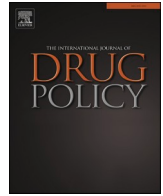


Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

International Journal of Drug Policy

journal homepage: www.elsevier.com/locate/drugpo

Psychedelics as a tool for a more connected and sustainable world? Considering the importance of rituals, boundaries, and commitment.

Katie Anderson^{a,*}, Patrick Elf^b, Amy Isham^c^a Department of Psychology, Middlesex University, The Burroughs, Hendon, London NW4 4BT, United Kingdom^b Centre for Enterprise, Environment & Development Research (CEEDR), School of Business and Law, Middlesex University, The Burroughs, Hendon, London NW4 4BT, United Kingdom^c School of Psychology, Swansea University, Singleton Park, Swansea SA2 8PP, United Kingdom

ARTICLE INFO

Keywords:

MDMA
LSD
Psilocybin
Psychedelics
Setting
Rituals

ABSTRACT

Despite the surge of interest in psychedelic research in the past decade, largely due to the promise of psychedelics for improving mental health outcomes, there has been comparatively little discussion about the social and environmental consequences of psychedelic drug use. While there is growing evidence to suggest psychedelics could foster a greater connection to the natural world and improve social relationships, such positive repercussions are far from guaranteed. In this commentary, we focus on LSD, psilocybin and especially MDMA, and outline three insights we came to see as crucial to creating beneficial outcomes: 1) the importance of setting and rituals, 2) the establishment of boundaries, and 3) understanding the long-term commitment required. These insights are grounded in the history of psychedelics, which is intimately intertwined with ritualised use, yet the process of commercialisation of these substances threatens to strip away important contextual factors. Creating boundaries around when, how and with whom psychedelics are used have been found to protect recreational users from harm and could also be instrumental in steering commercial interests to align with socio-environmental goals. Finally, far from being a ‘quick fix’ for social or environmental problems, the use of psychedelics requires sustained engagement to integrate the insights obtained. Whereas we remain optimistic about the transformative potential of psychedelics for social relationships and the environment, we also emphasise the need for a more cautious, considered approach if we are to harness the benefits and minimise the challenges of psychedelic drug use.

Research on the therapeutic use of psychedelics has rapidly gained momentum in the past decade, possibly driven by increased prevalence of mental health disorders, diminishing stigma surrounding psychoactive substances, and promising findings from clinical trials on psychedelic-assisted therapies (Nutt, 2019). Yet whereas clinical trials are becoming more common, there has been relatively little discussion about the broader societal impacts of psychedelic drug use beyond their clinical applications. Resurgence of clinical psychedelic use has drawn attention to psychedelics in the media and general population (Yaden & Griffith, 2021) and might foreseeably influence recreational use, underscoring the importance of understanding how to create beneficial outcomes. As psychologists and sustainability researchers, we are interested in how psychedelics may be able to support prosocial and pro-environmental outcomes and their potential to do so is the focus of this commentary. Given that we are drawing primarily on our own

previous work, ‘psychedelics’ will be used to refer to the so-called ‘classic’ psychedelics lysergic acid diethylamide (LSD) and psilocybin, as well as 3,4-Methylenedioxymethamphetamine (MDMA) or ‘ecstasy’, formally classified as an empathogen (e.g. Gandy et al., 2020), with a particular focus on the latter.

Notably, this commentary is not focused on the clinical use of psychedelics for the treatment of a health condition by a medically and/or therapeutically trained professional. Instead, it concerns the recreational use of psychedelics in social or naturalistic settings. Despite the proliferation of clinical trials studying psychedelics as a treatment for a range of mood disorders and addictions, the vast majority of psychedelics are consumed within recreational settings. In 2022, three million people in the European Union took MDMA and 12.3 million reported ever taking the drug (European Monitoring Centre for Drugs and Drug Addiction, 2022). In the United States, an estimated 10.7% of the

* Corresponding author.

E-mail address: k.anderson@mdx.ac.uk (K. Anderson).<https://doi.org/10.1016/j.drugpo.2024.104571>

Received 22 April 2024; Received in revised form 31 July 2024; Accepted 22 August 2024

Available online 5 September 2024

0955-3959/© 2024 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

population have taken LSD in their lifetime (Substance Abuse and Mental Health Services Administration, 2018) and the use of LSD rose 56.4% between 2015-2018 (Yockey et al., 2020). While most psychedelic use occurs without incident, there are risks involved, ranging from short-term effects such as low mood, fatigue and anxiety (MDMA), headaches, nausea and emotional distress (LSD/psilocybin) to more serious acute reactions such as hyperthermia (over-heating) and heart attack/cardiac arrest (Nutt, 2012; Rossi et al., 2022), and even fatalities (although this is rare for psychedelic use, especially for LSD and psilocybin (Office for National Statistics, 2021)).

Psychedelics have been used for hundreds if not thousands of years outside of modern clinical settings, and the Indigenous peoples of Central and South America have long cultivated psilocybin mushrooms for spiritual and ritualistic use (González-Mariscal & Sosa-Cortés, 2022) as well as ancient and native peoples from Europe and Africa (Froese et al., 2016). In contrast, medical, Western *therapeutic* use of psychedelics began fairly recently when a handful of American psychiatrists started delivering LSD-assisted psychotherapy in the 1950s, with recreational use following on its tail with the counterculture movement in the 1960s (Grof, 1970) and the subsequent scheduling of LSD in 1968. MDMA would follow a similar trajectory from early therapeutic use in the 1960s and 70s to popularised use at parties or raves in the 1980s (Passie, 2018).

Motives for psychedelic use outside of clinical settings can vary and go beyond pure enjoyment. A systematic review using a five-factor model of drug use motivation found that the most common motive for taking classic psychedelics (LSD, psilocybin, ayahuasca etc.) was ‘expansion’ – a desire for self-knowledge and to access altered sensory states (78% of all studies) followed by ‘coping’ – attenuating negative emotional states (67%) (Basedow & Kuitunen-Paul, 2022). Further themes also emerged around use as a form of cultural identity and spiritual development. The profile of MDMA users is slightly different, the dominant motive described as the desire for increased sociability and connection (Sottile et al., 2023), with expansion and coping being the second and third most popular reasons respectively, while an earlier study found euphoric/energetic effects as the most motivating (Ter Bogt et al., 2005). This variety in motivations points to a more nuanced understanding of the use of psychedelics and the outcomes they can facilitate.

The potential role of psychedelics in connecting with others and our environment

In recent years, and besides its still niche and emerging character, research has started to accumulate evidence that psychedelics could have an important role in fostering pro-environmental and prosocial outcomes. In this line of research, sustainability scholars have begun to explore the possible impact of psychedelics on attitudes and behaviours related to environmental conservation and sustainability (e.g. Forstmann & Sagioglou, 2017), with recent studies pointing to a relationship between the use of psychedelics and feeling connected to the natural world (Kettner et al., 2019; Lyons & Carhart-Harris, 2018). This sense of nature relatedness has been, in turn, linked with pro-environmental behaviours like recycling and objective ecological knowledge such as climate change information (Sagioglou & Forstmann, 2022), which might pave the way towards low-carbon good lives (Isham et al., 2024).

Psychedelics, particularly MDMA (or ‘ecstasy’), could also play an important role in promoting social connection (Lyubomirsky, 2022). For instance, controlled studies have found that MDMA alters a range of social cognitive processes such as increasing emotional empathy (Hysek et al., 2014), increasing value of social stimuli (Wardle, Kirkpatrick & de Wit, 2014) and reducing social anxiety (Baggott et al., 2016). Notably, whereas experimental studies tend to be performed in an isolated lab environment, MDMA is best-placed to amplify connection in the company of others (especially within personal or therapeutic relationships)

(e.g. Bershad et al., 2016), opening up questions about whether the prosocial effects of MDMA might be even more pronounced than recent studies suggest (Anderson, 2017; Lyubomirsky, 2022).

Emerging findings of the far-reaching, positive potential of psychedelics have rekindled enthusiasm for many researchers and practitioners. However, alongside the apparent hype around the “psychedelics renaissance” amongst popular science audiences, there are growing calls for more cautious approaches, highlighting potential repercussions (e.g. Pace & Devenot, 2021). Indeed, the context in which we consume psychedelics, with what intentions, and in what form, can all influence their outcomes (e.g. Hartogsohn, 2023).

This commentary reflects on some of the factors that may impact the value and outcomes of psychedelic substances. In particular, we discuss the importance of setting and rituals, the establishment of boundaries, and the long-term commitment required. Whilst excited by the surge of research on psychedelics in fields as diverse as sustainability, psychology, public health, and psychopharmacology, and optimistic about their potential, we are equally aware of the need for a more nuanced understanding of the most effective use of psychedelics for people and planet. Our arguments are derived from discussions surrounding our existing research and writings on the potential for different psychedelics to support prosocial and pro-environmental outcomes.

“The single best use of MDMA is to facilitate more direct communication between people involved in a significant emotional relationship”

(Greer & Tolbert, 1986, p. 326)

Katie Anderson’s work has focused on how MDMA’s social effects can support personal relationships. MDMA was first widely used over forty years ago in individual/group therapy sessions in the United States. Psychotherapists working in the 1970s and 80s saw MDMA as a catalyst for communication and insight which could deepen personal relationships, connect with and reshape the self, and facilitate therapeutic work (Passie, 2018). While no consensus was reached on how MDMA produced these effects, the drug’s ability to decrease fear and while fostering openness and compassion were commonly emphasised (Ingrasci in Gertz, 1985; Greer, 1985). The subsequent scheduling of MDMA by the Federal Drugs Administration in 1985 cut off this potentially promising thread of research. Yet, the groundwork was laid and more recent studies have echoed this early, formative work in their focus on the psychological mechanisms behind MDMA’s therapeutic potential (Sessa, 2011) including promoting more positive evaluations of the self (Kamboj et al., 2018). However, this commentary is focussed on exploring and responding to how MDMA is most often used – outside of the clinic – and draws particularly from Anderson’s research with collaborators Paula Reavey and Zoë Boden into the naturalistic use of MDMA by couples.

Romantic relationships have arguably replaced the family as the primary site for connection and intimacy (Jamieson, 1998; Perel, 2009) and there is a long history of MDMA’s ability (in both naturalistic and lab settings) to produce acute prosocial effects such as increased openness, empathy and feelings of closeness (Morgan et al., 2013). Qualitative studies have also pointed to more long-lasting impacts of MDMA on social behaviours and improved relationships (Bahora, Sterk & Elifson, 2009; Farrugia, 2015; Hinchliff, 2001), lending credibility to Greer and Tolbert’s (1986) emphasis on the use of MDMA to facilitate communication in personal relationships (although whether this is the ‘best use’ (p326) is debatable). Therefore, how couples experience the communicative and social properties of MDMA and how these experiences affect their relationships are the primary drivers behind Anderson’s research.

It is unclear how much overlap there is between the motivations, settings and outcomes of people who take psychedelics with a partner and those who do not due to an incomplete picture of the psychedelic user population (Johnstad, 2021) and the limited consideration of couples in the research (Neubert et al., 2024; Vervaeke & Korf, 2006). The small number of couple studies which exist suggest a more

conscious, considered type of use (e.g. Colbert-Hughes, 2023) when compared with the sometimes hedonistic use of psychedelics within rave culture (e.g. Ter Bogt & Engels, 2005). However, the importance and experience of the relationally-enhancing effects of psychedelics is present for both romantic partnerships (Colbert-Hughes, 2023; Neubert et al., 2024) as well as friendships (Farrugia, 2015; Newson et al., 2021) and both groups take psychedelics in a variety of settings. In short, while there are likely to be differences between romantic/platonic use of psychedelics, there will also be aspects of meaningful overlap when considering psychedelic use as a whole.

“Our enormously productive economy... demands that we make consumption our way of life, that we convert the buying and use of goods into rituals, that we seek our spiritual satisfaction, our ego satisfaction, in consumption... We need things consumed, burned up, worn out, replaced, and discarded at an ever-increasing rate.”

(Lebow, 1955)

Patrick Elf and Amy Isham have been interested in how the broader category of classical psychedelics can support what they call ‘sustainable wellbeing’ (Isham et al., 2022) whilst at the same time becoming increasingly exposed to processes of commercialisation (Ladh, 2020). Whereas psychedelics have been proposed to deliver benefits for human, social, and ecological well-being (Isham et al., 2022), there are questions surrounding the extent to which such practices are “intrinsically progressive” (Ferguson, 2016). The potential of psychedelics may be dependent upon the social context in which they are implemented.

As mental health issues are on the rise, so is the market for health and well-being solutions. The two most common mental health conditions, depression and anxiety, are responsible for \$1 trillion in damage to the global economy due to time being taken off work (i.e. absenteeism), and poorer performance and productivity in the workplace (Isham et al., 2021). Given that the recent interest in psychedelics has largely been fuelled by research documenting their potential to treat mental health ailments (e.g., Romeo et al., 2020), it is perhaps not surprising that both public and private sector actors have started to explore ways to harness the supposed potential of psychedelics. Indeed, the psychedelic industry is projected to grow from \$2 billion in 2020 to \$10.75 billion by 2027. This marketisation and commercialisation of psychedelics (which have historically been intertwined with spirituality and ritualistic use) through the adoption of a profit-driven approach for the management of these substances is one way in which the social and economic context could impact upon the nature, use, and consequences of psychedelics. Understanding how processes of commercialisation impact the outcomes of psychedelic use was the goal of Elf and Isham’s (along with collaborator Dario Leoni’s) recent paper. In this work, they explored outcomes within therapeutic practice but also outside of clinical contexts, such as the use of psychedelics recreationally within workplaces.

Whilst having different primary focuses, Anderson’s and Elf and Isham’s work both speak to the bigger question of if, how, and when psychedelics can have the most beneficial effects in terms of individual, social, and planetary relations. Through a series of discussions, we have together compiled a list of three themes, or factors, that we deem important to consider when reflecting upon the wider relevance and potential of psychedelics to deliver prosocial and pro-environmental outcomes.

(a) The Importance of Setting and Rituals

Historically, classical psychedelics have been tightly intertwined with spirituality in human societies that ritualised their use. The mystical experiences facilitated by psychedelics are often an integral component of healing ceremonies and other (Indigenous) rituals. The resulting mystical experiences have been suggested to be crucial to the role of psychedelics in reducing existential angst, anxiety, and depression, as noted by Kangaslampi (2023) and Elf, Isham and Leoni (2023).

The electronic music scene, intimately associated with psychedelics and especially with MDMA, has been framed as a ‘modern-day ritual’ – functioning as a space for personal, social and spiritual exploration and improving wellbeing (Redfield & Thouin-Savard, 2017). The importance of rituals in relation to the use of MDMA by couples has also been highlighted by Anderson, Reavey, and Boden (2019). In this context, rituals are much more than ancillary elements of an experience, and shape and transform the experience itself (Douglas, 1966). In discussion of Anderson et al.’s study, we explicitly focus on rituals and *not* routines. While routines can describe recurring patterns of actions (e.g. drinking a coffee from while listening to the news on the radio), rituals can be understood as deliberate practices that carry greater meaning and are often conducted in a specific, social context as part of special occasions (Takahashi & Olaveson, 2003). Rituals do not have to be spiritual or religious, what matters is the level of intentionality that underpin them.

Couples created rituals around their MDMA use to form secular ‘sacred’ spaces set apart from everyday life. To mark the specialness of the occasion, such rituals could involve tying MDMA use to significant life or calendar events (such as a homecoming or season change) as well as preparing both the setting, and their (mind)set, that is, preparing themselves mentally, physically and spiritually. Couples cleaned and decorated their homes with flowers, candles and tapestries, took a shower, ate and drank healthily, switched off devices and carefully curated props and music playlists to create unique, restorative experiences. These rituals allowed individuals to focus more on their partner, creating intimate moments of communication, and enhanced the perceived love between partners. Rituals could also perform a lighter function – encouraging fun and festivity. Similar practices of preparation, intentionality around setting and relational effects have been reported in other studies exploring the use of LSD and psilocybin by couples (Neubert et al., 2024), with friends (Wellbourne-Wood, 1997) and in retreat settings (Kettner et al., 2021).

Following Anderson et al.’s (2019) work highlighting the importance and the power of rituals in shaping the psychedelic experience, Elf, Isham and Leoni (2023) note that psychedelics’ use within contemporary, consumer cultures has typically been extracted from such spiritual or ritualistic roots. For instance, there are very rarely any rituals involved when people take LSD hoping to improve their productivity and/or creativity (see e.g. Aronov, 2019), and frequent microdosing diminishes any sense of psychedelic use being a special occasion. The implications of this separation from rituals may impact the outcomes of psychedelics and research should seek to determine the nature of this impact as psychedelics continue to be implemented in different sectors and contexts.

(b) Boundaries

Following on from discussion of the importance of rituals and contexts, Anderson et al.’s (2019) exploration of boundaries in the context of MDMA use raises intriguing questions. How could boundaries be implemented to control the effects of psychedelics? Boundaries could relate to constraints on when, where, with who, and with what intentions psychedelics should be used. Despite couples portraying their MDMA experiences as unstructured and spontaneous, use was often carefully bounded. Couples drew a clear line between their MDMA use and everyday life – MDMA was ‘a special event’ (p13), occurring infrequently and best aligned with celebratory/social events. Boundaries allowed couples to protect the sacredness of their MDMA experiences while also controlling use and reducing harm. By carving out acceptable times and reasons for use, unacceptable use practices were also delineated and connected with consequences for health and wellbeing. Boundaries were also used (consciously and unconsciously) to protect their relationship, as experiencing the powerful emotional effects of MDMA with other people might affect exclusive couple intimacy (cf. Stenner, 2013). Couples were often acutely aware of the prosocial effects MDMA could have and used boundaries, such as only using

MDMA when their partner was there, to enhance these social effects and make sure their relationship benefitted from them. Therefore, MDMA experiences could be seen as a way of enhancing feelings of closeness and helping to sustain couple relationships – with the appropriate boundaries in place.

Drug researchers have argued that harm reduction interventions are more likely to succeed when framed from the perspective of drug users themselves, such as acknowledging the pleasures of drug use and working with existing harm reduction strategies (Foster & Spencer, 2013; Pini, 2000; Pini, 2001; Race, 2008). With this in mind, prudent boundaries could include: reserving use for special occasions and carefully considering who to take psychedelics with. Furthermore, these boundaries could be understood as protecting the desirable effects of psychedelics, such as connection and insight, as well as safeguarding health and wellbeing. These boundaries are supported by a review suggesting that people who use psychedelics infrequently for therapeutic/spiritual reasons are more likely to experience positive outcomes (Johnstad, 2021) and prior studies where users stress the importance of taking psychedelics with people they trust to minimise harm (Palmer & Maynard, 2022).

Careful reflection with regards to boundaries seems also relevant when considering the impacts of the commercialisation of psychedelics (see e.g. Hendy, 2018). As stated previously, whilst we are encouraged by research pointing towards the potential for psychedelics to foster prosocial and pro-environmental outcomes, in the absence of boundaries surrounding how psychedelic experiences are implemented and to what ends, we equally see the need to *not* prematurely dismiss evidence that psychedelic experiences can be used to promote outcomes such as heightened productivity or for primarily commercial reasons (Pace & Devenot, 2021).

For instance, the growing interest in microdosing and the resulting opportunity to supply more frequent demand is one indication that psychedelics *could* be used to promote profit motives and productivity-enhancing ends. Indeed, whereas some recent studies point to the potential and significant benefit from microdosing (e.g. Rootman et al., 2022), self-administration of very low doses of psychedelics such as MDMA, psilocybin and LSD has been the subject of numerous anecdotal internet blogs and more recently some scientific research (see e.g., Lea et al., 2020; Prochazkova et al., 2018), citing outcomes such as productivity and creativity as main motivators, helping to support workplace outcomes. Instances in which profit-driven commercialisation is paramount might therefore occur at the expense of other, more socio-ecological beneficial factors (e.g. reduced consumption). In this way, whereas in the 1960s ‘hippies’ largely consumed LSD to unify and revolt *against* the system, one might argue that today’s mainstream consumers of psychedelics microdose to work better *for* the system (see e.g., Cameron et al., 2020; Carnegie, 2023). Indeed, legal versions of psychedelics are already being sold online for microdosing, with advertising for such products focusing on the promise of higher productivity (e.g. Amsterdam-based company MicrodosePro). Even before the potential legalization of psychedelics, companies have started to follow in line trying to exploit promising commercial opportunities, growing doubts that psychedelics can deliver the necessary systems change (cf. Peck, 2020). For sustainability scholars, this raises questions surrounding how carefully delineated boundaries could help steer the impact of commercialisation in a direction that aligns more closely with environmental targets.

(c) Not a Quick Fix

There is a cultural understanding of ‘pills’ as a ‘quick fix’ to solving problems – SSRIs for depression, Xanax for anxiety, and the list goes on. MDMA and other psychedelics might become seen in the same way – as an easy shortcut to desirable social qualities such as energy, sociability, and openness (Olsen, 2009) or to increased care for the environment (Gandy et al., 2020). As shown by Anderson et al., MDMA could be a

both transformative and transcendent experience for couples. However (and importantly), relationship problems uncovered or discussed on MDMA were not magically ‘solved’ once the ‘trip’ wore off. Couples had to continue the conversation and come to a deeper understanding of themselves and their relationship to resolve existing problems. One of the key things MDMA did was allow couples to speak more openly about their feelings and concerns in a non-judgmental, empathetic way but, importantly, these confessions and understandings still needed to be integrated into their relationship afterwards.

Similar themes ring true when considering the use of psychedelic-assisted therapy (PAT) more broadly. Current PAT is often labour intensive in that patients must be supervised by several trained practitioners during the psychedelic experience and the following integration (Spriggs et al., 2023). Even outside of clinical use, a process of integration is required to make sense of a psychedelic experience and if people come to use a substance without being prepared to do the mental work, it can have negative consequences (Glynos et al., 2023). Therefore, far from being a quick fix, to have the most beneficial effects psychedelics often require significant mental effort over longer time periods. However, longer time frames and high therapeutic costs are not desirable under a model of commercialisation, and thus researchers are trying to create new molecules that would provide therapeutic effects of psychedelics without the need for the therapy or even the psychedelic experience itself (see e.g. Jarow, 2023). It remains to be seen how such drives for efficiency will impact the outcomes of psychedelics, but this factor will be important to consider if psychedelics continue to be commercially marketed.

Closing remarks

In conclusion, the exploration of psychedelics as tools for fostering a more connected and sustainable world presents a complex tapestry of potential benefits and challenges. The prosocial effects and pro-environmental behaviours highlighted as a consequence of psychedelic use in various studies suggests that the transformative potential of psychedelics could extend beyond individual experiences to contribute positively to social and environmental wellbeing.

However, the enthusiasm surrounding the renewed interest in psychedelics must be tempered with a cautious and ethical approach before hastily overestimating the benefits (Yaden et al., 2021). The context in which these substances are consumed and the intentions behind their use both play a critical role in determining their outcomes. Moreover, the commitment involved in the ‘good’ use of psychedelics is not so much a commitment to *continued* psychedelics use but a commitment to utilising meaningful insights from the psychedelic rituals in one’s everyday life (Griffiths, 2016).

We have explored key factors influencing the value and outcomes of psychedelic substances. The three themes – the importance of setting and rituals, boundaries, and the acknowledgment that psychedelics are not a quick fix – underscore the need for careful reflection. As legislative frameworks shift towards decriminalisation of psychedelics in certain states and countries, and with the wider implementation of psychedelic-assisted psychotherapy within healthcare (Siegel et al., 2023), our reflections suggest that policies and need to be guided by a nuanced understanding of the contexts and practices that deliver optimal outcomes for people, communities, and the planet (McGuire et al., 2023). Guidance surrounding recreational use should be provided, highlighting the need for commitment and boundaries as we have noted here, to support effective and responsible self-experimentation. In essence, while psychedelics hold promise as catalysts for positive change in individual, social, and planetary relations, a thoughtful and cautious approach is imperative, recognizing the potential for both positive transformation and unintended consequences.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This work was supported by an Institute of Social Science Research scholarship from London Southbank University.

Ethics approval

Whereas no empirical data underpin the work of the manuscript directly, we heavily draw on previous empirical work by the first author. We therefore wish to note that we have obtained ethics approval from an appropriately constituted ethics committee/institutional review board where the research entailed animal or human participation.

CRediT authorship contribution statement

Katie Anderson: Writing – review & editing, Writing – original draft, Conceptualization. **Patrick Elf:** Writing – review & editing, Writing – original draft, Conceptualization. **Amy Isham:** Writing – review & editing, Writing – original draft, Conceptualization.

Declaration of competing interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

References

- Anderson, K. (2017). *Navigating Intimacy with Ecstasy: The Emotional, Spatial and Boundaried Dynamics of Couples' MDMA Experiences*. London Southbank University [Unpublished doctoral thesis].
- 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>
- Aronov, M. (2019). (Micro-) "Psychedelic" Experiences: From the 1960s creativity at the workplace to the 21st Century neuro-newspeak. *Ethnologie française*, 49(4), 701–718. <https://doi.org/10.3917/ethn.194.0701>
- Baggott, M. J., Coyle, J. R., Siegrist, J. D., Garrison, K. J., Galloway, G. P., & Mendelson, J. E. (2016). Effects of 3,4-methylenedioxymethamphetamine on socioemotional feelings, authenticity, and autobiographical disclosure in healthy volunteers in a controlled setting. *Journal of Psychopharmacology*, 30(4), 378–387. <https://doi.org/10.1177/0269881115626348>
- Bahora, M., Sterk, C. E., & Elifson, K. W. (2009). Understanding recreational ecstasy use in the United States: A qualitative inquiry. *International Journal of Drug Policy*, 20(1), 62–69. <https://doi.org/10.1016/j.drugpo.2007.10.003>
- Basedow, L. A., & Kuitunen-Paul, S. (2022). Motives for the use of serotonergic psychedelics: A systematic review. *Drug and Alcohol Review*, 41(6), 1391–1403.
- Bershad, A. K., Miller, M. A., Baggott, M. J., & De Wit, H. (2016). The effects of MDMA on socio-emotional processing: Does MDMA differ from other stimulants? *Journal of Psychopharmacology*, 30(12), 1248–1258. <https://doi.org/10.1177/0269881116663120>
- Cameron, L. P., Nazarian, A., & Olson, D. E. (2020). Psychedelic microdosing: Prevalence and subjective effects. *Journal of Psychoactive Drugs*, 52(2), 113–122. <https://doi.org/10.1080/02791072.2020.1718250>
- Carnegie, M. (2023). *Elon Musk Does it. Sergey Brin Does it. Your Boss Might Do it. Welcome to the Workplace Shroom Boom*. September. Wired <https://www.wired.com/story/microdosing-workplace-shroom-boom/>.
- Colbert, R., & Hughes, S. (2023). Evenings with Molly: Adult couples' use of MDMA for relationship enhancement. *Culture, Medicine, and Psychiatry*, 47(1), 252–270.
- Douglas, M. (1966). *Purity and danger: An Analysis of Concepts of Pollution and Taboo*. Routledge.
- Elf, P., Isham, A., & Leoni, D. (2023). Moving forward by looking back: Critiques of commercialized mindfulness and the future of (Commercialized) psychedelics. *History of Pharmacy and Pharmaceuticals*, 65(1), 33–62. <https://doi.org/10.3368/hopp.65.1.33>
- European Monitoring Centre for Drugs and Drug Addiction. (2022). *European Drug Report 2022: Trends and Developments*. Luxembourg: Publications Office of the European Union.
- Farrugia, A. (2015). You can't just give your best mate a massive hug every day": Young men, play and MDMA. *Contemporary Drug Problems*, 42(3), 240–256. <https://doi.org/10.1177/0091450915601520>
- Ferguson, M. L. (2016). Symposium: Mindfulness and politics: introduction. *New Political Science*, 38(2), 201–205. <https://doi.org/10.1080/07393148.2016.1153190>
- Forstmann, M., & Sagioglou, C. (2017). Lifetime experience with (Classic) psychedelics predicts pro-environmental behavior through an increase in nature relatedness. *Journal of Psychopharmacology*, 31(8), 975–988. <https://doi.org/10.1177/0269881117714049>
- Foster, K., & Spencer, D. (2013). It's just a social thing': Drug use, friendship and borderwork among marginalized young people. *International Journal of Drug Policy*, 24(3), 223–230.
- Froese, T., Guzmán, G., & Guzmán-Dávalos, L. (2016). On the origin of the genus *Psilocybe* and its potential ritual use in ancient Africa and Europe. *Economic Botany*, 70, 103–114.
- Gandy, S., Forstmann, M., Carhart-Harris, R. L., Timmermann, C., Luke, D., & Watts, R. (2020). The potential synergistic effects between psychedelic administration and nature contact for the improvement of mental health. *Health Psychology Open*, 7(2), Article 205510292097812. <https://doi.org/10.1177/2055102920978123>
- Gertz, K.R. (1985). "HugDrug" alert: The agony of Ecstasy. Harper's Bazaar November 1985 issue: 45–56.
- Glynos, N. G., Fields, C. W., Barron, J., Herberholz, M., Kruger, D. J., & Boehnke, K. F. (2023). Naturalistic psychedelic use: A world apart from clinical care. *Journal of Psychoactive Drugs*, 55(4), 379–388. <https://doi.org/10.1080/02791072.2022.2108356>
- González-Mariscal, J. M., & Sosa-Cortés, P. E. (2022). Insights for modern applications of psilocybin therapy from a case study of traditional Mazatec medicine. *Anthropology of consciousness*, 33(2), 358–384.
- Greer, E. (1985). Using MDMA in psychotherapy. *Advances*, 2(2), 57–59.
- Greer, G., & Tolbert, R. (1986). Subjective reports of the effects of MDMA in a clinical setting. *Journal of Psychoactive Drugs*, 18(4), 319–327. <https://doi.org/10.1080/02791072.1986.10472364>
- Griffiths, R. (2016). *Johns Hopkins Psilocybin Research Project: Overview, Phenomenology, and Therapeutic Applications*. June 3–5. Amsterdam, The Netherlands: ICPR 2016: Interdisciplinary Conference on Psychedelic Research [Paper presentation].
- Grof, S. (1970). The use of LSD in psychotherapy. *Journal of Psychedelic Drugs*, 3(1), 52–62.
- Hartogsohn, I. (2023). The corporadelic set and setting: On the consequences of psychedelic commodification. *History of Pharmacy and Pharmaceuticals*, 65(1), 131–140. <https://doi.org/10.3368/hopp.65.1.131>
- Hendy, K. (2018). Placebo problems: Boundary work in the psychedelic science renaissance. In B. C. Labate, & C. Cavnar (Eds.), *Plant Medicines, Healing and Psychedelic Science: Cultural Perspectives* (pp. 151–166). Springer International Publishing. https://doi.org/10.1007/978-3-319-76720-8_9
- Hinchliff, S. (2001). The meaning of ecstasy use and clubbing to women in the late 1990s. *International Journal of Drug Policy*, 12(5), 455–468. [https://doi.org/10.1016/S0955-3959\(01\)00113-X](https://doi.org/10.1016/S0955-3959(01)00113-X)
- Hysek, C. M., Schmid, Y., Simmler, L. D., Domes, G., Heinrichs, M., Eisenegger, C., ... Liechti, M. E. (2014). MDMA enhances emotional empathy and prosocial behavior. *Social Cognitive and Affective Neuroscience*, 9(11), 1645–1652.
- Isham, A., Elf, P., & Jackson, T. (2022). Self-transcendent experiences as promoters of ecological wellbeing? Exploration of the evidence and hypotheses to be tested. *Frontiers in Psychology*, 13. <https://doi.org/10.3389/fpsyg.2022.1051478>
- Isham, A., Loukianov, A., & Elf, P. (2024). Low-Carbon Good Lives. In C. Overdevest (Ed.), *Elgar Encyclopedia of Environmental Sociology*. London: Elgar.
- Isham, A., Mair, S., & Jackson, T. (2021). Worker wellbeing and productivity in advanced economies: Re-examining the link. *Ecological Economics*, 184, Article 106989. <https://doi.org/10.1016/j.ecolecon.2021.106989>
- Isham, A., Verfuert, C., Armstrong, A., Elf, P., Gatersleben, B., & Jackson, T. (2022). The problematic role of materialistic values in the pursuit of sustainable well-being. *International Journal of Environmental Research and Public Health*, 19(6), 3673. <https://doi.org/10.3390/ijerph19063673>
- Jamieson, L. (1998). *Intimacy: Personal Relationships in Modern Societies*. Cambridge, MA: Polity Press. <http://archive.org/details/intimacypersonal0000jami>
- Jarow, O. (2023). *Psychedelics Might Revolutionize Therapy. What happens if you Remove the Trip?*. July 25 <https://www.vox.com/future-perfect/23801576/psychedelic-drugs-therapy-depression-mushrooms-lsd-mdma-tripless-non-hallucinogenic>
- Johnstad, P. G. (2021). Who is the typical psychedelics user? Methodological challenges for research in psychedelics use and its consequences. *Nordic Studies on Alcohol and Drugs*, 38(1), 35–49.
- Kamboj, S. K., Walldén, Y. S., Falconer, C. J., Alotaibi, M. R., Blagbrough, I. S., Husbands, S. M., & Freeman, T. P. (2018). Additive effects of 3, 4-methylenedioxy-methamphetamine (MDMA) and compassionate imagery on self-compassion in recreational users of ecstasy. *Mindfulness*, 9, 1134–1145.
- Kangaslampi, S. (2023). Association between mystical-type experiences under psychedelics and improvements in well-being or mental health – A comprehensive review of the evidence. *Journal of Psychedelic Studies*, 7(1), 18–28. <https://doi.org/10.1556/2054.2023.00243>
- Kettner, H., Gandy, S., Haijen, E. C. H. M., & Carhart-Harris, R. L. (2019). From egoism to ecoism: Psychedelics increase nature relatedness in a state-mediated and context-dependent manner. *International Journal of Environmental Research and Public Health*, 16(24), 5147. <https://doi.org/10.3390/ijerph16245147>
- Kettner, H., Rosas, F. E., Timmermann, C., Kaertner, L., Carhart-Harris, R. L., & Roseman, L. (2021). Psychedelic communitas: intersubjective experience during psychedelic group sessions predicts enduring changes in psychological wellbeing and social connectedness. *Frontiers in Pharmacology*, 12, Article 623985.
- Ladha, A. (2020). Conscious capitalism is an alibi and an apology for our existing paradigm. *DoubleBlind Mag*. <https://doubleblindmag.com/conscious-capitalism-is-an-alibi-and-an-apology-for-our-existing-paradigm/>.
- Lea, T., Amada, N., & Jungaberle, H. (2020). Psychedelic microdosing: A reddit analysis. *Journal of Psychoactive Drugs*, 52(2), 101–112. <https://doi.org/10.1080/02791072.2019.1683260>
- Lebow, V. (1955). Price Competition in 1955. *Journal of Retailing*, 31(1), 5–10.

- Lyons, T., & Carhart-Harris, R. L. (2018). Increased nature relatedness and decreased authoritarian political views after psilocybin for treatment-resistant depression. *Journal of psychopharmacology*, 32(7), 811–819.
- Lyubomirsky, S. (2022). Toward a new science of psychedelic social psychology: The effects of MDMA (Ecstasy) on social connection. *Perspectives on Psychological Science*, 17(5), 1234–1257. <https://doi.org/10.1177/17456916211055369>
- McGuire, A. L., Lynch, H. F., Grossman, L. A., & Cohen, I. G. (2023). Pressing regulatory challenges for psychedelic medicine. *Science*, 380(6643), 347–350.
- Morgan, C. J., Noronha, L. A., Muetzelfeldt, M., Feilding, A., & Curran, H. V. (2013). Harms and benefits associated with psychoactive drugs: Findings of an international survey of active drug users. *Journal of Psychopharmacology*, 27(6), 497–506. <https://doi.org/10.1177/0269881113477744>
- Newson, M., Khurana, R., Cazorla, F., & van Mulukom, V. (2021). 'I get high with a little help from my friends'-how raves can invoke identity fusion and lasting co-operation via transformative experiences. *Frontiers in Psychology*, 12, Article 719596.
- Neubert, J. J., Anderson, K., & Mason, N. L. (2024). Psychedelic intimacy: Altered states of consciousness in romantic relationships. *Journal of Psychedelic Studies*. <https://doi.org/10.1556/2054.2024.00319>
- Nutt, D. (2019). Psychedelic drugs—A new era in psychiatry? *Dialogues in Clinical Neuroscience*, 21(2), 139–147. <https://doi.org/10.31887/DCNS.2019.21.2/dnutt>
- Nutt, D. (2012). *Drugs Without the Hot Air: Minimising the Harms of Legal and Illegal Harms*. Cambridge: UIT Cambridge.
- Office for National Statistics (2021). Deaths related to drug poisoning by selected substances, England and Wales (Dataset). Retrieved from <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/datasets/deathsrelatedtodrugpoisoningbyselectedsubstances>.
- Olsen, A. (2009). Consuming e: ecstasy use and contemporary social life. *Contemporary Drug Problems*, 36(1–2), 175–191. <https://doi.org/10.1177/009145090903600109>
- Pace, B. A., & Devenot, N. (2021). Right-wing psychedelia: Case studies in cultural plasticity and political pluriptency. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.733185>
- Palmer, M., & Maynard, O. M. (2022). Are you tripping comfortably? Investigating the relationship between harm reduction and the psychedelic experience. *Harm Reduction Journal*, 19(1), 81.
- Passie, T. (2018). The early use of MDMA ('Ecstasy') in psychotherapy (1977–1985). *Drug Science, Policy and Law*, 4, Article 2050324518767442.
- Peck, J. (2020, February). Psychedelics for systems change: Could drugs help us save the planet? openDemocracy. <https://www.opendemocracy.net/en/oureconomy/psychedelics-systems-change-could-drugs-help-us-save-planet/>.
- Perel, E. (2009). *Mating in Captivity: Unlocking Erotic Intelligence*. Harper Collins.
- Pini, M. (2000). Girls on 'E': Social problem or social panic. *Women's Health: Contemporary International Perspectives*, 43, 69–76.
- Pini, M. (2001). *Club Cultures and Female Subjectivity: The Move From Home to House*. Springer.
- Prochazkova, L., Lippelt, D. P., Colzato, L. S., Kuchar, M., Sjoerds, Z., & Hommel, B. (2018). Exploring the effect of microdosing psychedelics on creativity in an open-label natural setting. *Psychopharmacology*, 235(12), 3401–3413. <https://doi.org/10.1007/s00213-018-5049-7>
- Race, K. (2008). The use of pleasure in harm reduction: Perspectives from the history of sexuality. *International Journal of Drug Policy*, 19(5), 417–423.
- Redfield, A., & Thouin-Savard, M. I. (2017). Electronic dance music events as modern-day ritual. *International Journal of Transpersonal Studies*, 36(1), 6.
- Rootman, J. M., Kiraga, M., Kryskow, P., Harvey, K., Stamets, P., Santos-Brault, E., Kuypers, K. P. C., & Walsh, Z. (2022). Psilocybin microdosers demonstrate greater observed improvements in mood and mental health at one month relative to non-microdosing controls. *Scientific Reports*, 12(1), 11091. <https://doi.org/10.1038/s41598-022-14512-3>
- Romeo, B., Karila, L., Martelli, C., & Benyamina, A. (2020). Efficacy of psychedelic treatments on depressive symptoms: A meta-analysis. *Journal of Psychopharmacology*, 34(10), 1079–1085. <https://doi.org/10.1177/0269881120919957>
- Rossi, G. N., Hallak, J. E., Bouso Saiz, J. C., & Dos Santos, R. G. (2022). Safety issues of psilocybin and LSD as potential rapid acting antidepressants and potential challenges. *Expert Opinion on Drug Safety*, 21(6), 761–776.
- Sagioglou, C., & Forstmann, M. (2022). Psychedelic use predicts objective knowledge about climate change via increases in nature relatedness. *Drug Science, Policy and Law*, 8. <https://doi.org/10.1177/20503245221129803>, 205032452211298.
- Sessa, B. (2011). Could MDMA be useful in the treatment of post-traumatic stress disorder? *Progress in Neurology and Psychiatry*, 15(6), 4–7.
- Siegel, J. S., Daily, J. E., Perry, D. A., & Nicol, G. E. (2023). Psychedelic drug legislative reform and legalization in the US. *JAMA Psychiatry*, 80(1), 77–83.
- Spriggs, M. J., Murphy-Beiner, A., Murphy, R., Bornemann, J., Thurgur, H., & Schlag, A. K. (2023). ARC: A framework for access, reciprocity and conduct in psychedelic therapies. *Frontiers in Psychology*, 14. <https://doi.org/10.3389/fpsyg.2023.1119115>
- Sottile, J. E., Macia, K. S., Wickham, R. E., & Haug, N. A. (2023). Development and initial validation of an MDMA/Ecstasy motives assessment. *Addictive Behaviors*, 136, Article 107494.
- Stenner, P. (2013). Foundation by exclusion: Jealousy and envy. B. Malkmus, & I. Cooper. *Dialectic and Paradox: Configurations of the Third in Modernity* (pp. 53–83). Bern: Peter Lang.
- Substance Abuse and Mental Health Services Administration. (2018). *Key Substance Use and Mental Health Indicators in the United States: Results from the 2017 National Survey on Drug Use and Health (HHS Publication No. SMA 18-5068, NSDUH Series H-53)*. Rockville, MD: Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/>.
- Takahashi, M., & Olaveson, T. (2003). Music, dance and raving bodies: Raving as spirituality in the central Canadian rave scene. *Journal of Ritual Studies*, 72–96.
- Ter Bogt, T. F., & Engels, R. C. (2005). Partying" hard: party style, motives for and effects of MDMA use at rave parties. *Substance Use & Misuse*, 40(9–10), 1479–1502.
- Vervaeke, H. K., & Korf, D. J. (2006). Long-term ecstasy use and the management of work and relationships. *International Journal of Drug Policy*, 17(6), 484–493.
- Wardle, M. C., Kirkpatrick, M. G., & De Wit, H. (2014). 'Ecstasy' as a social drug: MDMA preferentially affects responses to emotional stimuli with social content. *Social Cognitive and Affective Neuroscience*, 9(8), 1076–1081. <https://doi.org/10.1093/scan/nsu035>
- Wellbourne-Wood, D. (1997). *Have a Safe Trip: An Investigation Of Rituals and Sanctions Surrounding LSD Use*. Edith Cowan University [Unpublished doctoral thesis].
- Yaden, D. B., Yaden, M. E., & Griffiths, R. R. (2021). Psychedelics in psychiatry-keeping the renaissance from going off the rails. *JAMA Psychiatry*, 78(5), 469–470. <https://doi.org/10.1001/jamapsychiatry.2020.3672>
- Yockey, R. A., Vidourek, R. A., & King, K. A. (2020). Trends in LSD use among US adults: 2015–2018. *Drug and Alcohol Dependence*, 212, Article 108071.