceived access to race-based resources (D. T. Sanchez & Chavez, 2010), and when atypical group members self-categorize themselves as more typical of a racial group, they feel more entitled to race-based resources (Good et al., 2010). Similarly, those who do not feel like true group members (i.e., face higher ingroup exclusion) may not feel they have the credentials to speak about race and thus experience more discomfort. Without validation from one's ingroup, people may feel less comfortable discussing race-related topics, particularly in a context where there is no clear numerical majority in the population. However, the direction of this relationship is unclear, and it is possible that experiencing discomfort in race-related conversations contributes to feelings of exclusion from one's ingroup. Future research should aim to disentangle the nature of this relationship, and whether comfort with race-related discussion fosters greater belonging with others, or if ingroup exclusion predicts discomfort with these conversations.

Limitations and future directions

This study provides additional evidence to support the notion that the *quality* of intergroup contact (via close friends) is essential to fostering positive intergroup relations. If high quality intergroup interactions can lead to more comfortable race-conscious conversations, these interactions could possibly shape a person's intergroup strategies more broadly. Recent work on *tertiary transfer effects* of intergroup contact has found that positive intergroup contact has the potential to not only shape future interactions, but also to have a broader psychological influence on individuals' cognitions (see, Boin et al., 2021). One thing that is still unclear from the current results is the directionality of the observed relationships. It could be that people are more comfortable talking about race when with racially/ethnically diverse friends, simply because these conversations are happening with an individual who is a close friend. Simply having racially or ethnically diverse friends may not increase people's ease with racial conversations with those outside their immediate friend group. It is unclear whether these relationships impact only their conversations with their friends or if it generalizes more broadly to improve their intergroup strategies with any outgroup member. Furthermore, we are unable to distinguish what occurs in cross-race vs. same-race conversations about race. It may be entirely different factors that facilitate comfortable race-related conversations when with an ingroup vs. outgroup member. Future research should tease apart how cross-race friendships and interactions impact race-related strategies and whether they extend further than those current relationships.

Lastly, given that many of the individual predictors we measured were exploratory in nature, future research should aim to replicate these results, particularly with regard to our unexpected relationships between outgroup attitudes and frequency of discussing race and ingroup exclusion and comfort with discussing race. These individual predictor measures were also given to participants *after* their participation in the experience sampling portion of the study. It is possible that after a week of answering questions pertaining to race, participants' responses were influenced by the salience of monitoring their cross-race interactions. Future research could counterbalance measures before and after experience sampling. In addition, this design also limited our statistical power because only participants who completed the final measures (at the end of experience sampling) were included in our analyses. However, all our significant effects, except the within-person effect of interaction with friends for mentioning race, were sufficiently powered (i.e., at least 80% power). It will be important for future work to replicate these effects in a larger sample. Furthermore, we measured exclusion and belonging by asking whether participants felt excluded from or belonging with a number of monoracial racial groups (e.g., How excluded do you feel from East Asians, Native Hawaiians, etc.), from which we calculated participants' ingroup and outgroup scores based on their self-identified race. This may potentially measure exclusion/belonging in a different way as compared to asking participants' sense of exclusion/belonging from their own racial/ethnic group more broadly. Particularly, for multiracial individuals who identify with multiple racial/ethnic groups, they may report different levels of exclusion/belonging from their own self-conceived racial/ethnic group compared to particular racial/ethnic groups when isolated (e.g., greater belonging to East Asian/White groups, but feel greater exclusion from East Asians

in isolation). Future research should measure sense of exclusion and belonging in both ways to better understand how ingroup and outgroup exclusion/belonging may impact comfort with discussing race.

Conclusion

The current study used a novel experience sampling approach to investigate the relationship between exposure to and interactions with racially/ethnically diverse others and individuals' mentions of race and comfort with race in everyday conversations. Greater interactions with racially/ethnically diverse close friends and lower intergroup anxiety related to a greater likelihood of mentioning race in conversations, more frequent race-related conversations, and greater comfort with race in conversations. Other potential predictors of comfort in racial discourse included lower feelings of exclusion from one's ingroup. These results bolster previous research on the importance of the quality of intergroup contact in easing tension in intergroup relations and illuminate other potential factors, such as identity exclusion, that can foster more anxiety when talking about race. With our society growing more racially diverse, these findings expand our understanding of the dynamics of intergroup relationships within racially diverse contexts and outside of the scope of artificially dichotomous intergroup interactions (e.g., White vs. POC). By understanding how critical components of racial harmony (such as intergroup contact) manifest in racially diverse environments, we gain insight into the behaviors that underlie positive race relations in contexts that will become increasingly pervasive in the near future.

Notes

1. We specifically chose to ask participants about racially/ethnically diverse others due to the importance of ethnic diversity in Hawaii (Bocher & Ohsako, 1977; Newton et al., 1988; Okamura, 1994)
2. Although surveys could also be nested within day, we found that the three-level nested structure resulted in a singular model, indicating that this three-level data structure was too complex to be supported by the data. In addition, a cross-classified model indicated day (0.02% of variance) and beep (i.e., morning or evening survey; 2.18% of variance) accounted for a negligible amount of variance and were thus omitted from the model.
3. Results were identical when running models with an autoregressive covariance structure, Likelihood Ratio Test = 2.40, $p = .121$.
4. We conducted initial analyses for Level 1 predictors across participants who completed the final backend survey vs. not and found there were no significant differences among our main variables of interest (mentioning race, frequency of race, and comfort with race), and thus we only report results for participants who completed the final survey.
5. There was no significant difference in the frequency of mentioning of race, and participants' comfort with race, across the type of race-related conversation, and therefore we do not examine type of race-related conversation further in the paper.
6. We calculated the mean using a random-intercept multilevel model with no predictors to account for the nested nature of the data. The mean is the intercept.
7. Two participants had missing data and were thus excluded from analyses.
8. Twelve participants did not report having a race-related conversation throughout the week, therefore analyses are conducted on $n = 43$.

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Data availability statement

The data described in this article are openly available in the Open Science Framework at <https://doi.org/10.17605/OSF.IO/S248G>.

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