

# Psychedelic intimacy: Altered states of consciousness in romantic relationships

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# ORIGINAL RESEARCH PAPER





#### **ABSTRACT**

Objective: Engaging in practices of intimacy meant to develop and sustain intimacy can be beneficial for couples. Psychoactive substances such as 3,4-Methylenedioxymethamphetamine (MDMA) have shown to facilitate bonding within couples and it is hypothesised that classic psychedelics, due to their property to increase prosocial behaviours, can similarly promote interactional intimacy. This study explores shared experiences of altered states of consciousness within romantic couples and their impact on intimacy in relationships. Participants: Twelve participants (six couples) between 19 and 29 years of age who had used psychedelics with their current partner were recruited. Method: Qualitative data was gathered via simultaneous interviews with both members of a couple. The semi-structured interviews featured an in-depth exploration of multiple shared psychedelic experiences. Reflexive thematic analysis was employed to analyse the resulting transcripts. Results: Three themes with subsequent subthemes were identified, portraying couples' experiences during psychedelic-induced altered states of consciousness: navigating anxiety (subthemes: novelty, preparation, shifting environment, and calming presence), reshaping practices (subthemes: excessive worrying, spirited discussions, and straight talking), and encountering bliss (subthemes: meeting the unexpected, the beauty around us, leaving the everyday behind, and breaking through). Conclusions: Couples' experiences with classic psychedelics align with criteria for interactional intimacy (i.e., self-exposure, positive involvement, and shared understanding), but their distinct nature warrants a novel definition of psychedelic intimacy. The unique pair bonding during shared psychedelic experiences could be utilized by psychedelic-assisted couples therapy.

#### **KEYWORDS**

psychedelics, interviews, thematic analysis, couples, intimacy

The impact of romantic relationships on personal health has been thoroughly documented and relationship quality has emerged as central mediating factor. Thus, couples reporting higher relationship quality are more likely to enjoy increased levels of subjective well-being (Kamp Dush & Amato, 2005; Kamp Dush, Taylor, & Kroeger, 2008; Proulx, Helms, & Buehler, 2007; Roberson, Norona, Lenger, & Olmstead, 2018; Robles, Slatcher, Trombello, & McGinn, 2014; Twiselton, Stanton, Gillanders, & Bottomley, 2020). This association also extends to young adults, for whom the exploration of romantic experiences constitutes an important part of their development (Furman & Collibee, 2014; Gómez-López, Viejo, & Ortega-Ruiz, 2019). For them, simply being romantically involved is associated with greater well-being, while an unfulfilled desire to engage in romantic relationships is linked with greater depressive symptoms (Beckmeyer & Cromwell, 2019; Braithwaite, Delevi, & Fincham, 2010). Thus, exploring means of enhancing romantic relationship quality is a pertinent question.

Couple intimacy has been identified as one of the contributing factors to greater relationship quality, even if definitions for this term have been varied (Birnie-Porter & Lydon, 2013; Greeff & Malherbe, 2001; Schaefer & Olson, 1981; Yoo, Bartle-Haring, Day, & Gangamma, 2014). A model by Prager and Roberts (2004) offers a useful framework for

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defining intimacy by outlining how interactions characterized by self-exposure, positive involvement, and shared understanding lead to *interactional intimacy*, while the frequency and quality of those interactions determines *relational intimacy*. Thus, individual interactions can be thought of as the foundation of overall couple intimacy.

To better understand how couples develop and sustain intimacy, it can be helpful to group related individual interactions into practices. This concept was originally developed as part of sociological family research as family practices (Morgan, 1996, 2011). The family practices approach emphasises how everyday practices shape and reshape what it means to be a family, and it represents a deviation from earlier literature which regarded the family as a rather fixed construct. Drawing on family practices, Gabb and Fink (2018) applied the same reasoning to couple practices: not every couple is alike, and relationships can take various shapes, depending on the practices which constitute coupledom. Specifically, this definition is akin to moving from a top-down approach of rigid definitions to a bottomdown approach of couples are what couples do. What those practices look like can be highly heterogenous, as every couple establishes their own individual couple practices. While every shared activity can be read as a couple practice, Gabb and Fink (2018) point out that not all practices necessarily engender intimacy. However, the subset of couple practices which do enable or generate moments of intimacy—termed practices of intimacy—deserve special attention because they considerably contribute to enduring relationships (Gabb & Fink, 2018).

While quality couple time, physical affection, or sex are common examples of practices of intimacy (Gabb & Fink, 2018), they are, by far, not the only means. The psychostimulant 3,4-Methylenedioxymethamphetamine (MDMA) is a prototypical entactogen characterized by its ability to induce acute feelings of sociability (Regan, Margolis, de Wit, & Lyubomirsky, 2021) and heightened emotional empathy (for a comprehensive review see Preller & Vollenweider, 2019). Entactogens represent a distinct pharmacological class of drugs featuring notable prosocial effects while hallucinogenic properties are largely absent (Nichols, 2022; Nichols, Hoffman, Oberlender, Peyton, & Shulgin, 1986). A qualitative study by Anderson, Reavey, and Boden (2018, 2019) illustrates how shared MDMA experiences serve as practices of intimacy-enabling couples to intensify their emotional connection while fuelling a sense of intimacy which extends into everyday life. The authors argued that the innate prosocial effects of MDMA were enhanced by (ritualistic) practices the couples engaged in, such as coupling MDMA use with special occasions, tidying/decorating their environment, or mentally preparing themselves via meditation. Similar experiences were also reported by Colbert and Hughes (2023), whose participants emphasised the positive influence on relational intimacy and improved communication skills with their partners via shared MDMA use.

MDMA is not the only psychoactive compound known to affect social cognition. Clinical research into classic psychedelic drugs, characterized by serotonin (5HT)<sub>2A</sub> agonism

(Nichols, 2016), have seen a revival in the past decades, leading to a wave of new studies investigating the effects of these substances in both clinical populations and in healthy volunteers (Aday, Mitzkovitz, Bloesch, Davoli, & Davis, 2020; Nutt & Carhart-Harris, 2021; Nutt, Erritzoe, & Carhart-Harris, 2020; Vollenweider & Kometer, 2010). In regards to clinical studies, evidence is growing that psychedelic substances such as psilocybin, lysergic acid diethylamide (LSD), and ayahuasca (a complex decoction containing N,N-dimethyltryptamine [N,N-DMT]) could be a potential alternative treatment option for common and difficult to treat psychiatric conditions, such as depression, anxiety, addiction, and post-traumatic stress disorder (Bogenschutz et al., 2015; Carhart-Harris et al., 2016; Gasser et al., 2014; Grob et al., 2011; Palhano-Fontes et al., 2019; Ross et al., 2016). Importantly, it has been repeatedly found that a single ingestion of a psychedelic drug in healthy participants alters social cognitive processes, increasing prosocial behaviour such as enhanced empathy, willingness to disclose sensitive information about a person's life, and (emotional) connectivity with others (for a comprehensive review see Preller & Vollenweider, 2019). In clinical studies, patients attribute therapeutic efficacy to increased feelings of connectedness to themselves, others, and the world around them (Watts, Day, Krzanowski, Nutt, & Carhart-Harris, 2017), and allude to persisting positive changes in friendships, improved relationship with family members, and increased prosocial activities in daily life, after psychedelicassisted psychotherapy (Watts et al., 2017).

Based on the known effects of classic psychedelics, and their mechanistic overlap and similar subjective effects to MDMA, it seems likely that shared classic psychedelic experiences by couples will have an impact on their relational intimacy and couple practices. Anecdotal reports attest to this, as a growing number of couples claim using classic psychedelics together on their own accord, with the explicit goal of improving relationship quality (Hanna & Thyssen, 2002; Hodges, 2021; Johns, 2017; Joshi, 2022; Schuster-Bruce, 2022; Williams, 2017). However, no scientific publications have explored these experiences in romantic couples so far. Thus, the current study aimed to understand how a shared experience of a psychedelic-induced altered state of consciousness by romantic partners influences their (perception of) intimacy. To do this, reflexive thematic analysis was used to delve into the specific experiences couples went through after consuming a classic psychedelic substance together. Couples were given the opportunity to share their experiences during an in-depth interview involving both partners simultaneously.

### MATERIALS AND METHODS

### Study design

An experiential qualitative research design was used to explore the effects of shared classic psychedelic use amongst partners in a romantic relationship. The study included two online questionnaires, created and hosted on the Qualtrics



software platform, which inquired about individual and shared history with psychoactive substances. Information from the questionnaires was utilised to prepare the in-depth, semi-structured interviews, which served as primary data. Transcriptions of all interviews were the basis for a reflexive thematic analysis (Braun & Clarke, 2006, 2013, 2022). The exploratory, open-ended approach inherent to qualitative research was most suitable to shed light on intimate practices related to psychedelic experiences in romantic relationships.

The study was conducted in accordance with the Declaration of Helsinki and subsequent amendments concerning research in humans and was approved by the Ethics Review Committee of Psychology and Neuroscience and Maastricht University (ERCPN- 233\_19\_02\_2021). Participation was voluntary and no incentives to participate were provided. All volunteers gave their written informed consent to participate, and in order to participate both partners had to give their consent independently. The research team was not involved in the participants decision to take any psychedelic substances.

Twelve participants (six couples) were recruited via word of mouth and social media, which included local and special-interest channels dedicated to psychedelic science. The sample size followed the recommendation by Braun and Clarke (2013) for small, interview-based, qualitative research projects. To meet inclusion criteria, all participants were required to be 18 years or older and to be in a committed relationship for no less than six months. Furthermore, they must have had at least one experience with a classic psychedelic with their current partner (excluding "microdosing" experiences; Kuypers et al., 2019). Eligible classic psychedelics (cf. Vollenweider & Preller, 2020) were defined as LSD, psilocybin (magic mushrooms or truffles), DMT (5-MeO-DMT or N,N-DMT), and mescaline (peyote, san pedro, or synthetic).

### Measures

Demographics. Demographic information collected included age, gender, nationality, self-described ethnicity, native language, level of English proficiency, highest education level achieved, and current employment status. Participants also indicated how many past relationships they had. Relationships were characterized on a per-couple basis in terms of duration, type (i.e., monogamous, open relationship, relationship anarchy, polyamorous, or other), and living situation (i.e., cohabiting or living separately).

History of substance use. Participants were first asked about their individual history with psychedelics and other psychoactive substances (irrespectively of whether their partner was present or not). They reported how often they had used classic psychedelics and specified which other psychoactive substances they had experience with (e.g., cannabis, cocaine, ketamine, or MDMA). The second questionnaire was answered by both partners simultaneously and covered shared experiences, which were defined as experiences during

which at least one of the partners consumed a psychoactive substance. This definition was specifically chosen to include experiences during which one partner served as *trip sitter* (i.e., a usually sober guide or companion who ensures a safe experience), a common harm reduction practice within the psychedelic community (Pestana, Beccaria, & Petrilli, 2021). The couples provided an overview of how often they had consumed each of the four eligible classic psychedelics, average dosage, and under which setting (i.e., did both partake or only one of them, were they alone or with others, did they combine the psychedelic substance with other psychoactive substances). Finally, they were asked to describe their three most recent shared experiences, including dosage and motivation.

Interviews. The questionnaires provided a first overview about the scope of their individual and shared experiences. Prior to every interview, this information was incorporated into the interview guide to tailor questions to the couples' background. The interview guide (see supplemental materials) was designed to cover the relationship and the role of psychedelics in it, as well specific instances of psychedelic experiences. The focus of the interviews was an in-depth discussion of one to three shared psychedelic experiences. For each experience one of the partners was responsible for recalling the experience in as much detail as they were comfortable with, afterwards the other partner was given the opportunity to comment. This is a variation of a single question inducing narrative (Wengraf, 2001), which allows for uninterrupted sharing of subjective narratives. Throughout the study, the guide was reviewed and adapted where necessary (Braun & Clarke, 2013).

Five out of six interviews took place via Zoom while one was conducted face-to-face. Both partners were interviewed simultaneously; this allowed for interaction between them and created an interview environment which valued shared experiences rather than individual histories (Bjørnholt & Farstad, 2014; Wimbauer & Motakef, 2017). Every couple was interviewed only once and most interviews were slightly longer than an hour ( $M=74.8~{\rm min}$ , SD=8.8). The audio from all interviews was recorded, anonymised, and manually transcribed for thematic analysis.

### Thematic analysis

Data analysis was performed in a qualitative research framework and employed reflexive thematic analysis (Braun & Clarke, 2013, 2022). Critical realism and contextualism provided the ontological and epistemological foundations, respectively. Coding of interview data was performed inductively with emphasis on semantic codes. Couples' experiences—in all their complexity and heterogeneity—were primarily viewed through an experiential orientation. Moreover, the theoretical flexibility afforded by reflexive thematic analysis allowed for the incorporation of elements from critical approaches (Braun & Clarke, 2022); these proved helpful to recognize how discussions between partners, during the interview, could contribute to the



construction of a shared understanding. The development of themes was guided by an exploration of *how* couples experienced psychedelics together and *to what extent* psychedelics opened new avenues of eliciting intimacy. The generous use of direct quotes in the results section serves to preserve authentic representation of—often ineffable—psychedelic experiences (cf. Watts et al., 2017).

### **RESULTS**

# Demographics and experience with psychoactive substances

Demographic characteristics and a summary of the results from the individual questionnaire are reported in Table 1. Participants' names were replaced with pseudonyms, based on popular names for their nationality. All twelve participants were similar in age ( $M=23.2~{\rm years},~SD=3.0$ ) and lived in Europe. Table 2 outlines length ( $M=39.5~{\rm months};~SD=26.0$ ) and type of relationship as well as couples' shared psychoactive experiences.

### Thematic analysis

The thematic analysis identified three themes—navigating anxiety, reshaping practices, and encountering bliss—and eleven subthemes. All themes relate to shared experiences

while under the influence of classic psychedelics and, thus, illustrate couple dynamics in these altered states of consciousness. Figure 1 provides an overview of all themes.

### Navigating anxiety

The theme *navigating anxiety* was present in all couples; it encompasses a multitude of unpleasant mental states—such as feelings of being anxious, worried, stressed, panicked, or scared—and how those were mitigated in cooperation with the partner.

Novelty. The extent of prior experiences with psychedelics or other psychoactive substances was unevenly distributed in most couples (see Table 1) and half of the participants experienced psychedelics for the first time together with their partner. Four couples reported that this discrepancy led to one partner assuming the role of mentor, who discussed previous experiences and gently introduced their partner to psychedelics. Even though the psychedelic-naïve participants reported feeling well-prepared, which they attributed to their more experienced partner or extensive online research, the novelty of psychedelics and uncertainty about what was about to happen still caused increased levels of anxiety for them. Some participants were initially hesitant to try psychedelics and, therefore, delayed their first psychedelic experience:

Table 1. Demographic characteristics and individual experiences with psychoactive substances

Pseudonym	Age years	Nationality	Gender	LSD n	Psilocybin n	DMT n	Other psychoactive substances $n \ge 1$
Damiano	21	Italian	Male	30	10	30	2C-B, cannabis, changa, cocaine, ketamine, MDMA, multiple NPS
Victoria	21	Italian	Female	≤5	≤4	2	2C-B, cannabis, ketamine, MDMA
Natalia	22	Slovakian	Female	20	5		25I-NBOMe, 2C-B, ayahuasca, cannabis, cocaine, codeine, DOB, heroin, MDMA
Jakub	22	Slovakian	Male	≥23	≥9	2	2C-B, amphetamine, ayahuasca, cannabis, cocaine, DOB, DOM, ketamine, MDMA, nitrous oxide
Judith	27	German	Female	3			Amphetamine, cannabis, MDMA
Vijay	29	India	Male	5	10		Cannabis, MDMA
Sara	25	Swiss	Female	2	2		Cannabis, cocaine, MDMA, nitrous oxide
Liam	25	British	Male	5			Cannabis, cocaine, ketamine, MDMA, nitrous oxide, salvia
Ida	19	Belgian	Female		1		Cannabis
Lewys	20	Irish/Welsh	Male		1		Cannabis
Helena	22	Greek	Female		≥2		Cannabis, MDMA
Milos	25	Greek	Male	25	5	1	2C-B, amphetamine, cannabis, changa, cocaine, MDMA

*Note.* Mentions of alcohol or tobacco were omitted. Empty cells indicate zero experiences. 2C-B = 4-Bromo-2,5-dimethoxyphenethylamine; NPS = New psychoactive substances; DOB = 4-Bromo-2,5-dimethoxyamphetamine; DOM = 2,5-Dimethoxy-4-methylamphetamine.



Couple	Relationship type	Relationship length months	LSD n	Psilocybin n	DMT n	Other psychoactive substances $n \ge 1$
Damiano Victoria	Open	62	4		5	2C-B, cannabis, changa, DOC, ketamine, kratom, MDMA, modafinil, multiple NPS, opium, salvia
Natalia Jakub	Monogamous	52	24	9	2	25I-NBOMe, 2C-B, amphetamine, ayahuasca, benzos, cannabis, cocaine, DOB, ketamine, MDMA, nitrous oxide
Judith Vijay	Monogamous	72	2			Cannabis, amphetamine, MDMA
Sara Liam	Relationship Anarchy	8	3			Cannabis, cocaine, MDMA
Ida Lewys	Monogamous	25	1			Cannabis
Helena Milos	Monogamous	18		2		Cannabis

Table 2. Description of relationship and shared experiences with psychoactive substances

*Note.* Mentions of alcohol were omitted. Empty cells indicate zero experiences. 2C-B = 4-Bromo-2,5-dimethoxyphenethylamine; NPS = New psychoactive substances; DOB = 4-Bromo-2,5-dimethoxyamphetamine; DOC = 2,5-Dimethoxy-4-chloroamphetamine.

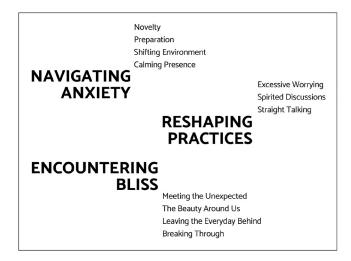


Fig. 1. Overview of the three themes (in bold) and subthemes

"We once had mushrooms, we wanted to take them together, but I was a bit scared. So, we didn't do it" (Judith).

"Before we got together, I was fascinated by his stories, but I was, like, very scared. I was not thinking I would have done that" (Victoria).

**Preparation.** While one couple, Natalia and Jakub, recalled rare instances of spontaneously taking psychedelics with friends, most discussed experiences were preceded by careful planning and preparation. At the minimum, this included picking a day in advance to make sure that both partners were free for the entire day and had no other obligations to attend to. Additionally, no one reported consuming psychedelics without being aware of their (potential) mind-altering effects. More extensive preparations included activities such as cleaning the whole apartment, preparing

or ordering food in advance, creating music playlists, or booking a special location for the experience.

Natalia and Jakub reported a fondness for taking psychedelics with friends, but explained how communal experiences with more than two people can be challenging for their relationship as well. In those cases, preparations were not limited to their mental state and the environment but also included preparing their friends:

"I'm just trying to keep my head on the top level of goodness (laughs) for one week was very important. Because if I'm angry before doing LSD that's not much, much fulfilling experience for me and it's, uh, sometimes turned out to be not so good than when my head is fully prepared for it" (Jakub).

"I definitely have to clean everything, because when I'm on LSD I hate dirt. [...] I can't stay in the room where there is dirt, that's why I'm better outside, because there is everything okay" (Natalia).

"You have to prepare people of course, too (both laugh), because when they got crazy, you know, your trip is directly affected by them and, as we mentioned before, then when the trip is bad it's directly affecting our relationship" (Jakub).

All those preparatory activities and plans are meant to facilitate an enjoyable experience for the couple by reducing as many sources of anxiety as possible. However, even well-prepared couples reported moments of anxiety caused by unpredictable events such as sudden weather changes, accidents, and interactions with other individuals (cf. subtheme *shifting environment*). While preparations can provide couples with a sense of security, being able to let go of plans was equally important and, as reported by Sara and Liam, even lead to unexpected moments of intimacy:

"The things planned like body painting, or like some drawing, we didn't even get around to that [...] 'cause we were forced to stay inside and we were forced to kind of



really focus on each other 'cause it was no external stimuli, it made it like a very like intimate feeling" (Liam).

Shifting environment. The importance of their environment was emphasised by all couples as an influence on their well-being. While the previous subtheme dealt with preparing environments, shifting environment describes how couples' surroundings can unexpectedly shift into anxiety-inducing places and how partners can facilitate a shift into more pleasant environments.

Four out of six couples shared at least one instance of anxiety during the trips, which were linked to their environment, also known as *setting* (Zinberg, 1984). These anxious moments were reported to be unexpected and sudden but could be mitigated by shifting location, as explained by Judith:

"We had to leave the lake because [Vijay] got scared of the, uh, monsters within" (Judith).

Other people can elicit a similarly strong response, as reported by Jakub when he quickly developed a "bad trippy feeling" in response to his girlfriend's colleague. He described it as a sensation of "antipower", a strong urge to stay away from that person and their perceived negative energy, which ultimately resulted in him panicking and leaving shortly after.

Most participants considered their home as an especially safe environment for psychedelic experiences. While being outside in nature was evaluated as a pleasurable setting by most couples, some encountered instances where they felt a strong wish to return home.

"The sun was going down and I wanted to get home. And I was scared of, like, staying in the forest for too long. And not being able to make it home" (Ida).

Even an environment perceived as pleasant in one moment, can quickly transform into a source of anxiety. For example, when Sara's partner dragged a chair across the floor, which resulted in scratch marks in the forest cabin they rented for their trip.

"When I looked down and I saw it, I like freaked out, and it made me very anxious, 'cause I was like, 'Oh no, they will be so upset and we messed this area up'. [...] I definitely, I think when I became more anxious, had more of a desire to be at home, where it's, like, comfortable and safe" (Sara).

Sara described the choice of location as a "fine balance" between the safety of one's home and the beauty of nature. Sara and Liam had to ensure both felt comfortable in their environment, because anxious feelings of one partner can easily impact the other. Overall, couples' ability to curate their environment and easily move to a different location if necessary were described as crucial skills in navigating anxiety. When external influences limited these very skills couples were especially vulnerable to developing anxiety. For instance, when Sara and Liam's experience was disrupted by a snowstorm. Confronted by this loss of agency (i.e., the inability to change location and follow the original plan), they both reported

feelings of anxiety, which were heightened by a sense of responsibility for their partner's well-being.

"There was a lot of, maybe, anxiousness from both of us for different reasons. I remember Sara was a little nervous, uhm, and I was also a little nervous [...] because there is always, like, a fear when we take something like that, like I don't want her to have a bad time, I don't want me to have a bad time, that's most important. [...] Especially 'cause we couldn't go out and do the things we planned to do, uhm, it was just, yeah sort of like: 'I hope this works out'" (Liam).

"It was very different to what either of us had planned and especially like me, 'cause I am quite a planner, but yeah it was nice, 'cause I think it just became very like cozier. I remember lying down, like it was very cozy we had, like, lights going and, like, fluffy blankets and stuff like that and that was, that was again a very, like, sort of intimate close time" (Sara).

Calming presence. All participants described the presence of their partner in positive terms, for example as "reassuring" (Sara), "relaxing" (Victoria), or "ready to take care of me" (Helena), especially when faced with anxiety-inducing situations.

"There was like one point where I was starting getting quite anxious, like, I kept trying to clean the apartment, and he was like: 'Stop, this is how you have a bad trip. Stop'. And he, like, forced me away from it, so I thought that was quite reassuring" (Sara).

When Victoria was anxious, Damiano soothed her nerves by chanting. His calming presence allowed her to be vulnerable in a psychedelic state.

"I did it only because I knew he was there for me. With him I was feeling safe in exploring my turbulent self" (Victoria).

"I thought that maybe to warm her and to calm her I would 'shanti om'. So, I began chanting and it became just natural thing to keep on doing" (Damiano).

As Damiano immersed himself in a DMT experience, Victoria found pleasure in reciprocating the role of the caring partner. Afterwards, it was Victoria's turn and Damiano was making sure she felt comfortable during her DMT experience.

"You make yourself comfortable for making him comfortable and then it's something that I think... I personally find a nice thing to do, I don't feel like I need to do it" (Victoria).

"I was super calm and relaxed. It made me smile, I was really smiling and, also having Damiano by my side was a part of my relaxation. I was feeling good being there with him. I could share my smiles with him and it was very powerful coming back to life" (Victoria).

As Vijay was considerably more experienced with psychedelics, he took over the role of trip sitter to guide Judith through her first experience:

"You were a bit navigating the whole thing. And then, I don't really remember the transition somehow, suddenly I was in a



completely different sphere thing and then we just started talking and telling each other what we experienced and what we were thinking and like sharing what was happening. And so I think that was also to reassure me a bit because I was a bit nervous about what is gonna happen" (Judith).

In contrast to other couples, where the more experienced partner assumed the role of caring for the other, Ida and Lewys were both inexperienced prior to consuming truffles. Ida's way of reciprocating care was reassuring Lewys he does not have to care for her in this moment (cf. subtheme excessive worrying). This highlights that the ability to provide a calming presence for the partner is not contingent on prior experience.

"We must have talked four or five times, she went like: 'Don't worry about this now'. This: 'We're doing this to have fun'—'You can relax'—'We're safe'—'Everything's okay'. And, after a couple of times. [...] I got to spot where I was like: 'Okay, tell me if anything's wrong, I'm gonna proceed to be completely smashed as well now'" (Lewys).

"That was really nice for me to be able to have, uhm, a time where I can let go with her and just be really happy. [...] I wasn't worried after. I don't know. She had to kick me out of it though" (Lewys).

### Reshaping practices

The second theme revolves around everyday practices the couples engage in, which were reshaped during their psychedelic experiences. Half of the interviewed couples talked about common patterns of interaction, which re-emerged during the experience in a markedly transformed way. All of them indicated that the practices described below are a common occurrence in their relationship prior to their psychedelic experience. As exploring these practices requires a more in-depth discussion of individual couples and their relationship, the three subthemes focus on just one couple each.

Excessive worrying. The previous theme outlined how Lewys reported worrying about Ida's well-being during the experience, but Ida managed to break him out of this pattern by repeatedly reassuring him that she is fine. This couple dynamic is worth exploring further because they reported how the practice of excessive worrying took place outside of the psychedelic experience, as well. Therefore, it is interesting to examine how the influence of psychedelics reshaped their couple practice.

**Alcohol.** Drinking was not pleasurable for Lewys as "some of the bad experiences with alcohol have been with Ida" and he suffered from what he described as "sad alcohol". On the rare occasion that they did drink alcohol, their interaction followed this pattern:

"When I drink with Ida. I'm, uhm, I'm obviously trying to stay as sober as I can, making sure she doesn't fall, she doesn't hurt herself. I don't know, I'm very aware because I'm worried" (Lewys). "I never drink like that much. I'm not, like, someone who is gonna get, like, shitfaced drunk. So, you, like, wanting to care, like, for me and being really responsible. It's pretty much... I think it's also coming from, from a place of, like, fear" (Ida).

For Lewys it was "very much stressful" to watch over Ida when she was in this alcohol-induced "very happy-go-lucky" state. Ida, in contrast, felt protected by Lewys as he "take[s] that place of almost being like a father" and she can let herself go. His supervision allowed Ida's "inner child [...] [to] resurfac[e] from time to time" and enabled her to relive carefree child-like experiences.

Truffles. In the beginning of their truffles experience, Lewys was again worrying about Ida and, according to Ida, trying to assume the father role. He inquired whether she is alright, and she responded that everything is okay. The same call and response interaction was repeated multiple times: Lewys asked and Ida reassured him. As the experience intensified, this was increasingly difficult for him because he "was trying to focus on being smashed and her at the same time" (Lewys). Finally, after a few back-and-fourths of reassurance the pattern was broken and Lewys realised "she's just totally smashed, but she's fine".

"I went with it and after that there was no afterthought, there was no worrying. So, yeah, that was really nice for me to be able to have, uhm, a time where I can let go with her and just be really happy" (Lewys).

Lewys attributed both Ida's comforting presence and the effect of the truffles to him being able to enjoy their shared experience without excessive worrying.

"It genuinely makes it hard to worry, like, you're very, very calm, very happy. That's it, bringing the dopamine out or whatever" (Lewys).

**Integration.** Although Ida had not realised the impact her reassurances have had on Lewys until they talked about it in the interview, she believed this *reshaped practice* might be beneficial in the future to counteract Lewy's tendency to worry.

"I'm gonna tell you every time. [...] I'll remember always telling you when we do cannabis and alcohol. Like: 'I'm okay. You see, this is a safe situation'. Like: 'You can relax'" (Ida).

Spirited discussions. While psychedelic experiences in many ways represent a deviation from ordinary practices, some couple practices are such an integral part of a relationship that they might reappear under the influence of psychedelics as well. At the core of Judith and Vijay's relationship are what Vijay described as "heated" or "spirited discussions" during which they vigorously try to convince each other that their opinion and line of argument is superior. While their (political) views "more or less" (Vijay) align, they still manage to find topics of disagreement quite regularly.



"And then, when we do find something where we don't agree, then it's, it's gonna be a four-hour long discussion" (Judith).

- "Right, right. Yeah" (Vijay).
- "And I think that happens, I don't know, every second week or something" (Judith).
- "Sure" (Vijay).

"Or even once a week. It happens a lot, so that is quite regular actually" (Judith).

During the interview, they tried to avoid common (mis-) conceptions about couples engaging in regular fights, namely the assumption that a higher frequency of fights might be indicative of an unstable relationship. They explained that those spirited discussions were what brought them together in the first place and emphasized that the foundation of their relationship is not shaken up by those fights; on the contrary, the discussions brought them closer together.

Taking LSD together set the stage for more discussions, albeit with a slightly different outcome. While extensive discussions were not part of their two LSD experiences with a larger dose (i.e., 120  $\mu$ g), they played an important role during a few experiences with lower doses ("45  $\mu$ g or so"; Vijay). As usual, they got into a discussion eventually, but—unlike the other times—it did not turn into a fight:

"One thing that was different is that we didn't fight. Usually, when we discuss these things we fight at some point, but we didn't then. And we didn't do that on any of those trips. [...] We discuss philosophical, political topics all the time. [...] And we always fight. I actually hadn't noticed this before, but during those trips we never fought. Although, we discussed those topics that usually make us fight, but then we didn't" (Indith)

Vijay believed that his individual use of psychedelics had a positive influence on him and, thus, contributed to the positive outcome of the discussion.

"I think it made me a more open person. There is no denying it. I think I would have been much more locked in my own corridors of thought and opinion" (Vijay).

Judith adds that the ability "to really listen" helped both to appreciate the opinions of the other and allowed them to break their usual patterns:

"When we discuss I feel like we're going in circles and just repeating the same thing and I'm frustrated because you don't really see what, why my opinion is better, but... (laughs) I think we were a bit more exploring the topic together instead of having a fixed opinion and trying to persuade the other. Because that's what we usually do" (Judith).

While Vijay was convinced that he became a more open person thanks to his psychedelic experiences, he was more careful when it came to drawing conclusions about the lasting impact on the relationship. He seemed sceptical whether the few experiences they had together, all of them many years ago, were enough to have "really changed anything". Even though the spirited discussions remain an integral part of their relationship practices, "small rituals" of trying to convince the partner, he believed the way they fight has shifted slightly.

"I think that changed in a way. Now we do consider each other's opinion more openly" (Vijay).

Straight talking. While the spirited discussions examined above were evaluated as a positive aspect of Judith and Vijay's relationship, the lack of straight talking was perceived as a negative influence by the next couple. According to Milos, Helena has difficulty to express the "main point" when talking to him and he quickly becomes angry in response to this because he prefers straight answers. Additionally, while waiting for the main point, he finds himself getting lost in his own thoughts, which increases his irritability further. Helena agrees with Milos and recalls several instances where he got angry with her because of not being "straight to the point". Furthermore, Helena admits that situations during which she struggles to express her thoughts sometimes lead to feelings of anxiety.

"She has this tendency to explain things, uhm, but... the main point kinda gets delayed in our everyday life. And, I'm kinda getting angry every time, because I know that we're missing, I'm missing the main point and I'm waiting. I'm like: 'Give it to me, please. Fast'" (Milos).

"I thought that the, there have been several times that you get angry, uh, with me when I, when I'm not straight to the point" (Helena).

"There's some times that I, I'm scared or... Not scared, I'm anxious about... what I would say to something" (Helena).

When they took mushrooms together, this pattern of interaction was reshaped and their way of communicating with each other changed—Milos did not become angry when they talked with each other. Both partners acknowledged that a shift or a break in the pattern occurred during the experience, but they have different viewpoints on the reason for it. Helena had the impression that Milos was more patient with her, but Milos insisted his "patience didn't change at all". Instead, he credited Helena for being more straightforward and being able to connect with her emotions.

"She had a better connection with her feelings, because she's a very sentimental person and every time she speaks, she speaks from feelings. She had a better understanding of her own feelings, so she didn't have to explain to me, real-time, in order for her to listen to herself to understand what's this feeling. She already knew" (Milos).

Furthermore, Helena noticed a change in her confidence levels and, thus, her ability to communicate more easily with Milos.

"I was feeling very confident and, uh, about my actions. And Milos, too. Uhm. And that was nice. [...] I wanted to dance, I was dancing. And, uh, Milos didn't dance, but it was okay. (laughs) And... Uh, I wanted to have sex. Milos, too. And it was okay" (Helena).



### **Encountering bliss**

Even though moments of anxiety were a possibility during the experiences, all couples reported an overall positive response to psychedelics. The final theme *encountering bliss* covers shared moments of joy, some expected and some unexpected, which were highly valued by all participants.

Leaving the everyday behind. When describing what the psychedelic experience felt like, half of the participants compared the trip to going on a vacation or holiday. Packing a suitcase might be enough for a traditional vacation, but a vacation "of the mind" (Vijay) requires a different kind of preparation to ensure a pleasant experience (cf. theme navigating anxiety).

"I would say that going for a [psychedelic] trip is like going for vacation or going for movie or something. It's... It depends, if it's a good trip, it will make you come closer together. If it's a bad trip, maybe it separates you a little bit" (Jakub).

For those couples, whether they stayed at home or not, the experience meant being distanced from the everyday, the routines, and the obligations. It was described as a cherished rare occurrence—something out of the ordinary.

"I'm a really stressed person, with my future et cetera. [...] So, for me, it was finally a moment where I was, like, not thinking about stuff, not wanting to be a control-freak and plan everything in my life and my relationship. And I really let go. Uh, we didn't really have responsibilities, we were just in for the fun" (Ida).

"I just remember thinking 'I'm having such a great time right now'. And I did have such a great time" (Vijay).

"You'd do it once a year and then your normal life is there and, you know, you're back to it and you think 'ah, that was a nice holiday' and you just continue with whatever you were doing. It kinda takes you out of the context of, context of your daily life and then sort of makes you think about things afresh anew and then you come back to your normal life" (Vijay).

With the everyday obligations out of the way, Liam and Sara felt like taking LSD together in a remote location in a forest was the best way to celebrate Sara's master graduation and to relax after a few stressful months:

"It's something that we only can do rarely. [...] something that we want to do rarely. That makes it extra special. [...] It was more about just having sorta a special experience and [...] doing something to kind of heighten the intimacy between us" (Liam).

"We were like 'We should use this time, 'cause it just is... It's, like, so rare'. Uhm. And it felt like a nice way to enjoy that. Like, to really appreciate that time off' (Sara).

Meeting the unexpected. When Ida and Lewys took truffles, the first psychedelic experience for both, they quickly realised that no amount of research would have been able to explain what to expect. Navigating this unknown psychedelic space was described as a "discovery experience"

(Lewys) and an "adventure" (Ida). *Meeting the unexpected* was not a cause for stress, but an enjoyable "surreal" (Lewys) experience for them.

"If I were asked: 'Was it as good as I expected?'. I would absolutely say: 'Yes'. 'Did it match what I expected?'—'No, I couldn't have expected it'. Uhm. I couldn't have known what was coming, but it very much matched my expectations in the sense that it was as amazing as I was hoping it would be" (Lewys).

Even for more psychedelic-experienced couples, such as Sara and Liam, it was not uncommon to encounter unexpected elements during their experiences. They reported valuing those moments, because not exactly knowing what is going on turns the experience into an adventure—a unique experience which is unlike anything that might happen on a regular day. When taking LSD, the necessity to "carve out time" (Sara) for (at least) a whole day reportedly allowed them to focus on their partner and bond through the shared adventure. Sara explained that no matter what they did, everything "felt more exciting" because they experienced the adventure feeling "like one team and one unit". For Sara, turning the experience into a good adventure meant:

"Just doing something shared, where you're like: 'I don't really know what's happening, but this is, this is entertaining'. You're like: 'This is something that we either can, like, tell a story about or, like, kind of had a shared experience of...'" (Sara).

One of these unique, adventurous stories was shared by Liam:

"Whenever I take acid, it doesn't really matter what we end up doing, uh, it always feels like an adventure. It always... It doesn't matter where we go or what we do, we always seem to run into sort of unique or interesting experiences. Like, uhm, like when we were sitting on that hill and some like sweaty man ran up to us. [...] We didn't really know what was going on, but I think he said he was being chased by a dog or something. [...] You just meet these, like, weird, unique people. And you're like: 'Is this because I'm on acid that I'm, like, really appreciating this sweaty man for everything that he is?" (Liam).

The beauty around us. Jakub preferred taking psychedelics with his partner Natalia and friends over solitary experiences, because he would rather see the movie in the "real world" than the "cartoon in [his] head". For him, the former emphasises connecting with others and immersing oneself in psychedelics' visual effects while the latter is akin to an introspective experience. He was quite fond of the movie analogy and compared taking LSD to getting excited about seeing a newly released movie in the cinema. The crucial difference being for Jakub was that with LSD there is no need to wait for the next release, but instead the beauty around us can be immediately experienced:

"The world is beautiful at every second. [...] You are used to its beautifulness, but when you are being LSD, it's *beautiful* beautiful, you know" (Jakub; emphasis added).



- "And you can see the beauty" (Natalia).

"So, that's like invitation to see the world even more beautiful like it already is" (Jakub).

Almost all participants attributed their (newly found) admiration of beauty as a positive influence on their experience—especially in nature, when they "appreciate trees" (Lewys) or notice how "the green stuff is breathing" (Sara).

"What got me the most in the whole trip was just the picturesque experience of it all. Genuinely just everything was so beautiful" (Lewys).

"I just remember thinking 'I'm having such a great time right now'. And I did have such a great time. And we sat under the tree and we were surrounded by mountains. It was like a bowl, and then there were these fractals in the mountains, uh, you know. It was a great time" (Vijay).

Breaking through. Due to the brevity and intensity of a DMT experience, Damiano and Victoria consumed it not simultaneously but took turns. Damiano had smoked DMT multiple times but had previously never managed to "break through", a trance-like state characterized as "passing into a 'space' that may be thoroughly alien or uncannily familiar yet is commonly reported as veridical and authentic" (St John, 2018, p. 58). Damiano reported his physical, mental, and spiritual preparation, which included breathing and yoga exercises, had culminated in his ability to experience a "kundalini awakening" immediately followed by a DMT breakthrough.

"I experienced an extreme sense of peace, of joy, of calm, of calmness. My body was below my consciousness, and it was sitting in the lotus position. Completely empty inside. Like I felt my body was just [...] an empty vessel. And, that was extremely therapeutic emptiness inside my body. All the tensions [...] body behaviour, everything was just clear, washed. I was in this realm of light, above my head. Every sufferance, every that came up from the body to this realm, it transformed into light. Anything positive, negative, neutral, there is just light. There is no judgement, everything is light, everything becomes this ethereal existence. And, I was extremely blessed. And, yeah, I loved it" (Damiano).

After the experience was over, he shared with Victoria what he witnessed. Damiano reported an encounter of pure bliss and "the true faith" in the realm of light. Victoria described being touched by Damiano's transcendental experience and feeling close to him.

"A realm where everything is light, where there is only peace and calmness and joy and ecstasy. Whenever, in the days later, whenever I felt like something was bothering me, I would just throw it up. Because into this realm, everything just dissolves into the universal light" (Damiano).

"I love to see people experiencing their true self. Because you can see it. I could see his bliss in his posture. He was like, he looked empty and, like, very stable. He was not moving a muscle. He was like a statue. I don't know. (laughs) And he came back and he said this, and I was still feeling blessed by my experience, so I was even more closer to him" (Victoria).

## **DISCUSSION**

The study has explored the nature of psychedelic experiences within romantic couples and three themes were developed as part of a reflexive thematic analysis: navigating anxiety, reshaping practices, and encountering bliss. The themes portray aspects of what it means to be in an altered state of consciousness with a romantic partner and psychedelics' impact on the relationship itself. The primary focus of the exploratory study was on the acute effects during the psychedelic experience, induced by one of the classic psychedelics (LSD, psilocybin, or DMT). This leads to the question whether the acute influence of psychedelics (Preller & Vollenweider, 2019) encouraged moments of intimate relating between partners, as defined by the interactional intimacy model by Prager and Roberts (2004). Based on the results of this analysis, this paper argues that couples' psychedelic experiences featured phenomenologically distinct instances of interactional intimacy termed psychedelic intimacy: a state of interactional intimacy achieved via a psychedelic-induced altered state of consciousness. The three necessary and sufficient conditions -self-exposure, positive involvement, and shared understanding—as defined by Prager and Roberts (2004) are thus extended by a fourth condition: being in an altered state of consciousness due to consumption of psychedelics.

While the fourth condition is self-evident for the interviewed couples, the other three conditions require a closer examination of the findings. First, self-exposure is promoted by verbal or nonverbal behaviours revealing aspects of the self, which are considered private or personal; the lowering of defences and willingness to show oneself in a state of vulnerability is often accompanied by strong emotions (Prager & Roberts, 2004). The theme navigating anxiety meets this condition as it highlights how participants willingly put themselves in a vulnerable position and did not shy away from revealing their innermost self to the other. Second, positive involvement between partners is a state of mutually undivided attention to the present interaction with the other featuring a positive regard for the other, which may be expressed via verbal cues, nonverbal cues, or a combination of both (Prager & Roberts, 2004). The couples' reports contained many instances of positive involvement; the interactions outlined in the theme encountering bliss were characterized by couples enjoying the present moment together while feeling connected to their partner. Among other examples, we can think of how positive involvement contributed to the *calming presence* of a partner or promoted spirited discussions between partners. Third, shared understanding is built during an interaction when both partners gain insight into the inner experience of the other and develop a deeper understanding of their partner's lived experience, which extends beyond the interaction in question (Prager & Roberts, 2004). The theme reshaping practices highlights interactions during which the couples gained a shared understanding, for example related to their



communication patterns (see subthemes *spirited discussions* and *straight talking*) or reasons for *excessive worrying*.

Going beyond the topic of intimacy, many of the themes identified as important for couples in Britain correspond with themes related to psychedelic-induced experiences. Gabb and Fink's (2018) couples valued communication practices which allowed them to "relate to each other" (p. 54) or build a "deep knowing, beyond words" (p. 60). Similarly, this study's couples emphasized how psychedelics facilitated novel patterns of communication (cf. theme reshaping practices). This overlap could indicate how psychedelics' prosocial effects might be able to encourage ways of communicating which are otherwise more difficult to attain.

In a similar vein, many aspects of the couples' experiences bore resemblance to couples who had taken MDMA together (Anderson et al., 2018, 2019), such as the carving out of special time for the experience, the distance to everyday routines, and feelings of closeness/oneness with the partner. Both classic psychedelic drugs and MDMA have been found to increase feelings of trust, openness, and unity, while reducing fear avoidance (Dolder, Schmid, Müller, Borgwardt, & Liechti, 2016; Krediet et al., 2020; MacLean, Johnson, & Griffiths, 2011; Mason et al., 2020; Preller & Vollenweider, 2019), an essential factor in establishing therapeutic alliance in the clinical context. In romantic couples, it may lower the threshold for the self-exposure condition of interactional intimacy, especially as partners embark on a potentially anxiety-inducing experience together. Classic psychedelics have also been linked to an increase in mindfulness, particularly the aspects concerning present-centred awareness and non-reactivity (Agin-Liebes et al., 2021; Kiraga, Kuypers, Uthaug, Ramaekers, & Mason, 2022; Madsen et al., 2020; Radakovic, Radakovic, Peryer, & Geere, 2022), which may exert a beneficial influence on couples' ability to focus their attention on each other during interactions featuring positive involvement, the second criterion for interactional intimacy. Moreover, heightened empathy both under the acute influence of psychedelics (Preller & Vollenweider, 2019), and in the days following (Kiraga et al., 2021), could contribute to novel insights participants have gained about their partners and associated experiences of shared understanding, the third conditions for interactional intimacy. The combination of these three factors—openness, mindfulness, and empathy—during shared psychedelic experiences could create a fertile environment for interactional intimacy between romantic

Given the growing clinical trials with psychedelics, exploring them as a potential therapeutic substance for a range of mental and physical health implications, it is important to consider the clinical implications from this study. First, one of the most significant personal relationships, where one gets most of their emotional needs met, is in a romantic couple. Romantic relationship quality, a person's subjective perception that their relationship is relatively good versus bad, is thus a powerful psychological construct. Accordingly, unhappy relationships are associated with many

negative stress-related outcomes. To avoid far-reaching societal consequences of low relationship quality, interventions and practices attempting to maintain or improve relationship quality are of high importance. Results of this study indicate that a shared psychedelic experience may enhance aspects of intimacy that can support relationship quality; this suggests the possibility of utilizing psychedelic-assisted couples therapy as a therapeutic approach to, for example, promote relationship quality. That said, future studies should directly address whether a shared psychedelic experience can directly enhance relationship quality (see clinicaltrials ID: NCT05670184 for ongoing work).

Furthermore, in the current study, participants reported that especially their first psychedelic experience was associated with increased feelings of anxiety. Appropriate preparations and being in the presence of a more experienced partner were reported as helpful anxiolytic strategies. However, even when both partners were taking psychedelics for the first time, they were able to exert a calming influence on one another. In clinical trials, some participants reported high anxiety going into their psychedelic experience as well (Watts et al., 2017). Thus, the involvement of a romantic partner (or even close family members) for the first, preparatory psychedelic session might be worth exploring as a means of reducing anxiety. Additionally, clinical trial participants indicated during the follow-up interview that talking to others with similar experiences proved beneficial in terms of making sense of and reconnecting with what they had experienced under the influence of psilocybin (Watts et al., 2017). While topics such as processing and integrating past psychedelic experiences were not explicitly addressed in the current study, it is possible that couples could benefit from being able to make sense of their experience together.

This study is not without its limitations. It is possible that couples who had less impactful or beneficial experiences were less likely to reach out because they felt their experiences were not worth mentioning. On the other end of the spectrum, couples with unpleasant experiences might have preferred not to discuss those during an interview. Furthermore, some couples explicitly sought out these shared experiences not for purely recreational purposes but to engender intimacy and strengthen their relationship. Given the sample population of couples in ongoing relationships, no conclusions can be drawn about the impact of psychedelics on the longevity of relationships. Finally, spending quality time together as a couple has been recognized as positive influence on intimacy and relationship health (Gabb & Fink, 2018; Girme, Overall, & Faingataa, 2014; Milek, Butler, & Bodenmann, 2015; Pearson, Child, Carmon, & Miller, 2009), so it is possible that couples also received benefits from dedicating an entire day to focus on themselves.

### CONCLUSION

Psychedelic research thus far has emphasized the benefits for patients in clinical research (Vollenweider & Preller, 2020) or healthy individuals (Gandy, 2019). Consequently, the



prosocial effects of psychedelics have mainly been studied within individuals (i.e., impact on an individual's emotional empathy), whereas this study is the first to start to assess effects between individuals (i.e., an increase in prosocial behaviour between people). More precisely, the present study is the first to examine experiences within couples under the influence of classic psychedelics. The reflexive thematic analysis led to the development of three themes, which make up the quilt that was the psychedelic experience for the interviewed couples. When faced with a potentially negative experience, the couples in the current study were navigating anxiety with careful preparation and the calming presence of their more experienced partner. For some couples, the constituting practices of their relationship resurfaced during the experience, and the psychedelic experience supported the couple as they were reshaping practices by renegotiating how they relate to each other. Encountering bliss was essential to all couples' shared experiences, and they cherished those moments of pure joy bringing them closer to the person they care so dearly about. The reported experiences met the conditions for the presence of interactional intimacy (Prager & Roberts, 2004). However, given the distinct phenomenological quality of psychedelic experiences—such as drug-induced increases in openness, trust, connectedness, mindfulness, and empathy—the term psychedelic intimacy is suggested to encompass couples sharing a psychedelic-induced altered state of consciousness.

### SUPPLEMENTARY MATERIALS

Supplementary data to this article can be found online at https://doi.org/10.1556/2054.2024.00319.

### **REFERENCES**

- Aday, J. S., Mitzkovitz, C. M., Bloesch, E. K., Davoli, C. C., & Davis, A. K. (2020). Long-term effects of psychedelic drugs: A systematic review. *Neuroscience and Biobehavioral Reviews*, 113, 179–189. https://doi.org/10.1016/j.neubiorev.2020.03.017.
- Agin-Liebes, G., Ekman, E., Anderson, B., Malloy, M., Haas, A., & Woolley, J. (2021). Participant reports of mindfulness, post-traumatic growth, and social connectedness in psilocybin-assisted group therapy: An interpretive phenomenological analysis. *Journal of Humanistic Psychology*, 1–28. https://doi.org/10.1177/00221678211022949.
- Anderson, K., Reavey, P., & Boden, Z. (2018). An affective (re) balancing act? The liminal possibilities for heterosexual partners on MDMA. In T. Juvonen, & M. Kolehmainen (Eds.), *Affective inequalities in intimate relationships* (pp. 19–33). Routledge. https://doi.org/10.4324/9781315107318.
- Anderson, K., Reavey, P., & Boden, Z. (2019). Never drop without your significant other, cause that way lies ruin': The boundary work of couples who use MDMA together. *International Journal of Drug Policy*, 71, 10–18. https://doi.org/10.1016/j. drugpo.2019.05.004.

- Beckmeyer, J. J., & Cromwell, S. (2019). Romantic relationship status and emerging adult well-being: Accounting for romantic relationship interest. *Emerging Adulthood*, *7*(4), 304–308. https://doi.org/10.1177/2167696818772653.
- Birnie-Porter, C., & Lydon, J. E. (2013). A prototype approach to understanding sexual intimacy through its relationship to intimacy. *Personal Relationships*, 20(2), 236–258. https://doi.org/10.1111/j.1475-6811.2012.01402.x.
- Bjørnholt, M., & Farstad, G. R. (2014). Am I rambling? On the advantages of interviewing couples together. *Qualitative Research*, 14(1), 3–19. https://doi.org/10.1177/1468794112459671.
- Bogenschutz, M. P., Forcehimes, A. A., Pommy, J. A., Wilcox, C. E., Barbosa, P. C., & Strassman, R. J. (2015). Psilocybin-assisted treatment for alcohol dependence: A proof-of-concept study. *Journal of Psychopharmacology*, 29(3), 289–299. https://doi.org/ 10.1177/0269881114565144.
- Braithwaite, S. R., Delevi, R., & Fincham, F. D. (2010). Romantic relationships and the physical and mental health of college students. *Personal Relationships*, *17*(1), 1–12. https://doi.org/10. 1111/j.1475-6811.2010.01248.x.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa.
- Braun, V., & Clarke, V. (2013). Successful qualitative research: A practical guide for beginners. SAGE.
- Braun, V., & Clarke, V. (2022). Thematic analysi: A practical guide. SAGE.
- Carhart-Harris, R. L., Bolstridge, M., Rucker, J., Day, C. M. J., Erritzoe, D., Kaelen, M., ... Nutt, D. J. (2016). Psilocybin with psychological support for treatment-resistant depression: An open-label feasibility study. *The Lancet Psychiatry*, *3*(7), 619–627. https://doi.org/10.1016/s2215-0366(16)30065-7.
- Colbert, R., & Hughes, S. (2023). Evenings with molly: Adult couples' use of MDMA for relationship enhancement. *Culture*, *Medicine*, and *Psychiatry*, 47(1), 252–270. https://doi.org/10. 1007/s11013-021-09764-z.
- Dolder, P. C., Schmid, Y., Müller, F., Borgwardt, S., & Liechti, M. E. (2016). LSD acutely impairs fear recognition and enhances emotional empathy and sociality. *Neuropsychopharmacology*, 41(11), 2638–2646. https://doi.org/10.1038/npp.2016.82.
- Furman, W., & Collibee, C. (2014). A matter of timing: Developmental theories of romantic involvement and psychosocial adjustment. *Development and Psychopathology*, 26(4pt1), 1149–1160. https://doi.org/10.1017/S0954579414000182.
- Gabb, J., & Fink, J. (2018). Couple relationships in the 21st century: Research, policy, practice. Palgrave Macmillan. https://doi.org/10.1007/978-3-319-59698-3.
- Gandy, S. (2019). Psychedelics and potential benefits in "healthy normals": A review of the literature. *Journal of Psychedelic Studies*, 3(3), 280–287. https://doi.org/10.1556/2054.2019.029.
- Gasser, P., Holstein, D., Michel, Y., Doblin, R., Yazar-Klosinski, B., Passie, T., & Brenneisen, R. (2014). Safety and efficacy of lysergic acid diethylamide-assisted psychotherapy for anxiety associated with life-threatening diseases. *The Journal of Nervous* and Mental Disease, 202(7), 513–520. https://doi.org/10.1097/ NMD.000000000000000113.
- Girme, Y. U., Overall, N. C., & Faingataa, S. (2014). "Date nights" take two: The maintenance function of shared relationship



- activities. *Personal Relationships*, 21(1), 125–149. https://doi.org/10.1111/pere.12020.
- Gómez-López, M., Viejo, C., & Ortega-Ruiz, R. (2019). Well-being and romantic relationships: A systematic review in adolescence and emerging adulthood. *International Journal of Environmental Research and Public Health*, 16(13), 2415. https://doi.org/10.3390/ijerph16132415.
- Greeff, A. P., & Malherbe, H. L. (2001). Intimacy and marital satisfaction in spouses. *Journal of Sex & Marital Therapy*, 27(3), 247–257. https://doi.org/10.1080/009262301750257100.
- Grob, C. S., Danforth, A. L., Chopra, G. S., Hagerty, M., McKay, C. R., Halberstadt, A. L., & Greer, G. R. (2011). Pilot study of psilocybin treatment for anxiety in patients with advanced-stage cancer. *Archives of General Psychiatry*, 68(1), 71–78. https://doi.org/10.1001/archgenpsychiatry.2010.116.
- Hanna, J., & Thyssen, S. (Eds.) (2002). Sex, spirit, and psychedelics [Special issue]. *MAPS Bulletin*, *12*(1). https://maps.org/news-letters/v12n1/v12n1.pdf.
- Hodges, N. (2021, May 20). I love you—Let's trip together. *Double Blind*. https://doubleblindmag.com/mdma-psilocybin-lsd-couples-therapy/.
- Johns, T. R. (2017, February 2). The couples using magic mushrooms as relationship therapy. Vice. https://www.vice.com/en/ article/43gv43/the-couples-using-magic-mushrooms-asrelationship-therapy.
- Joshi, S. (2022, February 28). Love & other drugs: The couples using psychedelics as a way to get closer. *Vice*. https://www.vice.com/en/article/bvnpjq/couples-doing-psychedelic-drugs-lsd-mushrooms-therapy-relationship-sex.
- Kamp Dush, C. M., & Amato, P. R. (2005). Consequences of relationship status and quality for subjective well-being. *Journal* of Social and Personal Relationships, 22(5), 607–627. https://doi. org/10.1177/0265407505056438.
- Kamp Dush, C. M., Taylor, M. G., & Kroeger, R. A. (2008). Marital happiness and psychological well-being across the life course. *Family Relations*, 57(2), 211–226. https://doi.org/10.1111/j. 1741-3729.2008.00495.x.
- Kiraga, M. K., Kuypers, K. P. C., Uthaug, M. V., Ramaekers, J. G., & Mason, N. L. (2022). Decreases in state and trait anxiety post-psilocybin: A naturalistic, observational study among retreat attendees. *Frontiers in Psychiatry*, 13, 883869. https://doi.org/10.3389/fpsyt.2022.883869.
- Kiraga, M. K., Mason, N. L., Uthaug, M. V., van Oorsouw, K. I. M., Toennes, S. W., Ramaekers, J. G., & Kuypers, K. P. C. (2021). Persisting effects of ayahuasca on empathy, creative thinking, decentering, personality, and well-being. *Frontiers in Pharmacology*, 12, 721537. https://doi.org/10.3389/fphar.2021. 721537.
- Krediet, E., Bostoen, T., Breeksema, J., van Schagen, A., Passie, T., & Vermetten, E. (2020). Reviewing the potential of psychedelics for the treatment of PTSD. *International Journal of Neuropsychopharmacology*, 23(6), 385–400. https://doi.org/10.1093/ijnp/pyaa018.
- Kuypers, K. P. C., Ng, L., Erritzoe, D., Knudsen, G. M., Nichols, C. D., Nichols, D. E., ... Nutt, D. (2019). Microdosing psychedelics: More questions than answers? An overview and suggestions for future research. *Journal of Psychopharmacology*, 33(9), 1039–1057. https://doi.org/10.1177/0269881119857204.

- MacLean, K. A., Johnson, M. W., & Griffiths, R. R. (2011). Mystical experiences occasioned by the hallucinogen psilocybin lead to increases in the personality domain of openness. *Journal of Psychopharmacology*, 25(11), 1453–1461. https://doi.org/10. 1177/0269881111420188.
- Madsen, M. K., Fisher, P. M., Stenbaek, D. S., Kristiansen, S., Burmester, D., Lehel, S., ... Knudsen, G. M. (2020). A single psilocybin dose is associated with long-term increased mindfulness, preceded by a proportional change in neocortical 5-HT2A receptor binding. European Neuropsychopharmacology, 33, 71–80. https://doi.org/10.1016/j.euroneuro.2020.02.001.
- Mason, N. L., Kuypers, K. P. C., Muller, F., Reckweg, J., Tse, D. H. Y., Toennes, S. W., ... Ramaekers, J. G. (2020). Me, myself, bye: Regional alterations in glutamate and the experience of ego dissolution with psilocybin. *Neuro*psychopharmacology, 45(12), 2003–2011. https://doi.org/10. 1038/s41386-020-0718-8.
- Milek, A., Butler, E. A., & Bodenmann, G. (2015). The interplay of couple's shared time, women's intimacy, and intradyadic stress. *Journal of Family Psychology*, 29(6), 831–842. https://doi.org/10.1037/fam0000133.
- Morgan, D. H. J. (1996). Family connections: An introduction to family studies. Polity Press.
- Morgan, D. H. J. (2011). *Rethinking family practices*. palgrave macmillan. https://doi.org/10.1057/9780230304680.
- Nichols, D. E. (2016). Psychedelics. *Pharmacological Reviews*, 68(2), 264–355. https://doi.org/10.1124/pr.115.011478.
- Nichols, D. E. (2022). Entactogens: How the name for a novel class of psychoactive agents originated. *Frontiers in Psychiatry*, 13, 863088. https://doi.org/10.3389/fpsyt.2022.863088.
- Nichols, D. E., Hoffman, A. J., Oberlender, R. A., Peyton, J., III, & Shulgin, A. T. (1986). Derivatives of 1-(1,3-benzodioxol-5-yl)-2-butanamine: Representatives of a novel therapeutic class. *Journal of Medical Chemistry*, 29(10), 2009–2015. https://doi.org/10.1021/jm00160a035.
- Nutt, D., & Carhart-Harris, R. (2021). The current status of psychedelics in psychiatry. *JAMA Psychiatry*, 78(2), 121–122. https://doi.org/10.1001/jamapsychiatry.2020.2171.
- Nutt, D., Erritzoe, D., & Carhart-Harris, R. (2020). Psychedelic psychiatry's brave new world. *Cell*, 181(1), 24–28. https://doi.org/10.1016/j.cell.2020.03.020.
- Palhano-Fontes, F., Barreto, D., Onias, H., Andrade, K. C., Novaes, M. M., Pessoa, J. A., ... Araújo, D. B. (2019). Rapid antidepressant effects of the psychedelic ayahuasca in treatment-resistant depression: A randomized placebo-controlled trial. *Psychological Medicine*, 49(4), 655–663. https://doi.org/10. 1017/S0033291718001356.
- Pearson, J. C., Child, J. T., Carmon, A. F., & Miller, A. N. (2009). The influence of intimacy rituals and biological sex on relational quality and intimacy among dating couples. *Communication Research Reports*, 26(4), 297–310. https://doi.org/10.1080/08824090903293684.
- Pestana, J., Beccaria, F., & Petrilli, E. (2021). Psychedelic substance use in the Reddit psychonaut community. A qualitative study on motives and modalities. *Drugs and Alcohol Today*, 21(2), 112–123. https://doi.org/10.1108/dat-03-2020-0016.
- Prager, K. J., & Roberts, L. J. (2004). Deep intimate connection: Self and intimacy in couple relationships. In D. J. Mashek, & A.



- Aron (Eds.), *Handbook of closeness and intimacy* (pp. 43–60). Lawrence Erlbaum Associates.
- Preller, K. H., & Vollenweider, F. X. (2019). Modulation of social cognition via hallucinogens and "entactogens". *Frontiers in Psychiatry*, *10*, 881. https://doi.org/10.3389/fpsyt.2019.00881.
- Proulx, C. M., Helms, H. M., & Buehler, C. (2007). Marital quality and personal well-being: A meta-analysis. *Journal of Marriage* and Family, 69(3), 576–593. https://doi.org/10.1111/j.1741-3737.2007.00393.x.
- Radakovic, C., Radakovic, R., Peryer, G., & Geere, J.-A. (2022). Psychedelics and mindfulness: A systematic review and metaanalysis. *Journal of Psychedelic Studies*, 6(2), 137–153. https:// doi.org/10.1556/2054.2022.00218.
- Regan, A., Margolis, S., de Wit, H., & Lyubomirsky, S. (2021). Does +/-3,4-methylenedioxymethamphetamine (ecstasy) induce subjective feelings of social connection in humans? A multilevel meta-analysis. *Plos One*, *16*(10), e0258849. https://doi.org/10.1371/journal.pone.0258849.
- Roberson, P. N. E., Norona, J. C., Lenger, K. A., & Olmstead, S. B. (2018). How do relationship stability and quality affect well-being?: Romantic relationship trajectories, depressive symptoms, and life satisfaction across 30 years. *Journal of Child and Family Studies*, 27(7), 2171–2184. https://doi.org/10.1007/s10826-018-1052-1.
- Robles, T. F., Slatcher, R. B., Trombello, J. M., & McGinn, M. M. (2014). Marital quality and health: A meta-analytic review. *Psychological Bulletin*, 140(1), 140–187. https://doi.org/10.1037/a0031859.
- Ross, S., Bossis, A., Guss, J., Agin-Liebes, G., Malone, T., Cohen, B., ... Schmidt, B. L. (2016). Rapid and sustained symptom reduction following psilocybin treatment for anxiety and depression in patients with life-threatening cancer: A randomized controlled trial. *Journal of Psychopharmacology*, 30(12), 1165–1180. https://doi.org/10.1177/0269881116675512.
- Schaefer, M. T., & Olson, D. H. (1981). Assessing intimacy: The PAIR inventory. *Journal of Marital and Family Therapy*, 7(1), 47–60. https://doi.org/10.1111/j.1752-0606.1981.tb01351.x.
- Schuster-Bruce, C. (2022, September 10). A couple on the brink of splitting spent \$6,000 of their life savings on psychedelic relationship therapy. They say it saved their 10-year marriage.

- *Business Insider.* https://www.insider.com/magic-mushroom-psilocybin-couple-therapy-saved-marriage-2022-7.
- St John, G. (2018). The breakthrough experience: DMT hyperspace and its liminal aesthetics. *Anthropology of Consciousness*, 29(1), 57–76. https://doi.org/10.1111/anoc.12089.
- Twiselton, K., Stanton, S. C. E., Gillanders, D., & Bottomley, E. (2020). Exploring the links between psychological flexibility, individual well-being, and relationship quality. *Personal Relationships*, 27(4), 880–906. https://doi.org/10.1111/pere.12344.
- Vollenweider, F. X., & Kometer, M. (2010). The neurobiology of psychedelic drugs: Implications for the treatment of mood disorders. *Nature Reviews Neuroscience*, 11(9), 642–651. https:// doi.org/10.1038/nrn2884.
- Vollenweider, F. X., & Preller, K. H. (2020). Psychedelic drugs: Neurobiology and potential for treatment of psychiatric disorders. *Nature Reviews Neuroscience*, 21(11), 611–624. https://doi. org/10.1038/s41583-020-0367-2.
- Watts, R., Day, C., Krzanowski, J., Nutt, D., & Carhart-Harris, R. (2017). Patients' accounts of increased "connectedness" and "acceptance" after psilocybin for treatment-resistant depression. *Journal of Humanistic Psychology*, 57(5), 520–564. https://doi.org/10.1177/0022167817709585.
- Wengraf, T. (2001). Qualitative research interviewing: Biographic narrative and semi-structured methods. SAGE.
- Williams, A. (2017, January 7). How LSD saved one woman's marriage. The New York Times. https://www.nytimes.com/ 2017/01/07/style/microdosing-lsd-ayelet-waldman-michaelchabon-marriage.html.
- Wimbauer, C., & Motakef, M. (2017). Das Paarinterview in der soziologischen Forschung. Method(olog)ische und forschungspraktische Überlegungen [Joint couple interviews in sociological research on couples: Methodological and practical considerations]. Forum Qualitative Sozialforschung/Forum: Qualitative Social Research, 18(2), 4. https://doi.org/10.17169/fqs-18.2.2671.
- Yoo, H., Bartle-Haring, S., Day, R. D., & Gangamma, R. (2014). Couple communication, emotional and sexual intimacy, and relationship satisfaction. *Journal of Sex & Marital Therapy*, 40(4), 275–293. https://doi.org/10.1080/0092623X.2012.751072.
- Zinberg, N. E. (1984). Drug, set, and setting: The basis for controlled intoxicant use. Yale University Press.

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