

## Race as a component of set and setting: How experiences of race can influence psychedelic experiences

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*Background and aims:* Set and setting function both as a concept that guides research and practice with psychedelic drugs and as a meme aimed at reducing harm among psychedelic users. Referring to non-pharmacological factors that shape drug experiences, the concept of set and setting was popularized in the West during the mid-20th century. However, little theoretical development has occurred regarding what falls under the umbrella of set and setting since its conception. *Methods:* By bridging set and setting theory with research from the fields of social psychology and sociology of medicine, this review calls attention to how race can contribute the set and setting for a psychedelic experience. *Results:* I argue that psychosocial factors influencing racial differences in mental health also constitute meaningful differences in set. Furthermore, I suggest that the character of race relations in the United States provides a distinct cultural setting for racialized psychedelic users, both in therapeutic and naturalistic contexts. In turn, racial identification may contribute to the variation in framing and interpretation of psychedelic experiences. *Conclusion:* These considerations have important implications beyond understanding non-pharmacological influences on psychedelic experiences, including developing protocols for clinical applications of psychedelics, educating future practitioners, and meeting the needs of diverse patient populations.

**Keywords:** race, set, setting, psychedelics

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### INTRODUCTION

Researchers and health professionals are once again considering psychedelic drugs as viable treatments for a range of mental health issues. With seemingly broad applications, psychedelics are being researched as novel treatment for a number of mental health disorders (Tupper, Wood, Yensen, & Johnson, 2015). For instance, psychedelic therapy has been applied to treat post-traumatic stress disorder, depression, drug and alcohol addiction, as well as anxiety associated with terminal diagnoses (see Bogenschutz et al., 2015; Gasser, Kirchner, & Passie, 2015; Johnson, Garcia-Romeu, Cosimano, & Griffiths, 2014; Mithoefer, Wagner, Mithoefer, Jerome, & Doblin, 2011; Mithoefer et al., 2019; Osório et al., 2015). Furthermore, a number of population studies indicate that naturalistic psychedelic use is not associated with mental health issues (Krebs & Johansen, 2013) and may even have protective effects against problems like opioid abuse, suicidal behavior, and mental distress (Hendricks, Thorne, Clark, Coombs, & Johnson, 2015; Pisano et al., 2017).

However, few studies have adequately examined whether the positive effects of psychedelic experiences in clinical or naturalistic contexts hold for different racial/ethnic subgroups. Although naturalistic studies have included race as a control variable (Hendricks et al., 2015; Johansen & Krebs, 2015; Pisano et al., 2017), clinical trials on psychedelics have been characterized by largely homogeneous

samples (Michaels, Purdon, Collins, & Williams, 2018). In nearly all cases, there has not been sufficient comparison between groups regarding patterns of naturalistic use, phenomenology of the experience, impacts on general well-being, or clinical outcomes from controlled experiences. Moreover, there has been little conceptualization as to why we might expect to find racial differences when investigating psychedelics in these varying capacities.

Hence, my aim for this analytic review is to conceptualize the ways that race may influence the psychedelic experience, specifically as a component of the extrapharmacological factors broadly referred to as “set and setting” (Hartogsohn, 2016, 2017). In turn, I suggest that more care should be taken to evaluate the impacts of psychedelic drugs among diverse populations. First, I describe the concepts of set and setting as they relate to psychedelic experiences. Second, combining theory from psychedelic studies and social psychology, I posit that race may be a salient factor in shaping interpretations of psychedelic experiences and could contribute to differences in clinical and naturalistic outcomes of psychedelic use.

My application of race as a concept is best described through the words of Desmond and Emirbayer (2009, p. 2) who define race as, “A symbolic category, based on

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*phenotype or ancestry and constructed according to specific social and historical contexts, that is misrecognized as a natural category.*” Thus, the basis of my suggestion says nothing of biological differences between races. Instead, I employ this definition to emphasize how symbolic racial categories that are subjectively and socially perceived as meaningful can shape subjective experiences with psychedelics. These racial categories are formed and reinforced via the intersubjective processes of “racial formation” that vary according to sociohistorical conditions (Andersen, 2017; Omi & Winant, 2015). Along these lines, the historical and contemporary salience of racial categorization in the United States may influence the set and setting for individual psychedelic experiences. Specifically, I argue that the psychosocial factors contributing to variations in mental health between African Americans and White Americans also constitute meaningful differences in set (Here, I focus on a comparison of African Americans and White Americans for the limited scope of this paper. Although more research is necessary, it is reasonable to assume that some of these differences would apply to other racial/ethnic groups as well). In addition, I discuss how aspects of race relations in the United States provide a unique cultural setting for African Americans using psychedelics in both naturalistic and therapeutic contexts. Understanding the relationship between racial identification and the psychedelic experience is important for understanding the effects of these substances, developing protocol for clinical applications, and tailoring harm-reduction efforts to specific populations.

## THE DEVELOPMENT OF SET AND SETTING

The concepts of set and setting generally refer to the extrapharmacological factors that shape drug effects, namely mindset and environment (Hartogsohn, 2016, 2017). Indigenous cultures around the world that utilize psychedelic plants have heeded variables encompassed by these terms for countless years through the use of rituals, music, suggestion, as well as religious interpretive frameworks (De Rios, 2005). In the West, Timothy Leary is generally credited with coining the term “set and setting” and highlighting the importance of both concepts for shaping psychedelic experiences. However, the conceptualization of set and setting occurred in relation to a generally growing interest in psychedelics during the early and mid-20th century (Hartogsohn, 2017). This development was supported by a slow realization that psychedelics may not be merely “psychotomimetic,” a growing interest in “psychedelic therapy,” and a growth of knowledge concerning other cultures that use psychedelic plants as sacraments and medicine. As Hartogsohn (2017, p. 8) points out, Leary was not the first to suggest that non-drug factors are integral in shaping drug experiences but his efforts, “*turned a growing sentiment into a simple slogan and made explicit the crucial importance of the set and the setting in which a drug experience takes place.*”

Nevertheless, beyond creating a catchy meme oriented toward harm reduction, Leary’s terms “set and setting” also provided researchers with the linguistic tools to succinctly represent a wide range of concepts that contribute to the

production of subjective experience in specific social and cultural contexts. Subsequently, I will be using a formulation of the concepts set and setting largely informed by the definitions put forth by Leary, Metzner, and Alpert (1964); Zinberg (1984); and more recently Hartogsohn (2017). Set refers to the internal conditions of the person using a psychedelic, including factors such as mood, attitudes, preparation, personal history, personality, expectations, motivations for using, and beliefs about themselves and the use of drugs. Set can be further categorized into “long-range” and “immediate” characteristics (Leary et al., 1964). Long-range set pertains to one’s overall personality characteristics and individual history; whereas, immediate-set is composed of an individual’s mood, expectations for the drug experience, and motivations for using.

Various studies demonstrate how these factors shade experiences with psychedelics. For example, Metzner, Litwin, and Weil (1966) found that responses to questions pertaining to mood and attitudes about taking psilocybin were significantly related to feelings of anxiety during the drug session. This notion has contributed to an emphasis on the importance of preparation prior to a drug session. Preparation can include completing any outstanding tasks or other activities like, “*Quiet reading, relaxation, withdrawal, listening to music, meditation . . . walking, bathing – whatever methods are most effective should be used to produce a serene sense of preparedness*” (Metzner & Leary, 1967). Moreover, an individual’s intention or motivation for using psychedelics can shape the effects of the experience (Hartogsohn, 2017; Leary et al., 1964; Neitzke-Spruill & Glasser, 2018). Finally, Barber (1970) concluded in his review of the literature that personality influences the intensity of a psychedelic experience and the degree to which one responds with anxiety, paranoia, or hostility. Despite the significance of set, Zinberg (1984) considers setting to simultaneously be one of the most integral and understudied elements shaping experiences with drugs.

Setting refers to the physical and social environment in which the drugs are being taken. Subsequently, some scholars have focused on the physical environment where drugs are taken, emphasizing things such as: the relationship and quantity of other persons, the type of music provided, the props or aids in the room where the session takes place, as well as the role of the guide or experimenter, the implicit and explicit suggestions of the guide, and the tasks or activities available to the subject during the session (Barber, 1970; Eisner, 1997). Other researchers have drawn attention to the sociocultural components that shape drug experiences (Baker, 2005; Becker, 1967; Bunce, 1979; Hartogsohn, 2017; Wallace, 1959; Weil, 2004; Zinberg, 1984). The addition of these characteristics illustrates the interdependence of set and setting variables when shaping psychedelic experiences. Along these lines, Hartogsohn (2017) calls attention to the idea that set and setting do not exist independently of culture. Inner characteristics of “set” can be influenced by the physical setting where psychedelic use takes place, while both set and physical setting are to some degree shaped by the broader sociocultural context. Therefore, set and setting can be seen as an interaction between individual, environmental, and sociocultural characteristics. Specifically, set and setting can be influenced by variations

in individual socialization and the broader cultural narratives that inform the ideas and practices surrounding drug use. In the words of Metzner and Leary (1967, p. 17), “*The process of being brought up and educated in a particular culture is a process of having the nervous system imprinted with a few thousand tribal concepts and symbols.*” These concepts and symbols mold the experience of psychedelics as well as the subsequent interpretation and communication of that experience.

As pointed out by Becker (1967), Western society widely views the use of psychedelics as an aberrant activity. Since there is no generally accepted forum for psychedelic use in the United States, users are more likely to experience psychedelic use as a subversive activity, which may contribute to the occurrence of “bad trips.” Furthermore, the lack of a legitimate channel for using these drugs means norms have not been well established regarding dosage, set and setting, or how one should interpret the general effects of these drugs – leaving individuals who take psychedelics susceptible to thinking they have gone insane. Yet, Becker (1967) suggested that as subcultures develop around the use of these drugs, a common understanding of appropriate dosages, practices, and interpretations of the experiences will spread among those who use psychedelics, thus leading to a reduced occurrence of negative experiences with these drugs.

Becker was shown to be largely correct in his projections. The instances of reported “bad trips” significantly declined in the 1970’s (Bunce, 1979). Moreover, Zinberg’s (1984) later investigation provides support to the notion that subcultural knowledge concerning the use of psychedelics helps to guide users. He states that, “*sanctions and rituals that surround the use of psychedelic drugs are stronger, better articulated, and more carefully followed than those associated with either marijuana or opiates*” (Zinberg, 1984, p. 147). These strong sanctions stem from efforts taken in the 1960s to control the intense experiences induced by psychedelics and prevent excessive use (Zinberg, 1984).

Ultimately, the interaction of long term and immediate set characteristics, the physical setting, and the broader cultural context suggests that experiences with psychedelics are not merely determined by pharmacological mechanisms. Rather, the rich concepts of set and setting invoke a variety of social–psychological processes that work together to shape the subjective experience of psychedelics. Beyond immediate experiences with psychedelics, Eisner (1997) proposed that an individual’s “matrix” must be considered when administering psychedelics and evaluating their effects. By matrix, Eisner means the living situation in which a subject was raised, their present living environment, and the environment to which they will return. While it could be argued that previous living situations could fall under “set,” the environment that subjects return to after psychedelic use is vital to consider. An individual’s living conditions may constrain the potential to integrate changes in perspective or behavior inspired by psychedelic experiences. For instance, although contemporary approaches employ therapeutic integration meetings after psychedelic sessions (Garcia-Romeu & Richards, 2018), individuals returning to everyday life may face limited opportunities

for behavior change by relationships, living situations, and a host of other social and economic factors.

Taken together, set and setting theory suggests a complex interplay of variables that shape how individuals subjectively experience and interpret the changes in consciousness induced by psychedelics. Furthermore, the influence of set and setting may extend to how individuals integrate these experiences into daily life. In the following section, I will put forth the notion that race necessitates more attention when evaluating the set and setting for psychedelic use. I describe the ways that race, operating through the social–psychological processes invoked by set and setting, may affect psychedelic experiences.

## RACE AS A COMPONENT OF SET AND SETTING

I have thus far established that drug effects are mediated by an individual’s “set” as well as the physical and sociocultural “setting” where psychedelic use takes place. Therefore, it is reasonable to hypothesize that insofar as processes of racial formation impact an individual’s set and setting, differential experiences, and interpretations, and even therapeutic outcomes of psychedelic use will be observed by race. It is informative to note that I am not the first to propose that individuals of different racial categories may experience drug effects differently. Starting in the late 19th century, anthropologists began to recognize cultural differences in how experiences with peyote were interpreted (Langlitz, 2013, p. 118; Mooney, 1896). This notion gained more traction as research on psychedelics expanded throughout the first half of the 20th century. In a notable study, Wallace (1959) compared the reports of Native Americans’ peyote use to those of White Americans who had encountered peyote and synthetic forms of mescaline. He found that White and Native Americans provided very different accounts of the drug experience. Wallace (1959, p. 64) concluded that these differences could either be accounted for by differences in setting (religious vs. experimental/hospital) or, “*Differences in the psychological meaning of the primary drug effects when experienced.*” Even though setting played a role here, Wallace (1959) emphasized the distinct cultural frameworks through which hallucinations were interpreted. These different worldviews led to the White users thinking they had gone insane, whereas Native Americans were able to explain the effects of the drug through their religious cosmology.

Here, we see factors operating at the level of set, physical setting, and social setting/background all contributing to the experience of mescaline, the active component of peyote. Native Americans had an explicit religious intention, used peyote in ceremonial settings, and had an adequate cultural framework through which they could describe and interpret the effects in a positive way (Wallace, 1959). White Americans included in the study used mescaline primarily as experimental subjects, received the drug in a hospital or otherwise sterile experimental setting, and came from Western culture, which views hallucinations as a sign of illness or insanity. Wallace’s (1959) study exemplifies how psychedelic experiences are interpreted through cultural frameworks of understanding that can vary according to

membership in a particular racial group. In turn, I contend that the history of African Americans and the unique experience of being Black in the United States are distinct enough to meaningfully shape psychedelic drug effects.

At the level of set, I suggest that certain psychosocial processes associated with racial socialization may contribute to varying interpretations of psychedelic effects. Cognitive frameworks and social interactions relating to racial identification can exert an influence on subjective conscious that contributes to the experience, interpretation, and integration of psychedelics. Differences in motivation for psychedelic use between African American and White psychedelic users may be one area where differential interpretations of psychedelic experiences occur. Regarding setting, the history of race relations in the United States and stigma toward minority drug users may contribute to broader concerns about drug use among African Americans. Furthermore, lack of representation in psychedelic using subcultures may limit the extent to which African American users share in harm-reducing sanctions and rituals, as described by Zinberg (1984).

Although individual dispositions and personality traits are variable, an individual's experience of race may be consequential in shaping someone's set. For instance, as argued by Du Bois (1903), African Americans are apt to develop what he calls a "double-consciousness." This concept is best illustrated in Du Bois' (1903, p. 2) own words:

*It is a peculiar sensation, this double-consciousness, this sense of always looking at one's self through the eyes of others, of measuring one's soul by the tape of a world that looks on in amused contempt and pity. One ever feels his two-ness, an American, a Negro; two souls, two thoughts, two unreconciled strivings; two warring ideals in one dark body, whose dogged strength alone keeps it from being torn asunder.*

Du Bois' famous quote is illustrative of the inner tension that can occur stemming from the unique perspective of African Americans. A full examination of the psychological implications of being Black in America is beyond the scope of this paper. However, I will briefly cover two social-psychological processes that contribute to this experience, as I believe they relate to set.

In McLeod's (2015) paper titled "Why and How Inequality Matters," she details the concepts of status and identity, as well as how their related processes can manifest mental health inequalities. Given that status and identity are two concepts, which closely pertain to individual, "roles, values, self-conceptions, and self-evaluations" (McLeod, 2015, p. 155), it is sensible to assume that the processes implicated in mental health equally contribute to an individual's "set" when using drugs. For instance, "status" refers to cultural beliefs about the relative worth of a particular category or "type" of person (Ridgeway, 2014), whereas "status processes" function to elevate, reinforce, or devalue different categories of people (McLeod, 2015). Status devaluation may occur through a number of mechanisms such as prejudice, social stigma, stereotype threat, or discrimination, which can in turn lead to increased stress

(McLeod, 2015). Although psychedelics are not typically associated with African Americans, the stigma historically attached to minority drug use (see Provine, 2011) may be confronted when using a psychedelic drug. In turn, when African American users interrogate their own motivations for having an experience with psychedelics, they may be faced with stereotype threat as members of a stigmatized subgroup choosing to use a class of drug that is widely seen as deviant. In contrast, African Americans who do try psychedelics may have positive experiences, despite the disproportionate impacts of "War on Drugs" policies. Social factors relating to resilience, such as racial identification and spirituality (Archibald, 2018), may counterbalance the effects of status devaluation associated with racial stigma. Subsequently, these cultural contributors to resilience may protect individuals from negative experiences or increase the chances of mystical experiences occasioned by psychedelics.

In these examples, we begin to see the mutually constitutive nature of set and setting. Thus, when referring to an individual's set, these characteristics are nearly always in reference to the setting. In the first case, the racist origins and implications of the "War on Drugs," which I will elaborate on below, shape subjective interpretations of psychedelic experiences. Whereas, the second example illustrates how racial identification comes with cultural components that may be beneficial. Another example of this dynamic concerns the impact that racial discrimination can have on individuals. For instance, African Americans who have been exposed to discrimination, or who perceive discrimination, may experience elevated stress levels as a result (Anderson, 2012; Goosby, Cheadle, & Mitchell, 2018). This stress can subsequently impact an individual's mood or apprehensiveness when using a psychedelic and negatively impact the experience.

In addition to status, I find identity, the second concept detailed by McLeod (2015), to be especially salient in relation to an individual's set. For the most part, identities are based on individual roles or social categorizations. For McLeod (2015, p. 156):

*Identities highlight the personal meanings and social connections that derive from role occupancy and categorical memberships. They involve expectations of self and others for feelings, attitudes, and behaviors. As such, they serve as guides to action and reaction, and they give us meaning and purpose.*

In turn, if identities can influence feelings and attitudes, a person's identification with a racial group likely has some influence on the way they interpret drug effects.

McLeod (2015) highlights five ways that identity is related to mental health inequalities, three of which I consider to be particularly relevant to the notion that African Americans have a unique set for psychedelic use. First, identity is mediated by certain sociodemographic characteristics that are situated within social hierarchies (McLeod, 2015). One example may be found in relation to motivations for drug use (discussed further below). In Rigg's (2017) analysis, he found that African Americans report unique motivations for using MDMA. However, he

concedes that these results, obtained from a small, low socioeconomic (SES) sample, may not be representative. In his recommendations for further research, Rigg points out the need for studies that include more diverse samples of African Americans. This suggestion recognizes that racial formation occurs in relation to other sociodemographic characteristics. Hence, motivations for the use of MDMA and other psychedelics may be shaped by the intersection of racial identity and other meaningful constructs.

Nevertheless, from a structural standpoint (see [Bonilla-Silva, 1997](#)), we might expect that processes of racial formation independently contribute to differences in motivation and other meaningful aspects of set between racialized groups. Although more direct comparisons are necessary, [Bonilla-Silva \(1997, p. 457\)](#) asserts that, “*Instead of explaining racial phenomena as deriving from other structures or from racism (conceived of as a free-floating ideology), we can trace cultural, political, economic, social, and even psychological racial phenomena to the racial organization of that society.*” While some historical examples will be covered later, I will note that the racialization of “drugs discourse” has remained embedded in contemporary social systems as a result of the various policies and practices carried out under the auspices of the “War on Drugs.” For instance, it has been well established that the arbitrary legal distinction between crack and cocaine has contributed to a variety of racial disparities ([Fellner, 2009](#)). The persistence of this racialization is evidenced by the “Fair” Sentencing Act of 2010, which improved but preserves the disparity in sentencing for crack and cocaine offenses ([Hart, 2014, p. 294](#)). Similarly, the recent “epidemic” of opioid overdose deaths (see [Jalal et al., 2018](#)) has shed light on the racialized narratives surrounding substance use and addiction ([Lassiter, 2015](#); [Netherland & Hansen, 2016](#)). Although the difference can be simply exemplified by the general shift from criminalizing toward medicalizing drug users, [Netherland and Hansen \(2016\)](#) also found that White opioid users are portrayed in the media as blameless and unlikely victims of substance abuse. Although the “renaissance” in psychedelic research and recent instances of decriminalization may represent a modest liberalization of attitudes toward psychedelics, it would be a mistake to assume that psychedelic culture and “psychedelic studies” have transcended the processes of racial formation that underlie drugs discourse in the United States.

[McLeod \(2015\)](#) also posits that inequalities can develop because identities are experienced socially through confirmation or disconfirmation by others, subsequently leading to positive or negative feelings. The little available information concerning race and psychedelics indicates that racial dynamics may influence “set.” In the context of psychedelic subcultures, African Americans who use psychedelics may be in the minority among Whites (e.g., *Burning Man*; see [Andrews, 2016](#)). Here, it is important to recognize that there may be limited opportunity for identity confirmation and a risk of disconfirmation among a largely White population. However, resilience may play a role here as well, since similar racial compositions can be found throughout society.

Finally, people often give different interpretations of similar conditions based on their identities ([McLeod, 2015](#)). A study conducted by [Sellers and Shelton \(2003\)](#) suggests that among African Americans there is a correlation between high levels of racial consciousness and perceived discrimination. Because of the higher levels of perceived discrimination and the associated stress ([Anderson, 2012](#); [Goosby et al., 2018](#)), strong racial group identification is likely to contribute in some way to psychedelic drug experiences. Specifically, if stress related to racial trauma and discrimination influences mood, which is one of the major “set” factors, then racial trauma could negatively shape psychedelic experiences.

On the other hand, identity and racial consciousness may actually protect individuals from negative outcomes with psychedelics. The rate of mental health issues among African Americans is generally lower than among Whites despite disproportionate rates of stress ([Archibald, 2018](#); [Miranda, McGuire, Williams, & Wang, 2008](#); [Mouzon, 2013](#); [Williams et al., 2007](#)). The fact that African Americans report greater levels of mental health and well-being, despite occupying lower levels of the social hierarchy, is referred to as the “*race paradox in mental health*” ([Mouzon, 2013](#)). [Archibald’s \(2018\)](#) review finds that racial group identification and the meaning that comes with being a member of that group protects against mental health consequences linked with race-related stressors. Racial identification remains important even in the presence of other measures of social support ([Archibald, 2018](#)). Moreover, [Assari and Lankarani \(2016\)](#) found that the relationship between stressful life events and depression is stronger for White men than Black men. These findings are suggestive of resilience, which may stem from Black cultural resources, in the face of disproportionate rates of stress ([Archibald, 2018](#)). Although [Assari and Lankarani’s \(2016\)](#) findings did not find any significant differences between White and Black women, [Jones, Cross, and Defour \(2007\)](#) found that multicultural identity may be protective against race-related stress among a multi-ethnic sample of Black women. Similarly, [Shih et al. \(2019\)](#) suggest that multiracial individuals demonstrate resilience through unique coping strategies, such as identity switching.

Despite these considerations, racist events are greater predictors of psychological distress than other stressful life events ([Utsey, Giesbrecht, Hook, & Stanard, 2008](#)), and race-related stress is a significant predictor of depression among Black women ([Jones et al., 2007](#)). Furthermore, although the overall lifetime prevalence of major depressive disorder is greater among Whites, one large epidemiological study indicates that a greater number of African Americans were chronically effected by depression ([Williams et al., 2007](#)). Compared to White Americans, African Americans indicated greater levels of severity when asked to rate their depression. Scholars hypothesize that these differences can be attributed to lack of access to culturally informed health-care providers ([Miranda et al., 2008](#)), as well as the status and identity processes previously discussed ([McLeod, 2015](#)). Regardless of the direct effect that racial consciousness may have on stress and mental health, it follows theoretically that if an individual’s subjective worldview is shaded by processes of racial formation, so too will their

drug experiences be shaded by their racial identity and interactions stemming from that identity. Yet, this relationship is not entirely deterministic, as cognitive processes composing the concept of set always occur in a particular social and cultural context (Mannheim, 1936; Zerubavel, 1997).

Another aspect of set that may contribute to differences in drug experiences are the motivations for using psychedelics. There is tremendous scarcity of information about African-American psychedelic users because it is a small and hard to reach population. Yet, recent research conducted by Rigg (2017, 2018) has shed some light on the use of MDMA in the African American community. His study employed in-depth interviews with a small sample of African American MDMA users and found that African Americans used MDMA for enjoyment, to enhance sexual experiences, and to mediate the effects of other drugs. Rigg (2018) notes that users who were motivated by their desire to get high were not necessarily doing so as an escape, but rather to have fun. Further, it is interesting to point out that the prevalence of sexually oriented motivations are thought to stem from popular media representations of the drug (Rigg, 2017), illustrating the ways that culture (setting) also informs set and shapes drug experiences. Although consistent in some ways, these motivations differed from that had previously been identified among Whites, such as enlightenment, introspection, or enhancement of music. Rigg (2017) suggested that some of this variance may be explained by the fact that his small sample was representative of the SES status of the African American sample, as opposed to middle-class Whites.

While Rigg's (2017) observations are specific to MDMA use, examinations of largely White samples of psychedelic users suggest that motivation for drug use may be an important point of divergence between African American and White drug users. Orsolini, Papanti, Francesconi, and Schifano (2015) observed that a sample of "e-psychonauts," composed of 80%–85% White users, reported four reasons for using psychedelics. Out of the four reasons that drove participants' to their first drug experience, researchers observed that 51.3% of those sampled did so out of curiosity, 21% were delving to shamanic practices, 14.8% were self-medicating, and 10.5% were looking for a high. In other studies of psychedelic users (Kjellgren & Norlander, 2000), curiosity remains a prevalent motivation. However, a number of users also report using psychedelics for reasons relating to personal growth. For example, some users report motivations such as, "*Wish to develop mentally; dive into myself,*" and "*To solve problems (theoretical/practical) both private and professional*" (Kjellgren & Norlander, 2000, p. 48). These reasons are also consistent with findings from a study of Westerners seeking out ayahuasca experiences in the Amazon (Kavenská & Simonová, 2015). They found that one third of participants were seeking self-knowledge, whereas one fourth of participants did so for the purpose of spiritual growth.

The aforementioned studies do not provide a direct comparison to the results obtained by Rigg (2017). Yet, they may serve as a starting point for further investigation into motivations for psychedelic use by African Americans. If considerably different motivations are observed for

psychedelic use, those differences may translate into differences in outcomes between users. In Zinberg's (1984) analysis, he suggests that users who are not as interested in the unique consciousness expanding properties of psychedelics are at higher risk for abuse. However, the degree to which motivations for psychedelic use differ between African Americans and Whites is unclear. Furthermore, potential differences in motivation may lead to a variety of psychedelic use outcomes including less likelihood of mental health consequences or greater likelihood of transformative, mystical, or therapeutic experiences. In turn, research into how race may shape motivations for substance use is necessary in order to further understand this relationship and develop more pointed harm-reduction efforts.

While the various elements of set are consequential to the experience of psychedelics, the importance of setting cannot be understated, as it simultaneously shapes the immediate drug experience and informs the meanings ascribed to drug use through socialization. Factors pertaining to setting are believed to be even more influential on psychedelic use outcomes (Zinberg, 1984, p. 108). The setting of African American psychedelic users is characterized not only by their minority status in society as a whole, but also by their minority status among the predominately White psychedelic users (Hendricks et al., 2015; Johansen & Krebs, 2015; Neitzke-Spruill & Glasser, 2018; Orsolini et al., 2015). Studies utilizing data from the National Survey on Drug Use and Health (NSDUH) estimate that between 3% and 4% of psychedelic users identify as African American (Hendricks et al., 2015; Johansen & Krebs, 2015; Krebs & Johansen, 2013). The NSDUH studies aimed to assess the long-term mental health outcomes associated with psychedelic use in a naturalistic setting. These population studies found that psychedelic use was not associated with mental health problems (Johansen & Krebs, 2015) and may in fact be protective of mental distress and suicidality (Hendricks et al., 2015). Yet, due to a lack adequate analysis by race, it is unclear whether those benefits are equally experienced across racial groups.

Furthermore, among African Americans using psychedelics, it is likely that not all are using within the context of psychedelic using subcultures. Results from one study that sampled from drug-centered websites found that the majority of survey respondents were White, college-educated males (Neitzke-Spruill & Glasser, 2018). Moreover, the rate at which African Americans participate in other forms of non-digital psychedelic culture is not entirely clear. Evidence from the yearly gathering at the Burning Man festival in Nevada suggests that just 1% of the 70,000 are Black (Andrews, 2016). Taken together, these three studies indicate that African Americans may not be engaging in psychedelic using subcultures at rates consistent with their use of psychedelics. This lack of representation in the psychedelic subculture may contribute to rates of participation, as well as a lack of consideration for diverse perspectives. Consequently, individuals may miss harm-reducing knowledge that is disseminated via sanctions and rituals throughout psychedelic using subcultures (Zinberg, 1984).

As previously mentioned, participation in psychedelic culture can shape the drug experiences by exposure to information regarding proper dosages, how to foster positive

sets and settings, and even what to expect when taking the drugs. However, participation in the psychedelic culture in general is not a prerequisite for having a positive and safe experience with these substances. Since there is a lack of research on African American psychedelic users, there is a dearth of knowledge concerning the existence of comparable subcultural practices that exist separately from what is currently documented in the literature. Furthermore, the nature of Internet allows for a significant portion of the individuals accessing information about psychedelics to go unnoticed. In any case, African Americans who participate in broader psychedelic culture may not be free of negative setting influences. Being a minority in a hyper-White space could exacerbate feelings of double-consciousness, limit opportunities to confirm their identities, and increase instances of identity disconfirmation.

The lack of African American representation observed among naturalistic psychedelic users reflects the homogeneity found in psychedelics research samples globally (Michaels et al., 2018). Michaels et al.'s (2018) systematic review of clinical studies of psychedelics discovered that just over 80% of the participants from all studies sampled were White. In the United States, people of color accounted for only 11% of the participants included in psychedelic studies that were conducted from 2006 to 2016. Moreover, Black participants represented just 2.5% of all participants globally, which is even slightly higher than proportion of Black participants in studies conducted in the United States. This discrepancy is a major issue because African Americans and other racial/ethnic minorities face unique mental health challenges that could be remedied with psychedelic medicines (Michaels et al., 2018; Williams & Leins, 2016). Although recruitment strategies did not mediate the varied representation of people of color between the studies reviewed by Michaels et al. (2018), they suspect that recruitment strategies play some part in the overall disparity.

Furthermore, distrust of medicine as an overwhelmingly White setting may also play a role. Minority racial groups already exhibit low rates of mental health treatment utilization, which is partially explained by the lack of representation in mental health professions (Miranda et al., 2008). African Americans account for only 3% of psychiatrists and 2% of psychologists, while Whites comprise an overwhelming majority at 81% and 93%, respectively (Miranda et al., 2008). This lack of concordance is accompanied by historical and recent mistreatment of minorities in biomedical research (e.g., The Tuskegee Experiment; Katz et al., 2006). Given this history, African Americans may perceive participation in these projects as risky (Katz et al., 2006), especially those involving stigmatized and potentially disorienting drugs.

In addition to challenges posed by the medicalized use of psychedelics, African Americans who use psychedelics in a naturalistic context must confront a separate set of issues. The setting for racial minorities who choose to use drugs in the United States is not a receptive one to say the least. Historically, drugs in the United States have been associated with certain marginal groups, to equally stigmatize the substance as well as the associated group. Marijuana's association with Blacks and Mexicans is just one example of how the demonization and racialization of certain groups

has been used to justify the criminalization of drugs (Miller, 2015). For instance, due to Harry Anslinger's attempts to demonize marijuana in the early 20th century, users, "were usually portrayed as young Mexicans and Blacks whose lust for white women was inflamed by marijuana, frequently leading to brutal rapes" (Miller, 2015, p. 240). Furthermore, African American communities have been disproportionately impacted by disparate sentencing laws for crack-cocaine and War on Drugs policy generally (Hart, 2014, p. 192; Mitchell, 2009; Provine, 2011; Scully, 2002). These and other punitive drug laws have been major contributing factors to mass incarceration (Roberts & Chen, 2013, p. 115). The aforementioned examples are just a few of the ways that the War on Drugs has been informed by racial stereotypes and negatively affected African Americans among other racialized groups in the United States. Accordingly, members of these groups may ascribe different meanings to their psychedelic use or experiences, be more reluctant to initiate the use, and even experience psychedelics differently.

In sum, issues of race may intervene at a variety of levels to exert influence on the experiences of psychedelic drugs. Social-psychological processes are especially relevant to an individual's set, as status and identity inform how individuals conceive of themselves and ascribe meaning to behaviors and situations. In other words, the status and identity associated with being Black in America provides a lens through which African Americans experience, interpret, and communicate their drug experience. Motivation, which may also vary by race, similarly shapes drug experiences because individuals must consider why they are using a particular drug at a particular point in time. The setting for African Americans who use psychedelics is shaded by the history of race relations in the United States. In a medicalized context, this can sometimes be characterized by fear, distrust, and a lack of representation. In a naturalistic context, African American drug use is highly stigmatized and many racist associations between Blacks and drugs have been made over the years.

## CONCLUSIONS

I have suggested that race should be considered alongside other concepts included under the umbrella of set and setting as a key element that contributes to the differential interpretations of drug effects. Much research is needed to discover whether drug experiences are influenced by racial factors pertaining to set, such as motivation, identity, and encounters with discrimination. Investigations into aspects of setting, such as participation and representation in subcultures where psychedelics are widely used, would also contribute to the understanding of race and drug effects. In a therapeutic context, I have discussed that representation in trials and patient-physician concordance may be important. Moreover, a recognition of the unique mental health challenges facing African Americans and other racial and ethnic minorities will help to deliver these substances effectively to a diverse population.

A greater appreciation of race in psychedelic studies is especially important in the United States, which provides a cultural setting that reinforces race as a salient and

natural category. The continued reification of these categories has vast implications for the subjective experiences of many racialized individuals. In turn, racial identification may contribute to variations in framing and interpretation of psychedelic experiences. By conceptualizing race as a dimension of set and setting, I hope to encourage greater consideration of the social processes of racial formation in psychedelics studies. Although this may seem like an act of reification itself, I forward this suggestion with the understanding that a variety of institutions contribute to the continued production of race as a social fact.

It is reassuring that some attention has been given to this issue (Williams & Leins, 2016). However, great strides need to be made recruiting representative samples (Michaels et al., 2018), which can increase the generalizability of findings related to psychedelics. More importantly, it is essential to consider diverse populations in psychedelic research in order for the benefits of psychedelics to reach everyone in need. Improved recruitment strategies can also help foster a greater sense of inclusiveness in psychedelic studies and the mental health sector generally. Paying more attention to processes of racial formation will improve our understanding of psychedelics, as well as the non-pharmacological factors that contribute to the experiences psychedelics produce. Consequently, expanding research in this area will not only be beneficial for educators aiming to reduce harms and researchers seeking a greater understanding of factors that mediate psychedelic experiences, but it will also help clinicians better serve diverse patient populations.

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