Abstract

As our society’s multiracial population grows researchers seek to understand how multiracial individuals conceptualize their identity and how their conceptualization may differ from that of monoracial individuals. While there are many theories describing racial identity development for those with multiple racial backgrounds, there is inconsistency in the factors associated with a positive identity for these individuals, perhaps due to the fluidity inherent in multiracial identity. Much of the literature on multiracial identity development attempts to fit these individuals into our current models of racial identity, which typically only include monoracial identities as identity possibilities. Reframing identity conceptualization as including a “multiracial” category versus attempting to fit multiracials into multiple racial categories may broaden our understanding of how multiracial individuals develop their identity. Investigating multiracial identity in Hawaii, a location where those who identify with more than one race are in the numerical majority, may provide some insight into potential benefits multiracial individuals garner from an environment where a “multiracial” category is salient. The present studies aim to explore how multiracial individuals in Hawaii conceptualize their identity, how this relates to their psychological well-being, and how making “multiracial” a salient category, through self-identification contexts, impacts well-being and sense of belonging. I found that environment (Hawaii vs. New Jersey) and racial composition played an important role in how multiracials navigated their identity, experienced discrimination, and their well-being. Additionally, I found that being forced to choose a monoracial identity led to greater depressive symptoms for multiracial individuals. Implications for how various contexts influence multiracial identity and their inter/intra-group outcomes will be discussed.
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**Introduction**

According to the U.S. Census, people who identified with more than one race rose 32 percent between 2000 and 2010 (U.S. Census, 2010). This growing multiracial population will likely expand our conceptualization of racial categories, as identifying with more than one race opens up new racial combinations that are not able to fit within our current monoracial categories (Chen & Hamilton, 2012). Steadily, there has been an increase in research focusing on the multiracial population (e.g., Shih & Sanchez, 2005). While much of this work has addressed multiracial identity and its complexity, little attention has been given to the implications of forming a new “multiracial” category for intergroup relations and to understanding the costs or benefits of belonging to such a category. With the movement for recognizing a multiracial identity building, an important question comes to mind: is “multiracial” a valid racial category? It was not until 2000 that the U.S. census even provided an option to mark more than one race, but even with this development it is unclear whether merely selecting multiple options adequately assesses a meaningful identity.

Past research indicates that forcing multiracial individuals to choose one racial category leads to lower self-esteem and greater depressive symptoms (Sanchez, 2010; Townsend, Markus, & Bergsieker, 2009). However, research has no examined whether identifying with an inclusive, yet singular category such as “multiracial” has benefits for psychological well-being. Multiracial individuals are often construed by their parts rather than their whole. For example, we might think of someone who is Black/White as half Black and half White, or someone who is Asian/Hispanic as half Asian and half Hispanic, instead of belonging to a more inclusive “multiracial” category. Because a multiracial category encompasses numerous ethnic identities under a common superordinate identity, ingroup membership should be expanded (Dovidio,
Gaertner, & Validzic, 1998) which may foster potential benefits, such as an increased sense of belonging with multiple ethnic groups and higher intergroup trust.

In hopes of better understanding the multiracial experience and the potential implications of adopting a social identity that encompasses multiple groups, the present research examines how the salience of a multiracial category affects racial identity and race perception processes for multiracial individuals, particularly within a diverse environment. Hawaii is an ideal setting to examine this question, with 77 percent of its population identifying as non-White and nearly 20 percent identifying with more than one race (U.S. Census, 2010). Utilizing Hawaii’s unique population will provide insight into how expanding diversity will affect race relations and identity processes in the larger U.S. population, which is expected to change drastically over the next 50 years. Through a series of studies, I investigated the effects of a diverse environment on multiracial identity and well-being, and examined how priming specific identity categories within a diverse environment shapes multiracial individuals’ sense of belonging. These studies test the hypotheses that (1) a diverse environment produces different social norms regarding race and consequently multiracial individuals experience less identity threat and perceived discrimination, leading to better psychological well-being, (2) the salience of a “multiracial” category promotes a better sense of belonging and closeness to a greater variety of racial groups and thus bolsters psychological well-being.

Multiracial Identity

Multiracial identity can be defined in a number of ways. Compared to those with a monoracial identity, there is considerable flexibility in how a multiracial individual may choose to identify. Some will choose to identify with one part of their racial background (i.e., in line with government-designated racial categories, such as White, Black, Asian, American Indian, etc.), while others may consider themselves “mixed” or “multiracial”. In some contexts, people
adopt slang for specific types of multiracial backgrounds, such as “hapa”, meaning mixed with Asian/Pacific Islander ancestry, or “blasian” for those with mixed Asian and Black ancestry. This flexibility in identification, challenges the traditional notion of race as biologically based (Shih & Sanchez, 2009). Specifically, people tend to conceptualize race as either a biological or a social construct (Williams & Eberhardt, 2008). As a biological construct, the definition of race is strict, based on genetic make-up, and people cannot belong to more than one racial group. As a social construct, the definition of race is more flexible, defining race as a socially created category that is dependent on context. This notion of race as socially constructed and mutable points to a more blurred definition of racial identity consistent with the flexibility apparent in many multiracial individuals identification (e.g., Harris & Sim, 2002; Hitlin, Brown, & Elder, 2006), as well as their view of race as a social construct (Shih, Bonam, Sanchez, & Peck, 2007; Shih & Sanchez, 2009).

Politically motivated agendas are a prime example of how shifting racial identity has become more commonplace. Take, for example, the change in racial identification options that occurred with the U.S. Census in 2000. For the first time, people were allowed to identify as more than one race (through the ability to check more than one box). Despite this advancement in the acknowledgement of multiracial people, there was still much debate over whether “multiracial” should be included as its own racial category. Rockquemore, Brunsma, and Delgado (2009) illustrate the numerous facets in multiracial identity development and the forms it may take. They separate racial identity (how one self-identifies), racial identification (how others perceive you), and racial categorization (the identity you chose depending on your context). In this sense, all the forms of identification are likely to be highly correlated but do not always overlap. This highlights the difficulty inherent in trying to conceptualize the multiracial
experience and measure multiracial identity. For the purposes of this study, I will touch upon all three aspects of multiracial identity, primarily from the target’s perspective. While it is important to be aware that multiracial identity can be expressed in a variety of ways, for the sake of the current study, I choose to identify those who hold more than one racial background as being multiracial.

Knowing that multiracial identity remains a fluid concept, much research has focused on how multiracial individuals come to self-identify. Rockquemore and Brunsma (2002) propose a multidimensional model of how biracial/multiracial individuals may choose to identify: with 1) a singular identity; where one chooses a single racial background, 2) a border identity; where one chooses to identify as “biracial” or “multiracial”, 3) a protean identity; where racial identity is interchangeable, and 4) a transcendent identity; where one rejects any type of racial identity (i.e. identify as “human”). There is a general consensus in biracial/multiracial identity development theory that an individual undergoes a discovery process to ultimately settle on a self-identity (Miville, Constantine, Baysden, & So-Lloyd, 2005). Qualitative studies show a general pattern whereby multiracial individuals typically go through a period of self-evaluation or questioning, which may include experience with racism or conflict surrounding their racial background and experience using their races interchangeably to suit certain social contexts (Collins, 2000; Miville et al., 2005). In line with many of the biracial/multiracial identity development models, these qualitative studies seem to suggest that developing a healthy multiracial identity is tied to having an integrated identity (Kerwin & Ponterotto, 1995; Kich, 1992; Poston, 1990).

**Well-being**

Identity integration is when multiple seemingly conflicting social identities are conceived as compatible (Benet-Martinez & Haritatos, 2005). This concept, which originated with bicultural individuals, has been extended to apply to individuals with multiple racial identities
(Cheng & Lee, 2009). Past research as shown that high identity integration in multiracial individuals relates to positive psychological benefits, from high racial pride to buffering racial discrimination (Cheng & Lee, 2009; Jackson, Yoo, Guevarra, & Harrington, 2012). If achieving an integrated identity is considered the desired state for healthy racial identity development, how can this be reconciled with the conceptualization of multiracial identity as flexible and “chameleon-like”? The fluidity and malleable nature of racial identity for a multiracial individual is an important characteristic of what it means to be multiracial, from both the target’s and the perceiver’s perspective. It affords the target a mechanism to switch their group membership and check off specific racial categories in contextually relevant situations such as college admissions or census forms. Additionally, multiracial individuals are not likely to be considered “multiracial” unless they are perceived as racially ambiguous, otherwise they are often categorized into a particular monoracial group and consequently don’t share common experiences with other multiracials (e.g., being asked “What are you?”; Miville et al., 2005). Thus, this malleable aspect of a multiracial identity is principal in the experience of multiracial individuals.

To examine how malleable racial identification relates to well-being, Sanchez, Shih, and Garcia (2009) created a scale to measure how much individuals perceive that their racial identity changes across time and different social contexts. Sanchez and colleagues hypothesized that because malleability would lead to instability and “compartmentalization” of selves that this would contribute to lower psychological well-being. While they did find that those with more malleable racial identities had greater depressive symptoms, there were a few factors that could have potentially explained this relationship. For one, unstable regard for one’s multiracial identity mediated the relationships between malleable racial identity and depressive symptoms;
such that lack of pride and unhappiness with one’s multiracial background led to lower well-being. Another important factor to consider is that the multiracial individuals recruited for this study were from an online sample and did not specify from which part of the country they were from, which may be important for understanding their results. As such, the benefits (or lack of benefits) of developing a malleable racial identity are still unclear. For example, it is possible that malleable racial identity may only lead to unstable regard in certain contexts, and thus the interpretation of these results may depend on features of the environment. Thus, it will be important to examine how multiracial individuals navigate their multiple identities as a result of the social context they reside in (e.g., a highly diverse environment versus not).

Contrary to malleable racial identity, achieving an integrated identity is consistently related to positive multiracial identity development (Binning, Unzueta, Huo, & Molina, 2009; Cheng & Lee, 2009; Jackson et al., 2012). Stemming from their work on bicultural identities, Cheng and Lee (2009) posit that multiracial identity integration manifests itself through two mechanisms: conflict and distance. The idea here is that if individuals have integrated their multiple identities, they will experience low levels of conflict between those identities and perceive them to be close to each other or harmonious. As further support for this idea, Brook, Garcia, and Fleming (2008) examined the relationship between holding numerous social identities and psychological well-being. They found that identity harmony along with importance of identity accounted for the association between number of identities and high levels of well-being. Therefore, having harmony between these multiple social identities was a key component to achieving well-being whilst juggling multiple identities. Multiracial identity integration has also been show to be related to higher levels of psychological adjustment (Jackson et al., 2012). In this study multiracial identity integration was examined through two subscales; conflict and
distance. Low conflict was found to be the key factor in buffering perceived racial discrimination, and this consequently led to lower levels of distress symptoms and negative affect. The interesting argument made here is that high levels of identity integration may be allowing multiracial individuals to ward off prejudice or discrimination by utilizing a frame-switching technique, very similar to the idea of being malleable with one’s racial identities. Rather than these two identity conceptualizations working in opposition, it may be that they need to work in tandem in order to be beneficial for multiracial individuals’ well-being.

**Environment and Salience**

While we know that the ways in which individuals develop and conceptualize their identity is important for fostering positive psychological outcomes, individuals do not live in a vacuum. Rather, their identity develops within and is shaped by their immediate social context. Depending on your social environment and context, certain identities become more or less salient (Turner, Oakes, Haslam, & McGarty, 1994). However, research on the relationship between ethnic and/or racial identity and psychological outcomes is often mixed. We know that collective self-esteem (which stems from social identification within a variety of social categories) has benefits for well-being and can buffer the negative effects of discrimination (Crocker & Major, 1989). When examining how the self interacts in a social context, salience is an important factor that impacts when and how strongly a particular social identity benefits us. For example, racial salience was found be particularly strong when racial composition of the environment matched the individual’s racial identity, and this bolstered sense of racial identity when race was salient led to higher levels of well-being (Yip, 2005). Similarly, Sanchez and Garcia (2009) examined how biracials’ well-being was related to the presence of stigmatized others, and found that being surrounded by others who shared their racial background increased the perceived value of their identity and boosted their well-being. Residing in an environment with those who are similar to
you appears to encourage psychological benefits by increasing an individual’s sense of belonging and in-group support (Postmes & Branscombe, 2002; Seaton & Yip, 2009). These lines of research highlight how diversity in one’s environment may shape identity experiences and psychological well-being.

Surprisingly, little research has examined multiracial identity in an environment where multiracial individuals are prevalent. Therefore, the present studies aim to address this gap in the literature by examining multiracial identity in Hawaii, where 20 percent of the population is multiracial (U.S. Census, 2010). Considering past research, growing up in a social context where having more than one racial background is common should make the category and identity of multiracial salient, and this salience should afford a strong sense of positive identity and psychological well-being for these individuals. Living in an environment where multiracial is a salient racial category should also afford multiracial individuals other benefits, such as a sense of community and belonging.

In addition to examining multiracial individuals in a more racially diverse environment, I aim to investigate how multiracial individuals’ social environments may interact with their own racial composition. By investigating a majority-minority (i.e., Hawaii) vs. majority-White (i.e., New Jersey) environment, not only does exposure to diverse others change across those two environments, but the status of the racial groups in said environments also changes. Most research has examined multiracial identity within a majority-White environment. Examining a majority-minority context may help to foster a better understanding of how multiracial individuals function in an environment where minorities have achieved higher numerical (and sometimes higher social) status. Consequently, because the status of racial groups may differ across these environments, the racial composition of a multiracial individuals’ identity (e.g.,
Black/White, Asian/White, Asian/Black, etc.) should also impact the meaning of their identity within these two environments. Little research to date has examined the varying experiences of multiracial individuals due to racial composition. Townsend, Fryberg, Wilkins, and Markus (2012) found that not all multiracial individuals choose to identify as biracial/multiracial and this related to the social status of an individuals’ racial background, such that Asian/White (higher status) biracial individuals were more likely to use the biracial/multiracial label. The current research investigates multiracial identity in two contrasting environments (Hawaii vs. New Jersey), and I predicted that the racial composition of multiracial individuals may influence not only how they choose to identify but also the meaning of their identity within that environment.

Living in a majority biracial/multiracial environment may also impact multiracial identity through fostering changes in how people in general think about race. Other research has shown that exposure to a majority biracial/multiracial environment elicited reduced race essentialist thinking compared to a majority white environment (Pauker, Weisbuch, & Ambady, 2012). Race essentialism—a concept that is largely incompatible with multiracial identity—is when race is thought to have a biological basis and is considered fixed and immutable (Haslam & Levy, 2006; Haslam, Rothschild, & Ernst, 2000; Williams & Eberhardt, 2008). Thus, majority multiracial environments seem to engender less essentialist thinking about race, which in turn supports a flexible notion of multiracial identity. Moreover, Shih, Bonam, Sanchez, and Peck (2007) found that when multiracial individuals endorse less race essentialist thinking they were better able to inhibit stereotypes when race was made salient. In addition to benefits garnered from having a salient multiracial category, a diverse, multiracial environment may also help to foster higher levels of self-esteem and well-being through supporting flexible notions of race and reducing susceptibility to stereotypes.
Multiracial as a Category

As the multiracial population grows, the notion of an overarching multiracial category has become more prominent in discussions of multiracial identity. With a larger reference group for multiracial individuals to turn to, many communities have begun to self-categorize themselves with positive labels such as “double” or “hapa” (Collins, 2000). It may be that with this greater recognition of a collective identity, multiracial individuals are starting to build a community that affords them the benefits that other minority groups have utilized to foster positive psychological adjustment. Multiracial individuals often face miscategorization by others or struggle to self-categorize themselves because of lack of knowledge or exposure to relevant category labels and/or differing expectations people have regarding what multiracial means (Hitlin et al., 2006). Research has shown that when multiracial individuals are forced to choose only one race compared to identifying with multiple races, self-esteem and motivation decreases significantly (Townsend et al., 2009). This problem seems to have been addressed through the change in format of the U.S. Census that now allows people to choose more than one race category. However, prior to this decision there was and still is much debate on whether “multiracial” should be included as its own category (Williams, 2008).

Adopting a multiracial category presents its own host of problems, most notably, the ambiguity of how this category is represented both in the minds of perceivers and multiracial individuals themselves. How multiracial people are perceived is subject to perceivers’ motivations and propensity to rely on social labels (Pauker & Ambady, 2009; Pauker et al., 2009), and even those individuals who do adopt a biracial or multiracial label may face an interpersonal cost (Sanchez & Bonam, 2009). Is there commonality in a multiracial experience, or is there too much variability in how these individuals are perceived, treated, and how they identify for this category to have any meaning?
It may be that in environments like Hawaii, where exposure to multiracial people is high, that a multiracial category will become salient and more meaningful. Indeed, past work has found that people in Hawaii compared to those in a majority White environment are more comfortable using a “multiracial” category (Pauker, Weisbuch, & Ambady, 2012). Thus, by investigating how multiracial individuals in Hawaii conceptualize their identity, I may be able to infer how highly diverse environments, particularly those with a high proportion of multiracials, shape the experience of this population. Affiliation towards a social category is highly dependent on individuals’ need to belong and ultimately ties into psychological well-being (Correll & Park, 2005). If “multiracial” becomes a salient category and an coherent ingroup for multiracial individuals, it would give them a social group with which to affiliate and feel acceptance, and this may afford them psychological benefits.

The unique aspect of adopting a “multiracial” category as an ingroup is that those who identify as multiracial belong to a diversity of backgrounds that are not limited to one race. Thus, adopting an ingroup that includes such a diverse array of members may expand what a typical ingroup may look like. Previous research suggests that ingroup membership can be expanded through minimal group membership (where distinction between groups of people are made by the most minimal characteristics, such as t-shirt color; Tajfel, 1970) and this minimal group membership is strong enough to shape attention and memory to this newly created minimal group and mitigate typical racial group differences (Van Bavel & Cunningham, 2012). If multiracial individuals’ ingroup membership expands to include all other multiracial individuals, regardless of their specific racial background, it may be strong enough to influence individuals’ sense of belonging and closeness towards a diverse group of people.
The Present Study

The present research aims to investigate multiracial identity in Hawaii and how the salience of “multiracial” as a category may be beneficial for those with more than one racial background. Hawaii is an ideal place to examine multiracial identity as it represents an environment that has a majority multiracial population. With our society steadily growing more diverse and the mixed race population increasing exponentially, Hawaii can serve as a potential window into what our future society may look like. Most of the research on multiracial identity has been conducted on the mainland U.S. and it is important to see whether multiracial individuals in Hawaii have comparable or different identity conceptualizations. Additionally it will be important to understand how multiracial identity functions within a diverse (Hawaii) vs. non-diverse (New Jersey) environment.

Because multiracial is a salient category in Hawaii, multiracial individuals may have access to a stable identity and a greater sense of belonging with a community of other self-identified multiracial individuals. In this case, I would expect to see that multiracial individuals in Hawaii, as compared to multiracials in the U.S. mainland, possess a strong and positive relationship between multiracial identity and psychological well-being, and potentially experience other benefits such as a higher sense of belonging to diverse others when their multiracial identity is made salient. Because the multiracial category is inclusive of many different races, it is possible that multiracial individuals who self-identify as “multiracial” feel a greater sense of closeness towards groups other than their own specific racial groups. Furthermore, because there is greater racial diversity in Hawaii, multiracial individuals should experience less identity threat and discrimination than those in the U.S. mainland, leading to greater well-being. These questions will be addressed in two studies. Study 1 examines multiracial identity in Hawaii compared to New Jersey using a correlational design. I explore
how malleable versus integrated identity concepts relate to psychological well-being outcomes, and other related factors, such as regard for multiracial status, identity threat, perceived discrimination, and racial composition (of the multiracial individuals). Study 2 examines multiracial as a category, by manipulating how multiracial individuals are able to self-identify (as multiracial or not), and exploring how self-identification affects well-being and sense of belonging. For these studies my hypotheses are as follows:

Study 1: In Hawaii, multiracial individuals will exhibit higher levels of identity integration than participants in New Jersey. High identity integration levels will be related to lower levels of identity threat and discrimination, therefore multiracial participants in Hawaii should also experience lower levels of identity threat and discrimination compared to participants in New Jersey.

Study 2: Those whose “multiracial” self-identification is highlighted will report higher levels of well-being and sense of belonging compared to those who are not allowed to identify as “multiracial.” Those in the “force-choice” condition will consequently have the lowest levels of well-being and sense of belonging.

**Study 1**

**Method**

Study 1 was designed to be an exploratory examination of how multiracial individuals in varying environments conceptualize their identity and how this conceptualization relates to well-being and other interpersonal consequences such as identity threat and discrimination. This study explored whether multiracial individuals in Hawaii compared to those in New Jersey conceptualized their identity as something malleable, whereby they switched between their multiple racial identities, or if they integrated these identities to create a more stable “multiracial” identity. I also examined which type of identity conceptualization was associated
with better well-being outcomes, as well as the extent to which multiracial individuals in the two environments experience discrimination and identity threat. Moreover, I examined if the racial composition of our multiracial participants interacted with their environment to influence outcomes, such as identity threat and discrimination.

**Participants.** Eighty participants from New Jersey ($M_{age} = 18.39$, $SD = .76$), with 43 females, 28 males, and 1 identifying as other (8 chose not to answer this question), and 83 participants from Hawaii ($M_{age} = 21.68$, $SD = 5.14$), with 60 females, 21 males, and 1 identifying as other (1 chose not to answer this question) completed the online survey. Participants for this study were recruited from the University of Hawaii at Manoa and Rutgers University’s undergraduate student population in exchange for extra credit for their psychology courses. Participants were told that this study aims to look at how people perceive themselves. As determined through a prescreening survey, only those who selected “multiracial” for their race or listed that they identified with more than one racial group, and who also indicated that they have lived in Hawaii longer than a year (for New Jersey participants, the only restriction was having lived in the U.S. longer than one year; no New Jersey participants were from Hawaii) were eligible to participate. In our Hawaii sample the racial composition breakdown was as follows: 4.8% Black-White, 26.5% Asian-White, 15.7% Asian-Other, 39.8% Mixed-Other, 6% White-Other, 7.2% not reported. In our New Jersey sample the racial composition breakdown was as follows: 12.5% Black-White, 16.3% Asian-White, 8.8% Black-Other, 5% Asian-Other, 21.3% Mixed-Other, 26.3% White-Other, 10% not reported. A power analysis was conducted using the statistical program called G*Power (Faul, Erdfelder, Buchner, & Lang, 2009) and found that a sample of 75 would provide power of 0.95 for an estimated effect size of $r = 0.40$. Thus, for this study I recruited around 80 individuals per location.
**Measures. Multiracial identity integration.** The Multiracial Identity Integration Scale (MII; Cheng & Lee, 2009) consists of two subscales (4 items each): conflict (HI $\alpha = .61$; NJ $\alpha = .65$) and distance (HI $\alpha = .43$; NJ $\alpha = .39$). The response scale ranges from from 1 (completely disagree) to 7 (completely agree) and includes items such as, “I feel torn between my different racial identities” (conflict) and “I keep everything about my different racial identities separate” (distance). Higher scores indicate low integration. Past research with the multiracial identity integration scale has broken it down into its subscales; conflict and distance. Since the distance subscale had low reliability in my samples, I omitted this sub-scale from analyses and focused only on the conflict subscale.

**Malleable racial identification.** The Malleable Racial Identification Scale (Sanchez et al., 2009) was used to measure the malleability of racial identification, as it fluctuates in different social contexts. The scale consists of 5 items, such as, “In different situations, I will identify more closely with one of my racial identities than another.” The response scale ranges from 1 (strongly disagree) to 7 (strongly agree) and higher scores indicate more malleability (HI $\alpha = .86$; NJ $\alpha = .82$).

**Unstable multiracial regard.** This was measured through an adapted version of the Rosenberg Self-Concept Stability Scale that was framed for multiracials by Sanchez and colleagueues (2009). Five items were used, including “Some days I am happy with my multiracial identity and other days I am not” scaled from 1 (strongly disagree) to 7 (strongly agree) with higher scores indicating more instability (HI $\alpha = .90$; NJ $\alpha = .87$).

**Well-being.** The Center for Epidemiological Studies Depression scale was used to measure psychological well-being (Radloff, 1977). This consists of 20-items that ask the
frequency of various depressive symptoms on a scale from 1 (none of the time) to 4 (all of the time), with an example item being “I felt depressed” (HI $\alpha = .89$; NJ $\alpha = .90$).

**Stress.** The Depression Anxiety Stress Scales (DASS-21; Antony, Bieling, Cox, Enns, & Swinson, 1998) is a 21-item scale measuring depression, anxiety and stress on a 4-point Likert scale. Only the stress subscale (consisting of 7 items) was used for this study (HI $\alpha = .82$; NJ $\alpha = .86$).

**Identity threat.** Perceived identity threat was measured with scaled adapted from Ethier and Deaux (1990). Items were modified to reflect a more generalized setting compared to the original scale’s specificity towards a school environment. For example, “I feel that I have to change myself to fit in at school” was changed to “I feel that I have to change myself to fit in with others.” This was measured on a scale of 1 (not at all) to 7 (all the time) and remained reliable (HI $\alpha = .84$; NJ $\alpha = .89$).

**Perceived discrimination.** The Perceived Ethnic Discrimination Questionnaire – Community Version (Brondolo et al., 2005) was used to measure perceived discrimination. Seven items were omitted from the original scale for their irrelevance to college students (e.g. pertaining to a job setting). Scale instructions were also modified from “Because of my ethnicity/race” to “Because of my multiracial background.” Example items include “Have others made you feel like an outsider who doesn’t fit in?” and was scaled from 1 (never happened) to 5 (happened very often) and remained reliable (HI $\alpha = .86$; NJ $\alpha = .88$).

**Procedure.** Participants who identified as multiracial in a pre-screen survey and expressed interest in participating were directed to an online survey on Qualtrics where they completed all the measures in the following order: Malleable Racial Identity, Unstable
Multiracial Regard, Multiracial Identity Integration, Well-being, Stress, Identity Threat, and Perceived Discrimination.

Results

Overview of analyses. In this first study I examined environment differences between Hawaii and New Jersey for all of my variables of interest. Next, I looked at environment by racial composition differences. Given that the two samples came from drastically different racial environments (one is a majority-minority environment whereas the other is not), I wanted to see if the racial composition of the multiracial participants related to their experiences (i.e., threat, perceived discrimination, well-being, stress) and whether that would change across the two environments. Lastly, I examined facets of multiracial identity across environment and racial composition. Past research on malleable racial identity has found that unstable multiracial regard explains the relationship between malleable racial identity and lowered psychological well-being (Sanchez et al., 2009). Based on these past findings, I explored whether unstable multiracial regard mediated the relationship between malleability and well-being, and also whether unstable regard also helped explain the relationship between malleability and conflict. For all regression analyses, variables were centered at the grand mean.

Environmental differences. To examine environment differences, I first ran an independent samples t-test on all our variables by environment (Hawaii vs. New Jersey). The only significant difference that emerged was a difference in conflict (identity integration), $t(161) = 2.15, p = .03$, whereby the Hawaii sample ($M = 2.95, SD = 1.11$) had higher levels conflict compared to the New Jersey sample ($M = 2.58, SD = 1.04$).

Environment by racial composition. To better understand any potential differences between Hawaii and New Jersey, I examined the racial compositions of our multiracial participants. Since it is possible that the racial composition of our two samples might be
confounded with their environments I conducted analyses that took into account the multiracial participants’ racial compositions, specifically with respect to examining participants’ experience of identity threat, discrimination, well-being, and stress in each environment. Taking into consideration their racial composition within each environment (i.e., the relationship between their identity composition and the majority/minority status of those identities within each environment) for these outcomes were especially important because identity threat and discrimination (and their consequences for well-being and stress) often stem from experiences as a stigmatized-racial minority.

Because multiracial identity, by definition, includes a variety of racial categories, I opted to dichotomize racial composition by whether participants were mixed with White or mixed with multiple non-White racial groups, therefore participants were categorized as part-White multiracial or non-White multiracial. To ascertain this information I looked at participants’ parents’ race and if at least one parent was identified as having White, Caucasian, European-American, or European ethnicities (Irish, German, etc.) then the participant was coded as being part-White. Overall there were 83 part-White (Hawaii $n = 39$, New Jersey $n = 44$) and 66 non-White (Hawaii $n = 38$, New Jersey $n = 28$) multiracial individuals (14 were missing this information). There was no significant difference in racial composition by environment, $X^2(1, n = 149) = 1.65, p = .19$.

**Identity threat and perceived discrimination.** I did not originally expect to see higher levels of conflict in the Hawaii sample. This finding could be due to differences in how different combinations of multiracial identity (i.e., different racial compositions) experience their identity in the two environments. For instance, perhaps certain racial compositions common in Hawaii are more susceptible to conflicting identities. In order to better understand why conflict was
occurring at higher levels in Hawaii, I examined participants’ experiences of identity threat and discrimination and how they varied by environment and racial composition. I conducted a 2 (environment) X 2 (racial composition) ANOVA on identity threat and perceived ethnic discrimination separately. For identity threat, there were no significant main effects for environment and racial composition, however, there was a marginally significant interaction, 
\[ F(1, 145) = 2.86, p = .09. \]
As displayed in Figure 1, participants in Hawaii were more susceptible to experiencing identity threat when they were part-White, whereas participants in New Jersey experienced more identity threat when they were non-White. For perceived discrimination, there were again no significant main effects for environment and racial composition, but a marginally significant interaction emerged, 
\[ F(1, 145) = 3.28, p = .07. \]
Participants in Hawaii who were part-White perceived experiencing more discrimination than non-White individuals, however for New Jersey the pattern was the opposite, with part-White individuals perceiving the least amount of discrimination (see Figure 2).

**Well-being and stress.** I ran a 2 (environment) X 2 (racial composition) ANOVA on well-being and stress (separately). No significant differences in well-being emerged. For stress, on the other hand, there was a significant main effect for racial composition, 
\[ F(1, 145) = 5.10, p = .025, \]
where part-White \((M = 2.36, SD = .07)\) multiracials experienced more stress than non-White \((M = 2.11, SD = .08)\) multiracials. There was also a marginally significant interaction, 
\[ F(1, 145) = 3.41, p = .06, \]
between environment and racial composition, where part-White individuals in Hawaii experienced higher levels of stress compared to their non-White counterparts, and part-White compared to non-White New Jersey participants differed little in their experiences of stress (see Figure 3).
Unstable multiracial regard as a mediator. Given that past research has found that unstable multiracial regard mediates the relationship between malleable racial identity and well-being (Sanchez et al., 2009), I wanted to replicate this finding. I conducted mediation analyses using Haye’s (2013) PROCESS algorithm, which utilized bias-corrected bootstrap confidence intervals based upon 1,000 bootstrap samples to determine indirect effects. I first ran mediational analyses with malleability predicting well-being and stress (separately), and found that both were significantly mediated by unstable multiracial regard (well-being: indirect effect = .05, 95% CI [.01, 12]; stress: indirect effect = .05, 95% CI [.01, 13]). Additionally, given the environmental difference I found with respect to conflict levels, I also examined the relationship between malleability and conflict with unstable multiracial regard as a mediator. Unstable regard significantly mediated the relationship between malleability and conflict, indirect effect = .14, 95% CI [.05, .25].

Given that my findings thus far suggest that environment and racial composition influence multiracial identity I examined environment and racial composition as moderators in this mediational analyses. I ran moderated mediational analyses with environment and racial composition moderating unstable multiracial regard’s mediation of the relationship between malleability and the following outcomes: well-being, stress, and conflict.

I found a 3-way interaction between environment, racial composition and malleability, predicting unstable multiracial regard, B = -.17, t(141) = -2.14, p = .03. The relationship between malleability and well-being was significantly mediated by unstable multiracial regard only for part-White individuals in Hawaii, 95% CI [.03, .28]. I found a similar relationship when examining the relationship between malleability and stress, such that only for part-White individuals in Hawaii did unstable multiracial regard mediate the relationship, 95% CI [.03, .31].
Lastly, I found consistent results for malleability relating to conflict, where only part-White individuals in Hawaii exhibit unstable multiracial regard mediating this relationship, 95% CI [.15, .56]. All other unreported mediational relationships were not significant. While multiracials’ environment combined with their racial composition seems to engender differential experiences of discrimination and threat, both environment and racial composition appear to also influence identity conceptualization. An unstable regard for one’s multiracial identity only explained the relationship between malleability and identity integration (as well as the relationship between malleability and well-being and stress) for part-White individuals in Hawaii, and did not explain these relationships for multiracials with different racial compositions or for those in New Jersey.

**Discussion**

I found that environment played a considerable role in predicting various identity related and psychological well-being outcomes. Contrary to my initial hypotheses, participants in Hawaii actually had lower identity integration (higher conflict). More importantly, I found that racial composition had a large impact on a multiracial individuals’ identity depending on their environmental context. Overall, there is a general trend that being part-White in a more diverse context, such as Hawaii, has general negative consequences, while the same multiracial identity combination is much more beneficial for those in a majority White context, such as New Jersey. I found that being part-White in Hawaii was associated with greater levels of identity threat, perceived ethnic discrimination, and stress. When looking at how the various identity concepts related to each other, I found more evidence of the negative consequences for holding a part-White racial background in Hawaii. Unstable multiracial regard helped to explain the relationship between malleability and well-being, stress, and conflict, but only for part-White multiracials who lived in Hawaii. Therefore, unstable multiracial regard only seems to help
explain how a malleable racial identity functions for part-White individuals in Hawaii. Environment appears to play a key role in identity conceptualization, but perhaps operates through directing the experiences of different types of multiracial individuals within an environment. Specifically, multiracials’ racial composition, likely driven by their experiences within that environment, impacts their identity integration, malleability, and regard for their multiracial identity.

Study 2

Study 2 aims to investigate how the salience of a multiracial identity for multiracial individuals affects their well-being and sense of belonging. Building on Study 1, the findings of Study 2 will provide insight into the directionality of the relationship between identifying as multiracial and positive psychological outcomes—specifically whether having the option to identify as “multiracial” contributes to a higher sense of belonging and closeness to ethnic groups that overlap with their own. Furthermore, I anticipate that identifying as “multiracial” will increase levels of closeness to outgroup members, and consequently contribute to higher well-being. Furthermore, I will examine how racial composition interacts with these outcomes, building on Study 1’s findings.

Method

In order to prime a multiracial identity, participants completed an identity questionnaire that was directed in one of three ways: (1) with a force-choice one option; including the “multiracial” category, (2) a choose all that apply option; including all typical monoracial categories, and (3) finally a control; a force-choice one option with no “multiracial” category. Participants in the first condition should be primed with a multiracial identity, compared to the other conditions where they are only allowed to identify themselves as belonging to monoracial
categories. Consequently, when primed with a multiracial category instead of monoracial categories, their identification with other multiracial individuals should increase, which may lead them to feel closer to multiracial group members more generally, even those outside of their own specific racial background.

**Participants.** One-hundred and four participants (78 females, 25 men, and 1 identified as other; $M_{\text{age}} = 20.34$, $SD = 2.65$) were recruited from University of Hawaii at Manoa’s undergraduate student population through undergraduate psychology courses in exchange for extra credit for their courses. Participants were told that this study aims to look at people’s perceptions of others. Through a prescreening survey, individuals whose Mother’s and Father’s racial identity differed or who themselves identified with more than one racial group, and indicated that they have lived in Hawaii longer than a year were included in this study. A power analysis was conducted using the statistical program called G*Power (Faul et al., 2009) and found that a sample of 100 would allow us to obtain power of 0.95 with an estimated effect size of $f = 0.4$.

**Measures.** Racial identity questionnaire. Participants were randomly assigned to one of three conditions: (1) multiracial condition (participants are only allowed to mark one option on the race demographic questionnaire, including a “bi/multiracial” option), (2) check-all condition (participants are allowed to choose as many racial identifications as necessary to identify themselves, not including a “bi/multiracial” option), and (3) a forced-choice condition where participants are forced to choose one option that does not include “bi/multiracial”.

**Identity and sense of belonging.** The Multigroup Ethnic Identity Measure (Phinney, 1992) was used to measure ethnic identity on a 4-point scale with items such as, “I have a strong sense of belonging to my own ethnic group”. Additionally, I used two questions to measure
sense of belonging and sense of exclusion on a 7-point scale (Ahnallen, Suyemoto, & Carter, 2006); “To what extent do you feel a sense of belonging to the following communities or with the following groups of people?” and “To what extent do you feel excluded from the following communities or by the following groups of people?” These last two items were repeated for each racial category (e.g. East-Asians, Blacks, Whites, Multiracials, etc.)

**Closeness.** Participants completed the Inclusion of Ingroup in the Self Measure (IIS; Tropp & Wright, 2001). This is a one-item scale where participants choose a pair of circles that best represent their identification with multiple ethnic groups (1 = no overlap to 7 = high degree of overlap). This item will be repeated for each racial category (e.g. East-Asians, Blacks, Whites, Multiracials, etc.)

**Well-being.** Participants completed a number of scales assessing both psychological and physical well-being. This included the Center for Epidemiological Studies Depression Scale (CES-D Scale; Radloff, 1977), a 20-item self-report measure assessing depressive symptoms using a 4-point Likert scale, the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), a 5-item measure for global life satisfaction using a 7-point Likert scale (adapted to a 4-point scale for this survey), the Depression Anxiety Stress Scales (DASS-21; Antony, Bieling, Cox, Enns, & Swinson, 1998), a 21-item scale measuring depression, anxiety and stress on a 4-point Likert scale (only the 7-item stress subscale was used for this study), and the Cohen-Hoberman Inventory of Physical Symptoms (CHIPS; Cohen & Hoberman, 1983), a 33-item scale measuring physical health symptoms on a 5-point Likert scale.

**Procedure.** Participants came into the lab for a study about relationships and well-being. Participants were randomly assigned to one of three conditions as outlined by the racial identity questionnaire. After the questionnaire, participants were asked about their sense of belonging,
closeness, and well-being. These blocks were randomized to minimize the influence of order effects. Finally, participants were debriefed and thanked.

Results

Measuring ingroup and outgroup. Because of the variability of multiracial participants’ backgrounds, I calculated belonging, closeness, and exclusion based on each individual’s specific racial composition. For example, if a participant indicated they were part-Asian and part-White, their ingroup would be calculated only for items that included Asian and White targets, while their outgroup would be calculated using all other target items. I took the mean scores for these items to more accurately capture ingroup and outgroup feelings based upon each individual’s racial composition. Subsequently, I created six new items: ingroup belonging, ingroup closeness, ingroup exclusion, outgroup belonging, outgroup closeness, and outgroup exclusion.

Differences by condition. To test condition differences, I first conducted one-way ANOVAs on all outcomes variables along with multiple comparisons using Tukey’s HSD. Only depression and feelings of exclusion varied based on the type of racial identity questionnaire participants completed. Depression varied by condition, \( F(2, 102) = 3.03, p = .05 \), with those in the forced-choice condition \( (M = 2.63, SD = .60) \) experiencing higher levels of depression compared to those in the check-all condition \( (M = 2.36, SD = .53; p = .07) \). The multiracial condition did not significantly differ from the other two conditions \( (M = 2.38, SD = .42) \). Exclusion also varied by condition, \( F(2, 102) = 3.37, p = .04 \), where those in the check-all condition \( (M = 3.46, SD = 1.12) \) experienced higher levels of exclusion compared to those in the multiracial condition \( (M = 2.74, SD = 1.23; p = .03) \). Levels of exclusion in the force-choice condition did not significantly differ from the other two conditions \( (M = 3.00, SD = 1.28) \). I broke down exclusion into ingroup and outgroup exclusion and found that levels of outgroup
exclusion varied marginally by condition, $F(2, 102) = 2.57, p = .08$. Consistently, those in the check-all condition ($M = 3.97, SD = 1.78$) experienced higher levels of outgroup exclusion compared to those in the multiracial condition ($M = 3.04, SD = 1.73; p = .07$). Levels of exclusion in the force-choice condition did not significantly differ from the other two conditions ($M = 3.37, SD = 1.74$). Additionally I found that stress varied marginally by condition, $F(2, 102) = 2.56, p = .08$, where those in the forced-choice condition ($M = 2.55, SD = .71$) experienced higher levels of stress compared to those in the check-all condition ($M = 2.18, SD = .71; p = .07$). Levels of stress in the multiracial condition did not significantly differ from the other two conditions ($M = 2.33, SD = 1.23$).

**Racial composition and identification.** Because of the important role racial composition played in Study 1, I examined how racial composition interacted with condition differences. Similar to Study 1, I dichotomized racial composition, where I labeled individuals as part-White if they indicated any Caucasian or European ethnicities in their parents’ backgrounds and as non-White if they indicated no Caucasian or European ethnicities in their parents’ backgrounds, but importantly everyone was multiracial. I conducted 2 (racial composition) X 3 (condition) ANOVAs on all outcome variables along with multiple comparisons using Tukey’s HSD.

For ingroup exclusion I found a marginally significant main effect for racial composition, $F(1, 95) = 3.16, p = .08$, where those who were part-White ($M = 2.63, SD = 1.16$) had higher levels of ingroup exclusion than their non-White counterparts ($M = 2.13, SD = 1.01$). There was also a main effect for condition, $F(2, 95) = 3.01, p = .05$, where those who were in the check-all condition ($M = 2.83, SD = .22$) experienced higher levels of ingroup exclusion compared to those in the multiracial condition ($M = 2.19, SD = .20; p = .14$) and force-choice condition ($M = 2.19, SD = .21; p = .37$), however these differences were not significant. Finally, there was a
marginally significant interaction between racial composition and condition, $F(2, 95) = 2.89, p = .06$. The force-choice condition seemed to have exacerbated the racial composition difference. Part-White individuals ($M = 2.78, SD = .126$) in this condition felt the highest levels of ingroup exclusion whereas non-White individuals ($M = 1.59, SD = .63$) in this condition felt the lowest levels of ingroup exclusion (see Figure 4).

**Self-selected identity.** While the three conditions were intended to prime various identities, I also examined whether or not participants’ identification choice before the manipulation influenced our outcomes. In a prescreen survey collected prior to completing my study, participants had the option to select one race (which included multiracial) along with the opportunity to list their various ethnicities. I dichotomized participants’ prescreen responses as either identifying as multiracial or monoracial depending on how they answered this prescreen race question. If participants chose “multiracial” and/or listed multiple ethnicities belonging to more than one racial group, they were coded as identifying as multiracial. In contrast, those who chose to identify as a monoracial race and/or only listed a single ethnicity (or only ethnicities belonging to one racial group), they were coded as identifying as monoracial. In our sample, 67 identified as multiracial, while 32 identified as monoracial, 5 did not provide this information and were dropped from these analyses.

**Benefits for identifying as multiracial.** I found that belonging, exclusion, and closeness to other multiracial individuals differed by participants’ prescreen identification. For belonging with other multiracials, those who initially identified as multiracial reported higher levels of belonging ($M = 5.96, SD = 1.38$) compared to those who initially identified as monoracial ($M = 4.91, SD = 2.19$), $t(97) = 2.91, p = .005$, For exclusion from other multiracials, those who identified as multiracial reported lower levels of exclusion ($M = 1.75, SD = 1.15$) compared to
those who identified as monoracial \((M = 2.38, SD = 1.93), t(97) = 2.03, p = .05\), Lastly, for closeness towards other multiracials, those who identified as multiracial felt greater closeness to other multiracials \((M = 6.22, SD = 1.73)\) compared to those who identified as monoracial \((M = 5.19, SD = 2.15), t(97) = 2.57, p = .01\).

**Consequences for identifying as multiracial.** Overall, identifying as multiracial, was associated with a sense of multiracial as a group and other social identity benefits, however, I did find some negative consequences for identifying as multiracial. I found that ethnic identity (as measured by the MEIM) differed between these two groups, \(t(97) = 2.18, p = .03\), such that those who initially identified as multiracial \((M = 4.27, SD = .77)\) had lower sense of ethnic identity compared to those who did not \((M = 4.63, SD = .80)\). Additionally, ingroup belonging followed this same pattern, where those identified as multiracial \((M = 4.74, SD = 1.21)\) had lower levels of ingroup belonging compared to those who identified as monoracial \((M = 5.38, SD = 1.13), t(97) = 2.54, p = .01\). So while identifying as multiracial afforded participants more belonging with other multiracial individuals, they felt less belonging towards their various ingroups (the monoracial groups that make-up their multiracial identity) than those who identified as monoracial.

**Discussion**

As predicted, individuals in the forced-choice condition experienced higher levels of depression. This is consistent with past research that finds being forced to choose a single monoracial identity for multiracial individuals is related to experiencing lower psychological well-being (Sanchez, 2010). Here, I extend these past findings by demonstrating the relationship between forced-choice dilemmas and psychological well-being through manipulated identification forms, thus providing support for this casual relationship. Additionally, I found that those in the check-all condition felt higher levels of outgroup exclusion. It is possible that
deliberately picking various parts of your identity made participants aware of their racial make-up and thus made their lack of belonging to various outgroups more salient. Again, I found that racial composition played a large role in how multiracial individuals navigate their social world. Overall, I found that part-White individuals felt significantly more ingroup exclusion than their non-White counterparts, but this effect depended on condition. Part-White individuals felt significantly more ingroup exclusion in the forced-choice condition. Finally, I found that participants who chose to identify as multiracial (before coming to participate in my study) had the benefits of feeling closer to, more belonging with, and less excluded by other multiracial individuals. However, these same participants had a weaker sense of ethnic identity and ingroup belonging, which goes against my original hypothesis. Instead of a multiracial identity expanding ingroup belonging, it seems as though it narrows it to only include other “multiracial” individuals, which does not include other monoracial categories.

**General Discussion**

While these findings did not support my initial hypotheses, these findings demonstrate the intersection of environment and racial composition on psychological outcomes for multiracial individuals. I found that in more diverse settings, such as Hawaii, being part-White is related to negative outcomes, such as higher levels of identity threat, perceiving more discrimination and experiencing more stress. However in a less diverse environment, such as New Jersey, being part-White was beneficial, and instead being a non-White multiracial was associated with more negative consequences. Furthermore, unstable multiracial regard explained the relationship between malleable racial identity and well-being, stress, and conflict for part-White individuals in Hawaii. Rather than the diversity of Hawaii and its salient multiracial population providing interpersonal benefits, it seemed as though the racial composition of
multiracials and whether their identity included a stigmatized identity as defined by each environment had a more direct influence on multiracial individuals.

These are illuminating findings. Most of the past work on multiracial identity has focused on one type of multiracial identity (i.e., part-White, part-minority) in one type of environment (i.e., majority White). In Hawaii, however, White is not the majority group and does not hold the same status as it does in most of the continental U.S. (Ohnuma, 2002). The lower status of Whites in Hawaii compared to elsewhere is reflected in my results. Consistently, part-White multiracial individuals in Hawaii experienced negative interpersonal consequences, from heightened identity threat to perceiving more discrimination. Findings from our New Jersey sample’s part-White multiracial individuals elicited opposite results; they experienced less consequences compared to their non-White counterparts. Multiracial individuals in Hawaii also unexpectedly reported experiencing more conflict over their multiple identities. While Hawaii boasts one of the largest populations of multiracial individuals in the U.S., living in an environment where fellow multiracial individuals are abundant, does not seem to be enough to ward off identity threat and conflict. Future research should take into consideration the racial composition of multiracial individuals as it may influence how these groups of people react to interpersonal factors such as belonging and perceived discrimination. More so, future research should be cognizant of how multiracial individuals’ racial composition could lead to entirely different experiences depending on differences in racial hierarchies present in different environments.

Those that experienced the most negative consequences in Hawaii were part-White. One potential reason to explain this finding is that being part-White is often perceptually visible whereas being non-White allows you to hold some racial ambiguity. In a place, such as Hawaii,
where Whites only make up about 20% of the population (Census, 2010), White features may be more perceptually salient (Halberstadt, Sherman, & Sherman, 2011). Phenotypically, those who are part-White will likely carry features that are noticeable amongst the sea of racial ambiguity. This is not unlike how the one-drop rule works for Black individuals in the U.S. (e.g., Halberstadt et al., 2011; Peery & Bodenhausen, 2008), except in Hawaii, it may manifest itself with White racial background, as White is a minority in Hawaii. Future research should examine the status and experience of White individuals in diverse settings, such as Hawaii, to see if they also experience higher levels of discrimination and stress compared to non-White individuals.

In Study 2 I found further evidence for varying experiences based upon racial composition. Here I found that identifying as part-White marginally related to greater feelings of ingroup exclusion. Particularly for the forced-choice condition, part-White individuals felt high levels of ingroup exclusion compared to non-White multiracials, which may be due to forcing participants to identify with only one part of their racial background, despite their ingroup encompassing numerous racial categories. Being part-White seems to make these multiracial individuals feel disconnected with aspects of their racial background. With the stigma and discrimination that exists against Whites in Hawaii, it is not hard to see why being part-White can lead to feeling more rejected than those who are non-White multiracial.

In manipulating racial identity via a racial identification task, I found that a forced-choice identity measurement led to higher levels of depression. This work builds upon previous research showing that multiracial individuals who are forced to choose one of their identities experience negative affect, and that forced-choice dilemmas relate to greater levels of depressive symptoms (Townsend, et al., 2009; Sanchez, 2010). This is the first empirical work to show a forced-choice task elicits greater depressive symptoms in multiracial individuals. Illustrating the multiple
deleterious effects of a forced-choice task on multiracial individuals, I also found that stress was more prevalent in the forced-choice condition. The check-all condition did not fair too well either, showing that these types of identification tasks lead to greater feelings of outgroup exclusion. While the multiracial condition did not directly show benefits, I can infer when compared to the other conditions, that allowing a “multiracial” identification option at least did not produce negative consequences.

Lastly, I found that individuals who self-selected to identify as multiracial (prior to the study) did appear to see multiracial as a social identity that offered them a sense of belonging. Not all multiracial individuals choose to identify as multiracial; only about 68% of participants identified as multiracial (prior to our identity task manipulation) despite either listing multiple racial backgrounds or having parents of different races. Participants who identified as multiracial had greater sense of belonging with, felt more closeness to, and felt less exclusion from other multiracial individuals. However, there were some consequences to identifying as multiracial. These same participants had a weaker sense of overall ethnic identity and lower levels of ingroup belonging. So while identifying as multiracial allows individuals to feel more connected towards other multiracial individuals, it can also make them feel less connected to an ingroup defined as the various monoracial groups that make up the multiracial individuals’ racial background. One possible explanation for this is that because these individuals are choosing to identify broadly as multiracial (as in the prescreen there were no restrictions for identification), it may be that ethnic identity towards specific racial groups will diminish as you encompass a broader racial category (i.e., multiracial). In other words, because these individuals choose to identify as multiracial, the strength of their ethnic identity may be reduced. In past research conducted in Hawaii, ethnic identity for Asian Americans decreased as a function of time in Hawaii due to participants’
newly gained majority status (Xu, Farver, J, & Pauker, 2015). Similarly, in an environment where such a large multiracial population is prevalent multiracial individuals may not need to have as strong of a sense of ethnic identity.

**Limitations and Future Directions**

While the intentions of this study were to examine multiracial identity within the context of a diverse environment, more specifically one that boasts a large multiracial population, I must take into consideration the unique circumstances that inform race relations and racial identity in Hawaii. In addition to being a majority-minority environment, Hawaii society perpetuates values that are built upon a tumultuous history of colonialism and an amalgamation of immigrant cultures. In this sense, while Hawaii offers an example of what a future majority-minority society with a growing multiracial population may look like, the observed results could be a product of some other factor unique to Hawaii. It is possible, for example, that Hawaii has unique norms concerning how people define and utilize race that do not exist in the continental U.S. Future studies should address this by comparing other majority-minority locations in the continental U.S. (other states that have majority-minority populations according to the Census (2010), such as New Mexico, California, Texas).

One of the primary findings in these studies was the importance of racial composition for multiracial individuals, particularly how environment influenced an individual’s experience based upon their racial background. As our initial study was exploratory, I did not have an explicit hypothesis regarding racial composition. Future research should take this into consideration and collect matched samples based upon racial composition. Additionally, examining other facets of racial composition, such as what race, proportion of racial make-up, and how these factors may influence self and others’ perceptions of multiracial people may elicit
more nuanced explanations for individuals’ varied experiences with a multiracial identity. In this study I examined identification as part-White based on a loose definition (as long as the participant explicitly identified as White, Caucasian or a European ethnicity, or if they listed one of their parents’ race as such). There may be different implications for those who are half White compared to someone whose White background only accounts for a fraction of their racial composition. Also, individual’s phenotypical appearance may influence identification, as well. Research has shown that when someone appears more phenotypically prototypical of their race, they are more likely to be perceived as that race (Wilkins, Kaiser, & Rieck, 2010). Consequently, it may be that when one appears more phenotypically White they may experience their identity differently compared to those who cannot as easily “pass” as White.

Many of the results reported throughout this paper included marginal effects. Study 1 was exploratory and correlational and when conducting power analyses I did not take into consideration the effect sizes needed for some of analyses (ANOVAs and moderated mediation). A larger sample may help to boost power to test these hypotheses.

Finally, while Study 1 used a comparison sample in the continental U.S., Study 2 did not. Future studies should examine how these identity primes might affect multiracial individuals in the continental U.S. and in environments where the “multiracial” category is less prevalent. It may be that in environments where multiracial individuals have less of a presence, the need for identity validation through the availability of a “multiracial” option would provide more benefit. Hawaii has a pronounced multiracial presence and community, such that needing a “multiracial” option for identification may be unnecessary, as multiracial individuals are already validated within their community.
Conclusions

The present set of studies illustrates the importance of context and racial composition for multiracial individuals’ conceptualization of their identity and well-being. In a majority-minority environment, identifying as part-White has negative consequences, whereas in a White-majority environment, identifying as non-white multiracial has more negative consequences. Furthermore, how multiracial individuals identify themselves in seemingly arbitrary tasks, such as an identification form, has important implications for their interpersonal relations and well-being. Being forced to choose one identity results in decrements in well-being, whereas self-identifying as multiracial is associated with a sense of belonging to a larger multiracial community. The present findings demonstrate the complex ways multiracial identity manifests itself and how multiracial identity can be shaped by both environmental (i.e., Hawaii vs. New Jersey) and non-social (i.e., identification forms) contexts. As our society becomes more multiracial it will be crucial to understand how the salience of this racial category impacts multiracial individuals’ intergroup relations and psychological well-being.
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Figure 1. Environment by racial composition predicting identity threat. Part-White individuals in HI experience the most identity threat, whereas non-White individuals in HI experience the lowest levels.
Figure 2. Environment by racial composition predicting perceived ethnic discrimination. Part-White individuals in HI experience the highest levels of discrimination and part-White individuals in NJ experience the lowest levels.
Figure 3. Environment by racial composition predicting stress. Part-White individuals in HI experience the highest levels of stress while non-White individuals in HI experience the lowest levels.
Figure 4. Condition by racial composition predicting ingroup exclusion. In the force-choice condition, part-White individuals experience more ingroup exclusion compared to non-Whites in that condition.
Appendix

Study 1 Measures

CES-D Scale (Radloff, 1977)
Instructions: Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the past week.
1: Rarely or none of the time (less than 1 day)
2: Some or a little of the time (1-2 days)
3: Occasionally or a moderate amount of time (3-4 days)
4: Most or all of the time (5-7 days)

During the past week:
1. I was bothered by things that usually don't bother me.
2. I did not feel like eating; my appetite was poor.
3. I felt that I could not shake off the blues even with help from my family or friends.
4. I felt that I was just as good as other people. (R)
5. I had trouble keeping my mind on what I was doing.
6. I felt depressed.
7. I felt that everything I did was an effort.
8. I felt hopeful about the future. (R)
9. I thought my life had been a failure.
10. I felt fearful.
11. My sleep was restless.
12. I was happy. (R)
13. I talked less than usual.
15. People were unfriendly.
16. I enjoyed life. (R)
17. I had crying spells.
18. I felt sad.
19. I felt that people dislike me.
20. I could not get "going."
Satisfaction with Life Scale (Diener, Emmons, Larsen & Griffin, 1985)

Instructions: Below are five statements with which you may agree or disagree. Using the 1-7 scale below, indicated your agreement with each item by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

1=strongly disagree, 2=disagree, 3=slightly disagree, 4=neither agree nor disagree, 5=slightly agree, 6=agree, 7=strongly agree

1. In most ways my life is close to ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

Malleable Racial Identification (Sanchez, Shih & Garcia, 2009)

1 (strongly disagree) to 5 (strongly agree)

1. In different situations, I will identify more closely with one of my racial identities than another.
2. I often identify more with one racial identity than another depending on the race of the personal I am with.
3. Depending on the activity, I feel closer to one racial identity than another.
4. I feel that I adapt to the situation at hand by identifying as one racial identity or another.
5. One racial identity can be more important than another in the moment depending on the race of the people I am with.

Rosenberg Self-Concept Stability Scale (Unstable Multiracial Regard adaptation) (Rosenberg, 1979; Sanchez, Shih & Garcia, 2009)

1 (strongly disagree) to 7 (strongly agree)

1. Some days I am happy with my multiracial identity and other days I am not.
2. My feelings about my multiracial identity seem to change very often.
3. Some days I feel one way about my multiracial identity, and other days differently.
4. Some days I have a good opinion of my multiracial identity and other days I do not.
5. I am often unsure about my multiracial identity.
Multiracial Identity Integration (Cheng & Lee 2009)

1 (completely disagree) to 5 (completely agree)

1. My racial identity is best described by a blend of all the racial groups to which I belong (distance - R)
2. I keep everything about my different racial identities separate (distance)
3. I am a person with a multiracial identity (distance – R)
4. In any given context, I am best described by a single racial identity (distance)
5. I am conflicted between my different racial identities (conflict)
6. I feel like someone moving between the different racial identities (conflict)
7. I feel torn between my different racial identities (conflict)
8. I do not feel any tension between my different racial identities (conflict – R)

Perception of Identity Threat (Eithier & Deaux 1990)

1 (not at all) to 7 (all the time)

1. I feel that I have to change myself to fit in at school
2. I try not to show the parts of me that are “ethnically” based
3. I often feel like a chameleon having to change my colors depending on the ethnicity of the person I am with
4. I feel that my ethnicity is incompatible with the new people I am meeting and the new things I am learning
5. I can not talk to others about my family or my culture
6. I can not talk to my family about my friends at school or what I am learning

Adapted

Directions: Thinking of a Hawaii context

1. I feel that I have to change myself to fit in with others.
2. I try not to show the parts of me that are “ethnically” based.
3. I often feel like a chameleon having to change my colors depending on the ethnicity of the person I am with
4. I feel that my ethnicity is incompatible with the people I meet.
5. I can not talk to others about my family or my culture.
6. I can not talk to my family about my friends who have different ethnicities.
PEDQ-CV (Brondolo et al 2006)

1(never happened) to 5 (happened very often)

Because of my ethnicity/race (multiracial background)…
1. Have you been treated unfairly by teachers, principals, or other staff at school?
2. Have others thought you couldn’t do things or handle a job?
3. Have others threatened to hurt you?
4. Have others actually hurt or tried to hurt you? (omit)
5. Have policemen or security officers been unfair to you?
6. Have others threatened to damage your property?
7. Have others actually damaged your property? (omit)
8. Have others made you feel like an outsider who doesn’t fit in?
9. Have you been treated unfairly by co-workers? (omit)
10. Have others hinted that you are dishonest or not to be trusted?
11. Have people been nice to your face, but said bad things about you behind your back?
12. Have people who speak a different language made you feel like an outsider?
13. Have others ignored you or not paid attention to you?
14. Has your boss or supervisor been unfair to you? (omit)
15. Have others hinted that you must not be clean? (omit)
16. Have people not trusted you? (omit)
17. Has it been hinted that you must be lazy? (omit)
Study 2 Measures

Multigroup Ethnic Identity Measure

In this country people come from a lot of different cultures and there are many different words to describe the different background or *ethnic groups* that people come from. Some examples of the names of ethnic groups are Mexican-American, Hispanic, Black, Asian-American, American Indian, Anglo-American, and White. Each person is born into an ethnic group, or sometimes two or more groups, but people differ on how important their *ethnicity* is to them, how they feel about it, and how much their behavior is affected by it. These questions are about your ethnicity or your ethnic group and how you feel about it or react to it.

Please fill in:

In terms of ethnic group I consider myself to be __________________________

Use the numbers below to indicate how much you disagree or agree with each statement

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Very Strongly Disagree</td>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Agree</td>
<td>Strongly Agree</td>
<td>Very Strongly Agree</td>
</tr>
</tbody>
</table>

1. I have spent time trying to find out more about my own ethnic group, such as its history, traditions, and customs.
2. I am active in organizations or social groups that include mostly members of my own ethnic group.
3. I have a clear sense of my ethnic background and what it means for me.
4. I think a lot about how my life will be affected by my ethnic group membership.
5. I am happy that I am a member of the group I belong to.
6. I have a strong sense of belonging to my own ethnic group.
7. I understand pretty well what my ethnic group membership means to me.
8. In order to learn more about my ethnic background, I have often talked to other people about my ethnic group.
9. I have a lot of pride in my ethnic group.
10. I participate in cultural practices of my own group, such as special food, music, or customs.
11. I feel a strong attachment towards my own ethnic group.
12. I feel good about my cultural or ethnic background.
13. My ethnicity is
   1. Asian or Asian American, including Chinese, Japanese, and others
   2. Black or African American
   3. Hispanic or Latino, including Mexican American, Central American, and others
   4. White, Caucasian, Anglo, European American; not Hispanic
   5. American Indian/Native American
   6. Mixed; Parents are from two different groups
   7. Other (write in): __________________________
14. My father’s ethnicity is (use numbers above)
15. My mother’s ethnicity is (use numbers above)
Belonging (Ahnallen et al., 2006)
Please indicate the extent to which you agree with these statements
1(not at all) to 7(extremely)

1. “To what extent do you feel a sense of belonging to the following communities or with the following groups of people?”
   a. -African American, Black, African Caribbean
   b. -East Asian (Chinese, Korean, Japanese, etc.)
   c. -South Asian (Indian, Pakistani, Sri Lankan, etc.)
   d. -Southeast Asian (Vietnamese, Cambodian, Filipino, etc.)
   e. -European American, White, Anglo, Caucasian
   f. -Hispanic American, Latino(a), Chicano(a), Mexican, Columbian
   g. -Pacific Islander (Micronesian, Melanesian, Samoan, etc.)
   h. -Native Hawaiian, American Indian, Alaskan Native
   i. -Biracial, Multiracial

2. “To what extent do you feel excluded from the following communities or by the following groups of people?”
   a. -African American, Black, African Caribbean
   b. -East Asian (Chinese, Korean, Japanese, etc.)
   c. -South Asian (Indian, Pakistani, Sri Lankan, etc.)
   d. -Southeast Asian (Vietnamese, Cambodian, Filipino, etc.)
   e. -European American, White, Anglo, Caucasian
   f. -Hispanic American, Latino(a), Chicano(a), Mexican, Columbian
   g. -Pacific Islander (Micronesian, Melanesian, Samoan, etc.)
   h. -Native Hawaiian, American Indian, Alaskan Native
   i. -Biracial, Multiracial
Closeness (Tropp & Wright, 2001)

Select the pair of circles that best represents your own identification with the following groups.

![Circles diagram]

Participants will complete this item for each of the following groups:
- African American, Black, African Caribbean
- East Asian (Chinese, Korean, Japanese, etc.)
- South Asian (Indian, Pakistani, Sri Lankan, etc.)
- Southeast Asian (Vietnamese, Cambodian, Filipino, etc.)
- European American, White, Anglo, Caucasian
- Hispanic American, Latino(a), Chicano(a), Mexican, Columbian
- Pacific Islander (Micronesian, Melanesian, Samoan, etc.)
- Native Hawaiian, American Indian, Alaskan Native
- Biracial, Multiracial
CHIPS (Cohen & Hoberman, 1983)

Mark the number for each statement that best describes HOW MUCH THAT PROBLEM HAS BOTHERED OR DISTRESSED YOU DURING THAT PAST TWO WEEKS INCLUDING TODAY. Mark only one number for each item. At one extreme, 0 means that you have not been bothered by the problem. At the other extreme, 4 means that the problem has been an extreme bother.

HOW MUCH WERE YOU BOTHERED BY:
1. Sleep problems (can't fall asleep, wake up in middle of night or early in morning) 0 1 2 3 4
2. Weight change (gain or loss of 5 lbs. or more) 0 1 2 3 4
3. Back pain 0 1 2 3 4
4. Constipation 0 1 2 3 4
5. Dizziness 0 1 2 3 4
6. Diarrhea 0 1 2 3 4
7. Faintness 0 1 2 3 4
8. Constant fatigue 0 1 2 3 4
9. Headache 0 1 2 3 4
10. Migraine headache 0 1 2 3 4
11. Nausea and/or vomiting 0 1 2 3 4
12. Acid stomach or indigestion 0 1 2 3 4
13. Stomach pain (e.g., cramps) 0 1 2 3 4
14. Hot or cold spells 0 1 2 3 4
15. Hands trembling 0 1 2 3 4
16. Heart pounding or racing 0 1 2 3 4
17. Poor appetite 0 1 2 3 4
18. Shortness of breath when not exercising or working hard 0 1 2 3 4
19. Numbness or tingling in parts of your body 0 1 2 3 4
20. Felt weak all over 0 1 2 3 4
21. Pains in heart or chest 0 1 2 3 4
22. Feeling low in energy 0 1 2 3 4
23. Stuffy head or nose 0 1 2 3 4
24. Blurred vision 0 1 2 3 4
25. Muscle tension or soreness 0 1 2 3 4
26. Muscle cramps 0 1 2 3 4
27. Severe aches and pains 0 1 2 3 4
28. Acne 0 1 2 3 4
29. Bruises 0 1 2 3 4
30. Nosebleed 0 1 2 3 4
31. Pulled (strained) muscles 0 1 2 3 4
32. Pulled (strained) ligaments 0 1 2 3 4
33. Cold or cough 0 1 2 3 4