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Rethinking enhancement substance use: A critical discourse studies approach.

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ABSTRACT

Background: We draw on both interdisciplinary enhancement substance use research and critical drug studies scholarship to reconceptualise enhancement substance use. Our critical discourse approach illuminates how a variety of substances are positioned as tools for self-improvement. In reconceptualising enhancement substance use, we ask what different substances can be positioned as providing enhancement? How are they positioned as tools for achieving enhancement or self-improvement goals? What discursive repertoires are employed to achieve these aims?

Methods: Forty interviews were conducted with people who use substances, such as ayahuasca, psilocybin, cocaine, alcohol, nootropics and non-prescription pharmaceuticals, including Adderall and modafinil. To explore the meanings of and motivations for substance consumption, we apply the sociocognitive approach (SCA) pioneered by Teun van Dijk (2014; 2015) and examine language through the triangulation of cognition, discourse and society. We analyse how different substances are positioned as tools for achieving enhancement or self-improvement goals.

Results: We identify three distinct discursive repertoires that frame substance use as enhancement: *the discourse of transformation, the discourse of healing* and *the discourse of productivity*. When accounting for enhancement substance use, our participants employ a number of discursive strategies, including ideological polarisation or 'othering', analogies, examples, maxims, metaphors and figurative speech. We also find evidence of interdiscursivity with most participants drawing on more than one discourse when speaking about how substances are positioned as providing enhancement.

Conclusion: We conclude that the concept of enhancement has wider applicability than current understandings allow. We argue that if we reframe all substance use as providing enhancement or achieving a self-improvement goal, we have the potential to destigmatise substance use and eliminate the over-simplistic binaries that surround it.

Introduction

Enhancement and the road to self-improvement: Interdisciplinary scholarship

Traditionally, research exploring human enhancement drugs (HEDs) has focused on the consumption of image and performance enhancement drugs (IPEDs). Two groups of substances have received much attention: 1) anabolic androgenic steroids (AAS) and human growth hormones, popular among athletes and other sports competitors, like bodybuilders which have spread to the recreational gym domain (Salinas et al., 2019). The consumption of these substances is understood to be motivated to improve physical performance and appearance, the desire for a muscular physique, and improved recovery from training and injuries (Hanley Santos and Coomber, 2017; Murray et al, 2016; Salinas et al, 2019; Van Hout & Kean, 2015); and 2) cognitive enhancers, typically prescription stimulants like Adderall and modafinil – being used without prescription - among student populations (Cakic, 2009; Mazanov et al. 2013; Vargo and Petróczi, 2016). The motivations for consuming cognitive enhancers include to improve focus, attention and productivity, to stay awake, to catch up with work and ultimately to improve performance in university assessments (Cakic, 2009; Mazanov et al. 2013; Vargo and Petróczi, 2016) or the workplace (Keane, 2011). These two substance use consumption practices typically result in and are motivated by a desire for self-improvement. What is being enhanced is physical appearance or

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performance, or cognitive functioning. We argue that the concept of enhancement, the idea that substance use can lead to self-improvement, can be applied to a wider range of substances.

The concept of enhancement or improvement connected to the consumption of substances has been explored by diverse disciplines encompassing those grounded in scientific biomedicine, like psychology, psychopharmacology and neurobiology, and social scientific perspectives, including religious studies, tourism and constructionism. These different perspectives point to the wider application of the enhancement concept. For example, within the discipline of psychology, James Fadiman has led the way in exploring the positive self-transforming effects of psychedelics for creativity, healing and self-discovery. In his famous book, *The Psychedelic Explorer's Guide* (Fadiman, 2011), he discusses how microdosing psychedelics, typically LSD, increases the potential for creativity and can relieve symptoms of depression and anxiety (see also Johnstad, 2018). In a later co-authored paper (Fadiman and Korb, 2019), reporting the systematic analysis of international self-reported microdosing experiences, positive benefits for mood, as well as increasing energy, work effectiveness, improved health habits and alleviation of symptoms associated with, for instance, migraine and pre-menstrual tension, were found. Other studies have also emphasised the therapeutic, medicinal or healing value of psychedelics, as well as empathogens, like MDMA, or dissociatives, like ketamine, in the treatment of psychiatric disorders or addiction (Morgan et al., 2017; Talin and Sanabria, 2017). Similarly, Tupper (2008, 2009) has highlighted the healing benefits of psychedelic substances, typically ayahuasca, and how for centuries they have been used as medicines in indigenous communities in South America, which has begun to spread to Western societies. What this body of research underscores is that many substances, beyond those we may typically consider HEDs, and many of which are more often associated with recreational drug scenes, can be used for enhancement purposes or to put it another way, bring with them a variety of personal benefits leading to self-improvement. In the examples provided here, what is being enhanced include mental and general health, well-being, understandings of the self, productivity and creativity, a much broader set of outcomes than traditional HEDs research has identified. This body of research contributes to traditional HEDs research, creating an expansive and interdisciplinary field for analysing and explaining enhancement substance use.

What is important for understanding enhancement substance use is the motivation for it, rather than the substance chosen to achieve a transformation. If we focus on the overall motivation being about achieving self-improvement and experiencing benefits, then a variety of substances can be considered as offering the potential for enhancement. The idea that substance use is beneficial, providing the motivation for continuing use, has long been established by social science researchers and can be traced back as far as the pioneering work of Becker (1963), who emphasised the importance of pleasure for the consumption of cannabis. Functionalist perspectives (see Boys et al., 1999, 2001; Boys and Marsden, 2003; Williams, 2013; Williams and Parker, 2001), for instance, have identified a range of reasons for the consumption of different substances, concluding that the overall motivation for recreational substance use is that it provides or fulfils a function in a person's life. For example, Williams (2013) highlighted how cannabis was smoked for relaxation, to aid sleep, or to forget about worries, whilst stimulant substances, like cocaine or amphetamines, increased confidence in social settings, provided energy and aided weight loss. In a study of 'gay circuit party' attendees, (O'Byrne and Holmes, 2010) found that drug and alcohol use facilitated dancing, alertness, sexual performance and sexual willingness, fulfilling desires for unlimited and unrestrained connection. Similar to the healing motivations outlined above and discussed in the work, for example of Tupper (2009), others have noted how substance use can function as a form of self-medicalisation to ameliorate psychological stress and negative mental states (Boys et al., 1999, 2001). This body of work illustrates how different kinds of substance use can be understood as providing a function or positive effect, improving behaviours or health and well-being, whether that be insomnia, anxiety, lack of confidence, or low energy, suggesting that the concept of enhancement has a wider application than we currently allow.

In developing our argument, we take inspiration from a neurobiological perspective, proposed by (Müller and Schumann, 2011) explaining the motivations for non-addictive psychoactive drug consumption. They argue: '*non-addictive drug use is chosen for its positive effects … [It] may have a number of beneficial effects on behaviors relevant for survival and reproduction, which may explain the persistence of drug use in human societies*.' (p. 310). Psychoactive drugs, consumed as part of normal, everyday lives, are therefore taken because they fulfil personal goals. The precise neurobiological mechanisms which achieve this need not detain us here. In essence, however, Muller and Schumann propose that humans are able to learn their mental states can be changed by psychoactive drugs in order to facilitate other, non–drug related behaviours. Psychoactive substances can be utilised as instruments or tools (see also Tupper, 2008) for the improvement of human functioning or performance, what Muller and Schumann conceptualise as *drug instrumentalization*. Accordingly, a variety of behaviours can be improved or enhanced through the consumption of different psychoactive substances, not just psychoactive substances we traditionally associate with human enhancement, but even substances, like heroin or methamphetamine, which are more typically linked with addictive forms of substance use. Muller and Schumann argue that they are consumed for the intense state of euphoria they produce, leading to an enhanced mood and potentially more efficient performance of goal-oriented behaviours. Theorising like this suggests that the concept of enhancement can therefore be applied to all kinds of non-addictive substance use or substances that are used in a non-addictive manner. Whilst our data does not allow us to explore this, it is our view that addictive forms of substance use can also be understood through the lens of enhancement. If we consider withdrawal symptoms from substances like heroin to be a negative health effect, taking heroin to alleviate them, can lead to improved health and overall functioning, albeit temporarily. This is not to suggest that any kind of substance use does not bring risks or harms with it, but at the same time, it can result in self-improvement, fulfil a goal and enhance performance or functioning.

Enhancement: A critical drug studies perspective

In further rethinking the concept of enhancement, we turn to the work of critical drugs studies scholars (see, for example, Dennis, 2017; Duff, 2015; Fomiatti et al., 2019; Keane, 2011; Lancaster et al. 2015; Pienaar et al., 2017; Pienaar, Murphy, Race, & Lea, 2020; Race, 2009) who question commonly held assumptions about the meanings of substance use. Like them, we aim to challenge over-simplistic categorisations and the binaries which flourish around substance use, including, for example, recreational versus dependent, legal versus illegal, controlled versus uncontrolled, and functional versus dysfunctional. The concept of enhancement substance use, as it is currently applied to a small group of substances, invites a further binary: enhancement versus diminishing substance use. Binaries like these create stereotypes of substance use and substance users. As Fomiatti et al. (2020) found, in their study of men who inject PIEDs, a 'monstrous' distinction was made distinguishing the men from 'junkies' who they perceived as irrational, desperate and untrustworthy (see also Monaghan, 2001). Similarly, people who take drugs in a controlled and functional way often rationalise and legitimise their consumption in comparison to perceived uncontrolled and dysfunctional substance use (Askew, 2016; Askew & Salinas, 2019; Lau et al. 2015). Furthermore, positive effects and pleasure are typically associated with certain forms of substance use, for example, recreational. However, critical drugs studies scholars have found pleasure discussed in the narratives of

injecting substance users and those identifying as dependent on drugs and/or alcohol (Dennis, 2017; Pienaar et al., 2015, Pienaar et al., 2017). If we broaden the concept of enhancement and apply it to all forms of substance use, we can begin to eradicate binaries like these. As Pienaar et al. (2020: 7) conclude, the distinctions or binaries around substances are untenable:

> … *illicit drugs can be used therapeutically, just as pharmaceutical drugs can be used for recreational and pleasure-seeking purposes. If we recognise that these purposes are not mutually exclusive, we can avoid reproducing the stigmatising associations of illicit drug use with hedonistic pleasure, dependence and loss of control …'*

Researchers exploring public perceptions of the motivations for cognitive enhancement substance use, argue that the boundaries between medical and recreational, healing and harming, are blurred, and we need to do more to understand where enhancement substance use fits (Coveney et al., 2019; Keane, 2011; Bell and Figert, 2012). Adopting a critical drugs studies perspective allows us to question what we mean when we apply the term enhancement to substance use and how it is constructed and constituted in everyday life.

Examining how different substances are constructed, critical drugs studies scholars identify a reductionist drugs discourse in which dominant (e.g. media and political) discourses 'frame drug use as intrinsically related to addiction, danger and negative outcomes' (Taylor, 2016: 100). In neoliberal societies, drug addiction is viewed negatively, associated with a loss of control and autonomy, deemed irrational and irresponsible behaviour (Rose et al., 2006; Fraser and valentine, 2008), and 'drug addicts' are characterised as flawed citizens and consumers (Seear and Fraser, 2010; Keane, 2011) , which serves to further sustain binaries. This narrow conceptualisation of substance use is presented as objective and fails to consider its subjective and varied meanings. Critical drugs studies researchers have criticised some PIEDs research for its limited conceptualisation of enhancement and understandings of the motivations for use. For example, Fomiatti et al. (2019: 15) argue there is a tendency to pathologise men who use PIEDs as 'insecure, inadequate and vulnerable, and as marked by compulsion and crisis' (see also Latham et al., 2019; Underwood, 2017). They emphasise men's agency and their unique motivations for consuming PIEDs, conceptualising it as a practice of the self. One which often leads to self-transformation, with a range of outcomes. Improving the body aesthetic may provide an initial motivation for the consumption of PIEDs, especially in neo-liberal societies which, as Heyes (2007 cited in Latham et al. 2019: 152) observes places emphasis on: '*how we look has become more important to how we understand ourselves*'. Thus, the consumption of PIEDs, can meet the twin demands to be 'under constant renovation and renewal' and be 'good citizens' (Keane, 2011). However, a range of incidental benefits that exceed initial motivations or instrumental benefits for the consumption of PIEDs, like increased muscle mass or improved physical performance, have been identified, including improved mood, confidence, energy and sexual experiences which can result in enhanced normative masculinity, social relationships and status (Fomiatti et al., 2019; Latham et al., 2019; Monaghan, 2001; Monaghan, 2002; Rowe, Berger, & Copeland, 2017; Underwood, 2017). As Underwood (2017), in her research of an online community of bodybuilders notes, whilst men may use PIEDs to improve their appearance, they also perceive wider benefits addressing unequal power relations with women, giving them the power to pick and choose women to date. Similarly, in a study of LGBTQ culture, Pienaar et al. (2020) analysed the role of substances in transforming and enhancing experiences of sex, sexuality and gender. For example, substances, through their disinhibiting effects, amplified erotic desires and pleasures, in turn, improving sex. This body of work further demonstrates the transformative power of substances, suggesting again that the concept of enhancement can be more expansive, and include instrumental as well as incidental benefits which may result in self-improvement.

In line with the critical drugs studies lens we adopt in this paper, we examine the subjective meanings and motivations for the consumption of substances that are not typical HEDs or PIEDS, like AAS, Adderall or modafinil. Rather, we explore how substances, many of which are usually associated with recreational drugs scenes, are discursively constructed as providing enhancement. In doing so, we employ a critical discourse perspective (see van Dijk, 2014; 2015 and the next section for further details), which allows us to explore how people account for their substance use. Researchers utilising discourse analysis perspective have found substance users employ narrative, discursive or interpretative repertoires or frameworks (see Askew, 2016; Jarvinen and Ravn, 2015; Mannson and Ekendahl, 2013; Monaghan, 2002; Riley et al., 2008, (Riley et al., 2010; Sandberg, 2012) to explain their motives for substance use. Some have identified discourses which emphasise how substances are consumed for enhancement purposes. For instance, in a study of people who use psilocybin 'magic' mushrooms, Riley et al. (2010) identified six interpretative repertoires, including how they were either celebrated for transforming relationships with others or the natural world. Similarly, Monaghan (2002), in his research with bodybuilders, distinguished 'vocabularies of motive', the most relevant for our purpose being self-fulfilment accounts, which positioned steroids as providing physique enhancing effects and fulfilling specific goals. Jarvinen and Ravn (2015), in their study of how cannabis consumption is discursively accounted for among a sample of young people in treatment, identified a self-medication narrative referring to mental health problems that made smoking cannabis necessary. Collectively, these studies highlight how substances are discursively justified to enhance relationships, physical appearance and performance, and mental health. As noted earlier, the subjective meanings of substance use and the discourses produced are negotiated and articulated with reference to broader cultural understandings (see Askew and Bone, 2019; Mannson and Ekendahl, 2013). In neo-liberal societies which demand citizens be productive and responsible for the choices they make, Riley et al. (2008; 2010) and Askew (2016) found participants emphasized self-control when accounting for what constitutes acceptable substance use (see also Pennay and Moore 2010; Rødner, 2005).

The broad aim of this paper is to rethink how we conceptualise enhancement substance use. In doing so, we bring together insights from an extensive and interdisciplinary field of enhancement substance use research and critical drugs studies. In reconceptualising enhancement substance use, we ask what different substances can be positioned as providing enhancement? How are they positioned as tools for achieving enhancement or self-improvement goals? What discursive repertoires are employed to achieve these aims? In doing so, we argue that the concept of enhancement has wider applicability than current understandings allow. If we reframe all substance use around the concept of enhancement, we have the potential to eradicate stigmatising binaries. In the next section, we outline the methodological approach employed.

Methodology

Background, sampling strategy and the sample

The project was funded by the British Academy (Grant number: SG151054) and aimed to explore emerging drug trends, such as the use of plant-based medicines, microdosing, the rise in the use of off-prescription benzodiazepines (alprazolam and diazepam) and z drugs (i.e. zopiclone and zopidem), and, in particular, how people reasoned their consumption of these substances. This was an extension of research conducted by Askew (2016) analysing the narratives of twenty-six adult recreational drug takers using a form of discourse analysis called discursive psychology (Potter and Weatherall, 1987). Further funding was sought to interview those who were using substances for reasons

beyond that of 'functional fun' (Askew, 2016), exploring substance use that was not associated with recreational pursuits.

Recruitment was facilitated through the project website, with a contact form for potential participants to express their interest. The link to the website was shared through established research networks and social media. Recruitment was targeted to those using substances for creativity, spirituality and self-discovery, to alleviate physical pain and mental health issues, or to enhance productivity and focus in work or study. Table 1 details the purposive sampling network, illustrating the eleven separate recruitment sources for the 40 study participants. Three musicians from different cities who had large professional and social networks acted as trusted gatekeepers and introduced nine participants. Two friends of the lead author also acted as gatekeepers introducing a participant each. The research was promoted to students at various universities through three sources which generated five people to interview. The lead author also contacted a drug interest group that resulted in the recruitment of five participants. The website contact form secured eight people for interview. A further three participants were recruited via other interviewees. The lead author had met or knew fourteen of the participants before interviewing them, the remaining twenty-six were unknown to her.

The participants were aged between 21 and 62 years. Thirty (75%) were White British (others were Australian, Italian and American). Twenty-three (58%) were male and seventeen (42%) were female. Although the research focused on aspects of substance use that were not associated with recreational pursuits, participants spoke about their substance use histories which were wide ranging and often included experiences commonly associated with recreational use. In addition, participants also spoke about dependency on certain substances either former or current, which is reflected in the findings. Participants had experience with a range of substances, including alcohol, cannabis, ketamine, psychedelics (e.g. psilocybin, ayahuasca and DMT), stimulants (e.g. Adderall, modaphinil, Ritalin, as well as cocaine and MDMA), benzodiazepines and Z drugs (e.g. zopiclone and zopidem), that had not been prescribed by a doctor, and various nootropics (e.g. phenibut, racetams and gingko biloba). Most participants (except one person using cannabis for chronic pain) consumed multiple substances. For example, several people interviewed about their ayahuasca experiences also took substances such as cocaine, ecstasy and cannabis, which they state was primarily for recreational purposes.

The sociocognitive approach

Critical discourse studies (CDS) is a multidisciplinary perspective within socio-political disciplines specifically focusing upon the reproduction of and resistance to power (Wodak and Meyer, 2015). CDS has different branches and approaches, we applied the sociocognitive approach (SCA) pioneered by Teun van Dijk (2014; 2015). It provides a conceptual toolbox guiding the overall research design, data collection and analysis process. The SCA studies language through the triangulation of cognition, discourse and society. It focuses on how personal experiences are cognitively mediated via broader cultural and subcultural understandings of phenomena. In this case, how people articulate the meanings of and motivations for their substance consumption by affirming or challenging dominant drugs discourses. The SCA approach differs from other critical discourse perspectives, such as Fairclough's dialectical analysis, which studies semantics in careful detail, focusing on exchanges in conversation, and Wodak's Discourse-Historical Approach, which combines sociolinguistics with historical critical theory (Wodak and Meyer, 2015), through its emphasis on the cognitive processes involved in the reproduction of discourse, ideology and knowledge. Van Dijk (2015) highlights both the mental models (personal experiences) and the social cognition (shared understanding and knowledge) involved when people are talking, reading, writing about or listening to certain phenomena. The SCA is similar to discursive psychology.[1] It examines discursive strategies, however, additionally it allows for a socio-political focus on power, ideology and resistance to dominant drugs discourses when accounting for behaviour. The participants in the current study spoke about behaviours (i.e. substance use) that transgress moral and legal codes about acceptable consumption/behaviour. As Tupper (2012) argues, illicit drugs are highly stigmatised and rejected within policy and the law. The SCA is therefore particularly suitable for analysing the data generated by this study.

Van Dijk (2014; 2015) emphasises how cognitive mediation is ideologically structured within discourse. This is achieved through ideological polarisation or what drugs researchers applying discourse analysis perspectives conceptualise as 'othering' (see, for example, Askew, 2016; Mannson and Ekendahl, 2013; Rodner, 2005). Ideological polarisation is relevant for our purpose to understand how a variety of substance use is positioned as enhancing or beneficial. It functions to resist negatively perceived behavior, emphasising positive self-presentation in contrast to others negative presentations, including descriptions of good conduct that represent norms, values and goals. The SCA also examines the use of pronouns, such as, I, we, our, demonstrating how people distinguish between individual versus collective behaviours, ideologies and values; and how legitimation of domination or resistance to domination is articulated within discourse. In our analysis, we also pay attention to the use of other argumentative devices, such as, analogies, examples, maxims, and metaphors or figurative speech (Askew, 2016; Mannson and Ekendahl, 2013; Riley et al. 2008; Rødner, 2005).

Data collection

The lead author conducted the interviews during 2016 and 2017 using narrative interviewing techniques in order to elicit rich storytelling. The interviews covered a lot of ground. The topic most pertinent to this paper is the participants' description of when they first heard about a substance they were using, their first experiences and memorable experiences of it, and their reflections and articulations on the meaning of consumption .[2] All interviews were audio recorded with participants' consent. The interviews ranged from twenty minutes to two hours, with an average length of 45 minutes per interview.

A central tenet of critical discourse studies is that discourses are situationally and contextually reproduced (Wodak and Meyer, 2015). In the present study, the participants' discourse emerged from an interview scenario between two social actors based on shared or assumed knowledge of the subject. The discourses produced were therefore affected by the relationship between each participant and the lead author (which varied by interview, for example, some participants were known, and others were strangers), and as Jarvinen and Ravn (2015: 874) noted in their study, should therefore be understood 'as interactional achievements that are co-constructed between interviewer and interviewee …'. The narratives serve a specific purpose, underlining a specific performance and attempting to produce a coherent narrative. They largely represent positive and goal-oriented self-presentations elicited in the interview context and also acting as a defense mechanism rejecting dominant anti-drugs discourses. This situationally and contextually produced data may have been presented differently in another context.

Data analysis

The interviews were transcribed in full and inductively and hierarchically coded using NVivo 10. The first phase coded the meanings

[1] For an application of this approach to drugs research, see Askew (2016).

[2] See Askew and Bone (2019) for further details about all the topics discussed in the interviews.

Table. 1
Recruitment matrix and sample produced

		Number and pseudonym of participants generated							
	Source/gatekeeper	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*
1	Drug interest group	Jude	Sid	Simon	Jonny	Mia			
2	Musician City 1 (GK)	Jonah	Lewis	Declan					
	Snowball	*Gemma*	*Peter*						
3	Musician City 2	Larry	Mikey						
	Snowball		*Isaac*						
4	Musician City 3	Libby	Jane	Alfie	Marissa				
5	Askew social media	Niamh	Louise	Sian	Violet	Sara	Dora	Jessica	Lee
6	Student recruitment (GK)	Matt	Dominic	Jake					
7	Student recruitment	Diane							
8	Student recruitment	Damo							
9	Friend 1 (GK)	Tommy							
10	Friend 2 (GK)	Lucas							
11	Website contact form	Felicity	Marco	Lianne	Dermot	Stella	Oscar	Jed	Bella

GK indicates where a gatekeeper initiated the contact but were not interviewed .

and motivations for substance use; 33 individual functions were identified. Participants described multifaceted reasons for the consumption of individual substances and how they impacted their lives in intentional and unintentional ways. Table 2 details the participant group, the substances that were discussed as part of the interview and their perceived reasons/functions/motivations for use, as well as the discourses identified. We do not present a detailed analysis of the participants frequency or quantities of substance use. In this paper, it is the participants talk about the meanings and motivations for their enhancement substance use that is meaningful, not their consumption patterns.

The second phase of the analysis aimed to identify distinct discursive repertoires and explore how the consumption of different substances can be framed as enhancement substance use. In respect of the latter, we paid attention to the ways in which accounts were produced and framed in terms of ideology and knowledge, including resistance to and adaption of dominant discourses about substance consumption; how arguments were made persuasive through ideological polarisation or othering, and the use of pronouns, analogies, examples, maxims and metaphors and figurative speech.

Results

Interdiscursivity

The narratives generally resisted discourses that position drugs as diminishing or impairing a person, or ultimately as negative. In line with research exploring how substance use is discursively accounted for (see Askew, 2016; Jarvinen and Ravn, 2015; Mannson and Ekendahl, 2013; Monaghan, 2002; Riley et al., 2008; Riley et al., 2010; Sandberg, 2012), we identified three distinct discursive repertoires framing the consumption of a variety of substances as enhancement substance use: *the discourse of transformation, the discourse of healing* and *the discourse of productivity*. These were not mutually exclusive. Similar to Sandberg (2012), we found interdiscursivity. That is, that at least two repertoires were drawn on to a greater or lesser extent by most of our participants, irrespective of the types of substances they used (see Table 2), to construct a narrative about the meanings of and motivations for enhancement substance use.

The discourse of transformation

The transformative power of substances has been documented by enhancement substance use research (see, for example, Fadiman and Korb, 2019; Fomiatti et al., 2019; Underwood, 2017). Furthermore, a discourse of transformation has been employed by psilocybin and steroid users when accounting for their substance use (see Monaghan, 2002; Riley et al., 2010). Our participants also emphasised how substances had the capacity to transform their lives. This was evident in descriptions of psychedelic substance use, such as psilocybin, LSD and ayahuasca, which facilitated self-discovery, spirituality, enlightenment, and higher consciousness. Ten of the interviewees had participated in (and in some cases organised) ayahuasca ceremonies. These participants described feeling lost, stuck in patterns of behaviour (such as frequent party substance use), being generally unhappy, or dealing with grief and trauma, which initiated an interest or introduction to ayahuasca. In the following extract, Lucas states how several ayahuasca retreats contributed to self-discovery and enlightenment:

> *Ayahuasca ceremonies were wrapped with kind of meditation, yoga, there was a fire walk at the end of the week, a sweat lodge, body dearmoring, trance dancing, fire gazing, I mean it was good. And it was all designed to put you in a place where the ayahuasca could be of most benefit…A Bikram* class is very like an ayahuasca ceremony because you get to look at yourself very, very clearly in a mirror as you're going through absolute hell. You have a choice, you can walk away from it or you can keep doing it, and then as you keep doing it the more things drop away. You find acceptance in yourself and , consequently through that, everything around you.*

*Bikram is a form of yoga that is practiced in 40-degree heat using a 26-pose sequence.

Ayahuasca is positioned as part of a process of personal development alongside other activities. The setting of the retreat is presented as enhancing the benefits of ayahuasca. Supporting existing critical discourse analysis research (e.g. Askew and Bone, 2019), Lucas employs the 'you' pronoun as an argumentative device. In doing so, he speaks broadly, rather than personally about ayahuasca use, suggesting that this is a unified experience shared by others. He also employs the discursive strategy of an analogy to strengthen his argument (see. Mannson and Ekendahl, 2013), comparing an ayahuasca experience to a challenging yoga practice thereby associating it with physical development. The excerpt outlines ayahuasca as providing a protracted positive impact connected to self-discovery and self-acceptance, and ultimately self-improvement. Ayahuasca enhances the process of transformation, it is positioned as showing Lucas an alternative path, with the emphasis on the individual to initiate this change. The process is framed as confrontational through discipline and discomfort, highlighting the importance of perseverance through challenging circumstances in order to achieve this transformation of the self. His account resists the dominant discourse of addiction which associates substance use with harmful, irresponsible and irrational behaviour. As Muller and Schumann (2011) argue, substance use is goal-oriented behavior, which challenges dominant discourses like these. Similarly, the discourse of transformation positions substance use as a rational, individual choice,

Table. 2
Participants' substance use, motivations and discourses identified.

	Pseudonym	Substance use spoken about for interview	Key motivations/functions	Discourses
1	Simon	Psilocybin, ayahuasca Phenibut and other nootropics, caffeine, theanine	Mediation, introspection, self-discovery, focus, mood improvement, energy, reduce anxiety., boost cognition	Transformation, healing, productivity
2	Jude	Ayahuasca, DMT, cannabis, mushrooms	Medicinal purposes connected to mental health (depression), meditation, spirituality and self-discovery.	Transformation, healing
3	Jonah	Plant medicines, ayahuasca, psilocybin.	Spirituality, enlightenment, higher meaning, connection to others.	Transformation, healing
4	Niamh	Modafinil and adrafinil	Focus, productivity, energy	Productivity, transformation
5	Sid	1pLSD (microdose), cannabis	Self-improvement, self-discovery, higher consciousness, spirituality, mood improvement, alertness, creativity, connectivity to others (microdosing), cannabis for arthritic pain.	Transformation, healing, productivity
6	Diane	Modafinil	Focus, productivity,	Productivity
7	Gemma	Plant medicines, ayahuasca.	Spirituality, self-discovery, enlightenment, meditation, connectivity to nature and other people, higher consciousness.	Transformation and healing
8	Marissa	Valium	Reduce anxiety, induce sleep, counter the effects of stimulant drugs.	Healing
9	Alfie	Cannabis, Alcohol	Performance anxiety, creativity and productivity	Productivity, healing
10	Libby	Dexamphetamine, cocaine	Productivity, focus, energy	Productivity
11	Jane	Ritalin, Adderall	Focus, productivity, energy, supress sleep.	Productivity
12	Louise	Modafinil, microdosed ecstasy	Energy, supress sleep, connectivity and intimacy, improve cognition, creativity.	Productivity, transformation, healing
13	Lewis	Cannabis, alcohol, cocaine	Creativity (cannabis), productivity and energy (cocaine) and performance (alcohol)	Productivity, healing
14	Matt	Cannabis	Stress relief, relaxation and creativity.	Healing and transformation
15	Felicity	Cannabis, microdosed LSD, psilocybin	To improve daily functioning, work, creativity, movement, focus, pain relief in exercise.	Productivity, healing, transformation
16	Marco	Psilocybin, microdosed LSD	Self-discovery, higher meaning, improve mood, reduce anxiety, facilitate learning and understanding,	Transformation, healing
17	Lianne	Cannabis	Pain relief (chronic pain sufferer) and depression	Healing, transformation
18	Sian	Cannabis	Self-discovery, critical thinking, broadened mind.	Transformation, healing
19	Dermot	LSD, 1pLSD	Self-discovery, enlightenment, spirituality.	Transformation, healing
20	Jake	Modafinil, LSD	Focus and productivity, combat procrastination; Relieve depression and anxiety	Productivity, healing
21	Issac	Cannabis, modafinil,	Focus, improve mental health	Productivity, healing
22	Violet	Psilocybin	Connectivity and communication with others, contentedness, higher consciousness, self-discovery, introspection.	Transformation, healing
23	Dominic	Ritalin, modafinil, St Johns Wart, phenibut, Melatonin, aniracetam, Lions Maine,	Combat a sleep disorder, mood improvement, improve brain function, combat burn out	Healing, transformation
24	Mikey	Cannabis	Creativity and focus.	Productivity, transformation
25	Tommy	Anabolic steroids, modafinil, adrafinil, various nootropics, aniracetam, Chinese herbs, supplements (gingko bilbo, green tea, theanine, magnesium, 5HTP)	Anabolic steroids – physical growth, recovery from injury. Modafinil for focus and productivity, nootropics - cognition, brain health, preventing disease, mood enhancement.	Productivity, healing, transformation
26	Sara	Cocaine, modafinil	Energy, creativity, productivity, focus	Transformation, productivity
27	Declan	Ayahuasca	Self-discovery, to deal with grief, trying to reduce cocaine consumption, improve creativity in career.	Transformation, healing
28	Stella	Cannabis, Ketamine (though a legal trial), peyote	Alleviate depression, creativity and focus.	Healing, transformation, productivity
29	Peter	Cocaine and cannabis	Focus, creativity, energy	Transformation and productivity
30	Oscar	Plant medicines, ayahuasca, various psychedelics including, DMT, 2cB, 2C1, tobacco	Spirituality, self-discovery, higher meaning, altered states of consciousness, enlightenment. Tobacco to pray and give thanks.	Transformation, healing
31	Jed	Microdosed psilocybin	The afterglow of mood improvement.	Healing
32	Jonny	LSD, cannabis and psilocybin, MDMA	Self-evaluation and reflection, aide decision making, bonding and connecting to others, learning and understanding.	Transformation.
33	Damo	Ayahuasca, Cannabis, Modafinil.	Self-discovery, enlightenment, spirituality, dealing with past trauma; creativity and focus.	Transformation, healing and productivity.
34	Lucas	Ayahuasca	Connectivity with others, self-discovery, deal with trauma, higher consciousness, enlightenment.	Transformation and healing
34	Larry	Ayahuasca	Cleansing the body, reducing recreational use, improve productivity, enlightenment.	Transformation, productivity and healing.
36	Bella	LSD, psilocybin, Ritalin.	Connection to others, dancing and movement, meditation; focus and study.	Transformation, healing, productivity.
37	Jessica	Valium and zopiclone	Encourage sleep/relax after stimulant drug use, anxiety.	Healing

(*continued on next page*)

Table. 2 (*continued*)

	Pseudonym	Substance use spoken about for interview	Key motivations/functions	Discourses
38	Dora	Valium and zopiclone	Encourage sleep/relax after stimulant drug use.	Healing
39	Lee	Ketamine, psilocybin, ayahuasca, DMT, Changa, Lions Maine.	Reduce anxiety, contentedness, meditation, critical thinking, connectivity with others, self-discovery, self-reflection, higher consciousness, spirituality.	Transformation, healing and productivity
40	Mia	Cannabis, CBD oil and Psilocybin	Chronic pain relief, stress reduction and depression.	Healing and transformation

placing emphasis on the enhancing goal of self-discovery and enlightenment, rather than it being motivated by addiction.

The discourse of transformation, as psychological research has found (e.g. Fadiman and Korb, 2019), was also connected to the enhancement of creativity. These were more subtle descriptions of how substances helped to facilitate new and creative ways of thinking or performing. Felicity practices ballet and discussed how LSD enhanced her abilities.

Felicity: the body connection is second to none for LSD, it's unbelievable, and balance as well. I do ballet and I've only ever done a double pirouette twice in my life, once was on a tab of acid and the other time was a week after that, so you know, it's really good for learning physical activities.

Rebecca: can you explain how it's good for physical activities, what does it give you?

Felicity: …It becomes much more intuitive. I think it's because we stop ourselves from doing so much by what we believe we can do and what we believe we can't do, and LSD definitely gets rid of that. I mean you can't suddenly become an amazing athlete or ballerina and I've watched friends have negative experiences stemming from the fact that they were expecting beautiful creative outbursts and it didn't happen, because if you can't draw sober then you still can't draw high on anything.

In this extract, LSD is positioned as an enhancer of creativity and performance within the discourse of transformation. Felicity describes LSD as facilitating the freedom to release the inner restraints that impinge upon the ability to progress and change. She outlines that LSD is not transformative beyond an individual's capabilities, but rather facilitates the mastery of a skill or creative process that a person has within them. Similar to Lucas, Felicity frames this as a common experience, through her reference to friends' experiences, rather than something that is only relevant to her. She refers to a negative experience but links this to expectations surrounding effects and the capacity of transformation, thereby resisting dominant discourses about the harms associated with substance use.

The discourse of transformation is also connected to broadening the mind and adopting critical thinking. The examples provided so far discuss psychedelic substances which have typically been associated with this kind of discourse (see, for example, Fadiman and Korb, 2019; Riley et al., 2010). However, Sian, a retail manager, describes how using cannabis enhanced her ability to think critically about a work situation with her boss. Sian had a brief period abstinent from cannabis due to lack of availability, but has since recommenced her use. In the following extract she describes the impact of cannabis on her work and personal relationships:

> *I just found myself going around work slagging my boss off and being unprofessional. But then when I did have it (cannabis), I started considering why she's being the way she is and what her situation is, and it just made me look at the bigger picture…it broadened my mind…I can be impulsive and that [cannabis] just allows me to stop and think 'what the hell are you doing?'. And I found that to be true again with something else that was going on, like I'd been texting a colleague for months, but when I had that first spliff my first thought was 'what the fuck are you doing?'. It had just been months of doing stupid things and then the minute I had it, that was the first thing I thought to myself 'what the fuck are you doing?'.*

Sian positions her account as relevant to her personal experience evidenced by the use of 'I' throughout. She uses two specific examples to illustrate the capacity of cannabis to broaden her thinking. This signifies that it is more than a one-off experimental experience. She describes herself as impulsive and fixated, with cannabis enhancing her ability to think critically and see alternative perspectives. Rather than taking the substance for a particular purpose, she describes, in a recreational context, the unintended benefits cannabis has on her mindset and the potential for incidental benefits leading to the enhancement of social relationships (see Fomiatti et al., 2019; Latham et al., 2019).

The discourse of healing

Research grounded in biomedical perspectives has highlighted the therapeutic, medicinal or healing value of, typically psychedelics, as well as other substances, such as, MDMA and ketamine (Morgan et al., 2017; Talin and Sanabria, 2017). The discourse of healing is embedded in participants' narratives that described cannabis as relieving chronic pain and psychedelics as alleviating mental health issues, alongside narratives that positioned substance use as enhancing functionality in everyday life. Consistent with Jarvinen and Ravn's (2015) findings, our participants employed a discourse of self-medication when explaining their substance use. This reflects research that has identified a rise in active participation in the processes of medicalisation and pharmaceuticalisation (Bell and Figert, 2012; Abraham, 2010). Damo spoke about how ayahuasca ceremonies helped to initiate a reduction in his party drug use overtime. However, he had increased the intensity of his cannabis use over recent years:

> *I still smoke weed, maybe even more so now. It makes me control my mouth, I am not necessarily rude, but I am forward, direct and a lot of people can take that the wrong way. I am uptight and stressed and my brain goes too fast for what I can handle, so having a spliff means I don't have to deal with that, and it makes me more acceptable to other people… My relationship with cannabis makes me feel like I can live what I see as a normal life.*

Damo describes frequent cannabis use, but rationalises this in the context of a discourse of healing, rather than a discourse of addiction. He positions himself as an active consumer for the purpose of self-medicalisation (Brown and Zavestowski, 2005; Crossley, 2006; Figert, 2011). Similar to Sian, he describes the benefits that cannabis has for him on a personal level. He positions his consumption as improving specific behaviours and being goal-oriented (see Muller and Schumann, 2011), emphasising how he is uptight and stressed, and how cannabis leads to wider benefits, enhancing his social acceptability and personal relationships (see Fomiatti et al., 2019; Latham et al., 2019). Damo characterises his substance use as facilitating normality. This is not framed as achieving an advantage over others but as the entitlement to live a 'normal life' (Keane, 2012). Here, dependency on a substance is positioned as enabling rather than diminishing, which speaks to the medicalisation of substances in order to heal and repair (Bell and Figert, 2012).

The discourse of healing also included references to further benefits associated with substance use, including benzodiazepine use for a reduction in anxiety and stress, zopiclone to assist in improved sleep patterns, cannabis to enhance the ability to relax, microdosing psychedelics for mood improvement and cognitive functioning, and plant medicines, such as ayahuasca, for dealing with past trauma. The range of substances used and the motivations for doing so positioned participants as knowledgeable of how to use substances as 'pharmaceutical fixes' for a specific issue (Coveney and Bjønness, 2019; Fox and Ward, 2008). Dominic's narrative epitomizes this idea. He spoke about using a variety of supplements, nootropics and medications to enhance certain states and conditions. He described an undiagnosed sleep disorder endured throughout his teenage years that had been incorrectly diagnosed as depression. This had recently been managed through a Ritalin prescription and previously self-managed through non-prescription use of modafinil. Dominic described his strategy for his current enhancement substance use within the discourse of healing:

> *… I would say that my go to drugs now are when I want to control my sleep, so when I need to change up my sleep pattern, I would use Phenibut or if I am feeling a bit burnt out, it's not just to go to sleep early I just need the relaxing effect that it has. I would put melatonin in that category… that's fantastic as well. I have used Aniracetam, when I am feeling a bit burnt out and not social, which is quite a good one also because it increases my focus, my mental energy to engage, but it also puts me in a really good mood.*

Dominic describes selecting various substances to enhance his state of mind, induce sleep and improve his mood. He talks with experience and confidence about self-experimentation and describes a toolbox of substances selected to facilitate improved health and well-being. This connects to the notion of using biomedical solutions for health maintenance, enhancement and optimisation (Bell and Figert, 2012; Keane, 2011). The narrative evokes control over the body (Decorte, 2001), rather than being out of control, through the use of substances for particular purposes. It fuses the discourses of healing and discourse of pleasure, where the physiological effects perform particular therapeutic functions (e.g. enabling sleep, combating burn out, or improving focus), alongside the pleasurable effects associated with feeling relaxed and mood improvement.

Several participants spoke about anxiety and stress in their lives and how psilocybin, as well as other psychedelic substances (e.g. 1pLSD), helped to alleviate depression, anxiety and low mood (see Fadiman and Korb, 2019; Johnstad, 2018). Many described microdosing these substances over a period of time, whilst others took macrodoses (i.e. larger quantities) occasionally. Mia spoke about the enabling effects of psilocybin and how it helped her during a period of poor physical and mental health:

> *[It] has really helped me cope with my depression, actually. It really got me out of a hole I was in, in the lead up to Christmas, I was having medical procedures and I would have a mushroom trip every two weeks, eight times in total, it really pulled me out of a really bad depression that I was sinking into. It has been huge actually and I think it helped me cope with hospital and my life being on hold, because my life has been on hold for nearly two years.*

Here psilocybin is characterised as a therapeutic instrument. Mia uses figurative speech to describe it as rescuing her from depression: 'it really got me out of hole I was in'. The substance is positioned as enabling her to cope with, and improve, her life that is restricted through ill health. As research employing discourse analysis perspectives has found (e.g. Askew, 2016; Riley et al., 2008, 2010), Mia refers to the frequency of consumption, emphasising that it was planned and controlled, thereby resisting a dominant discourse of uncontrolled, dependent or problematic drug consumption. A further prevailing discourse that her narrative challenges is that psychedelics are damaging to mental health. Within a discourse of healing, Mia constructs psilocybin as a substance which combats and alleviates mental health issues situating it within a medicalisation framework (Bell and Figert, 2012)

Tupper (2008) discussed how ayahuasca is constructed as a medicine in indigenous South American cultures, which is now spreading to some Western societies. Participants in our study commonly referred to ayahuasca as a 'plant medicine', associating it with natural healing, and, in doing so, challenged the use of the term 'drug'. Several of the participants expressed support for plant-based medicines or psychedelic assisted therapy treatments to be more widely available due to the inadequacy of prescribed medications and therapies, such as SSRIs for the treatment of depression. These participants can be understood as 'access-orientated collaborators' (Abraham, 2010), as they are providing arguments for increased access and availability to currently unlicensed or unavailable medications and therapies. Jude describes the differences between SSRIs and ayahuasca in addressing her depression.

> *I'm currently using SSRIs which is kind of like, for me, it feels like a massive compromise. Because you know the, you have to take them every day, you can't just stop taking them when you feel better and they don't really do the job you want them to do anyway. You know they are not helping you deal with things in a practical way, they just stop you being so bothered about things…they don't really help you find out how to have happiness. Like ayahuasca somehow encourages you to live a healthier lifestyle, you know in terms of exercise, food, in terms of your relationships and so your attitudes are naturally going to lead you to*

happier lifestyle which you don't get that with SSRIs.

Jude employs ideological polarisation (van Dijk, 2014; 2015) or othering (Rødner, 2005) to distinguish SSRIs from ayahuasca. Jude rejects the 'pharamceuticalisation' of depression treatment in favour of plant medicine. This aligns with the increased anxiety about over-medicalisation in western societies (Keane, 2012). The benefits of ayahuasca are not presented as the physiological effects of the substance, instead Jude emphasises how they have wider benefits enhancing health and well-being. Ayahuasca is positioned within the discourse of healing as facilitating positive changes in lifestyle, relationships and mood. Conversely, SSRIs are positioned as controlling, due to the frequency of use, and as masking depression, rather than healing it. In contrast, ayahuasca is presented as resolving an issue rather than diverting or temporarily escaping from it.

The discourse of productivity

Traditional HEDs research has identified how cognitive enhancers, typically prescribed stimulant substances, are used by students to improve productivity and performance in assessments at university (Cakic, 2009; Mazanov et al. 2013; Vargo and Petróczi, 2016). Our participants drew on a discourse of productivity when discussing their stimulant substance use (e.g. Adderall, modaphinil, dexamphetamine and cocaine) for the purpose of facilitating and improving performance whilst studying. These substances were also positioned as enhancing productivity in the workplace and framed around the pressures of modern life, in which the focus on self-maximisation and the cycle of continual self-improvement proliferates (Keane, 2011).

Louise, Niamh and Sara, to varying degrees, drew from the discourse of productivity when articulating the purpose of their stimulant substance use in the context of their work life. This, as (Keane, 2011) also observes, situates the workplace as a site of performance enhancement. Niamh explained how she takes modaphinil or Adrafinil in her coffee daily to enhance productivity and focus in her academic life:

> *After four hours of marking I am usually knackered, but after modaphinil, after four hours I felt like I had just sat down…I marked for 14 hours in total yesterday and completed 62 papers. I had 400 papers to mark in fifteen days. I worked out a rubric for marking quickly and gave them individual feedback as well. They have all been second marked fine.*

By comparing how she feels after marking with and without taking modaphinil, Niamh positions modaphinil as facilitating productivity and combatting exhaustion beyond normal capabilities. The pressure of work is outlined as the overriding motivational factor. Being specific about the number of papers Niamh had to mark and the time frame in which she had to do this, conveys the extent of the task she was faced with. This specificity was likely due to the account being relayed to the interviewer, a fellow academic, who could comprehend the enormity of this task. Furthermore, Niamh also defends against a prospective position of concern about the quality of the work produced by stating that students were assessed individually, and grades were verified by colleagues. This defends against the discourse of abuse that is associated with the non-medical consumption of pharmaceuticals (Dertadian, 2019) placing emphasis on improved productivity and meeting expected standards.

Some participants also discussed using substances, like cocaine or alcohol, to enhance productivity. Lewis, a musician, described using cocaine to help complete laborious tasks that required energy and focus, '*it was really to power me through the afternoon and get the job done. We had a limited time-frame so we had to make the most of the time.*' Here the discourse of productivity references external forces that require work to be completed rapidly, which are positioned as the motivation for substance use. Similarly, Libby, an entrepreneur, described a period of intense work, in her case involving establishing a new business alongside working full time. When she returned from her day job, she used a combination of red wine and cocaine to facilitate work on her business in the evening until the early hours of the morning. The next day, she took dexamphetamine to combat fatigue and exhaustion, and enhance her performance at work, as she explains here:

> *… it enabled me to work, there was just no way I could stay up past midnight without wanting to go to bed and there was too much work to do…I was amazed how much work I would get done on a Monday, even after half a quarter of a dexy…I am the kind of person who flits and flaps from one thing to another; I will start one thing and not get it finished. I remember the first time I did it, I just went 'fuck it' and finished everything, you know even the things that are always bottom of the list that you leave until the last minute when you are going to get in trouble. Well I would just get everything done, it amazed me, I was like wow, this is brilliant.*

Libby emphasises how the pressure of a heavy workload combined with her propensity for poor concentration provide the motivation for using stimulant substances. This resists the discourse of abuse as consumption is framed as facilitating the completion of tasks and fulfilling an economic role (Keane, 2011). Her stimulant substance use is framed as facilitating and enhancing productivity, combatting exhaustion and providing energy beyond normal capabilities. Libby outlines her inability to focus, and how dexamphetamine enhances concentration and provides her with an extended period of time in which to complete the work. This positions a personal deficiency that requires fixing through pharmaceutical self-governance (Keane, 2011). She describes her first experience as a revelation, which had a huge positive benefit for the completion of tasks with little rest.

In discussing the substances she takes, Louise normalises the consumption of stimulant substances in her life….*I think that I rely on some sort of stimulant every day to keep me going, I mean it's mainly just coffee because its easily available, but I also think that having discovered modafinil I have found it incredibly useful for certain things*. Within the discourse of productivity, Louise described how stimulants suppressed tiredness and increased energy, and as she discusses below, enhanced creativity:

> *A colleague and I used it when we were doing data analysis, this meant loads of repetitive tasks counting ones and zeros. I think in retrospect it probably reduced the margin of errors from looking at a screen where you are counting row by row. It was two days of intensive analysis and I got shit loads of ideas, not just from myself but from talking to her, we were sat side-by-side feeding off each other's ideas.*

Discussing how modaphinil was taken with a colleague positions it as a substance that is accepted by others within Louise's workplace. The monotony and the amount of work are described as motivating factors for use. Louise reflects on the impact of modaphinil on her work, which alludes to experimental use, rather than having preconceived ideas about how it would effect it. She highlights the creative and collaborative function through figurative speech, 'feeding off each other's ideas' and positions modaphinil as an animalistic and shared creative force.

Participants who spoke about stimulant substance use in the context of work, described the periodic nature of their consumption, and similar to existing research (see, for example, Askew and Bone, 2019), resisted discourses about dependency, placing emphasis on self-control (see Askew, 2016; Riley et al., 2010) and self-governance (Keane, 2011). Sara states: '*I can work without cocaine, obviously*', stressing that cocaine is an enhancer for an occasion, rather than using it more frequently to facilitate work. This chimes with the neoliberal citizen where self-governance and control are the cornerstones of responsible citizenship (Rose et al., 2006; Fraser and valentine, 2008). At the same time, participants resisted the discourse of productivity presented, emphasising some of the negative impacts of their substance consumption upon their ability to perform and be productive citizens at work (see Riley et al., 2010). For example, Louise discussed spending an hour marking one student paper as she became fixated with minor details.

She also reported forgetting to move around and eat, which affected her levels of exhaustion afterwards. Sara was concerned her use was becoming too frequent and was worried about her health. This aligns with research that demonstrates the complex and often conflicting narratives that emerge when speaking about illicit drug consumption (Keane, 2011; Pienaar et al, 2017)

Discussion

This paper provides new knowledge and understanding in the broad interdisciplinary field of enhancement substance use and critical drugs studies. It examines, through an SCA conceptual framework, the socio-political construction of enhancement substance use and the ways in which it is understood and discursively justified from the perspective of users. It makes an original contribution and fills a gap in our understanding, exploring how a range of different substances, rather than a single substance or group of substances (e.g. psychedelics), which compromise users' everyday drug taking repertoires, and include some substances that are not typically associated with enhancement substance use, are positioned as providing enhancement rather than intoxication. This exploration develops existing research (e.g. Monaghan, 2010; Morgan et al., 2017; Riley et al., 2010; Tupper, 2009; Vargo and Petrooczi, 2016) which has focused on a single substance or group of substances. As previous research, employing discourse analysis perspectives has found (see Askew, 2016; Jarvinen and Ravn, 2015; Mannson and Ekendahl, 2013; Monaghan, 2012; Riley et al., 2008; Riley et al., 2010; Sandberg, 2012), our analysis identified three distinct discursive repertoires - *the discourse of transformation, the discourse of healing and the discourse of productivity*. Furthermore, in accounting for enhancement substance use, our participants deployed a number of discursive strategies, including ideological polarization (van Dijk, 2014, 2015) or 'othering' (see, for example, Askew, 2016; Mannson and Ekendahl, 2013; Rødner, 2005), as well as, analogies, examples, maxims, metaphors and figurative speech (Askew, 2016; Mannson and Ekendahl, 2013; Riley et al. 2008; Rødner, 2005).

The discourses we identified build on existing research which has distinguished the overall motivations for and purpose of enhancement substance use as being transformative (e.g. Fadiman and Korb, 2019; Fomiatti et al., 2019; Latham et al., 2019; Riley et al., 2010), enhancing cognitive performance and productivity (e.g. Vargo and Petróczi, 2016), and improving health and well-being (e.g. Fadiman and Korb, 2019; Morgan et al., 2017). The discourse of transformation positions, typically psychedelic substances, as achieving enhancement through self-discovery, enlightenment and spirituality. Substances are framed as contributing to and 'tweaking' a personal developmental goal-oriented process and enhancing critical thinking, learning and creativity. In the discourse of healing, participants position substances, such as cannabis, psilocybin, ayahuasca and nootropics, as providing certain therapeutic benefits that assist in daily functioning, alleviating mental health issues as well as facilitating broader positive impacts on health and well-being. The discourse of productivity frames stimulant substance use as improving focus and providing energy, as well as creativity. Muller and Schumann (2011) assert that psychoactive substances are utilised as instruments or tools to improve human functioning or performance. The participants generally positioned substances in a similar manner, as enhancers, enablers, or facilitators to achieve a particular personal goal or improve a psychological state. Conceptualising substance use as a 'tool' allows us to understand the largely positive meanings that substance users ascribe to it. As Tupper (2008) argues, it provides opportunities for policy-makers to consider the benefits as well as the harms associated with substance use.

The application of SCA (van Dijk, 2014; 2015) also makes a novel contribution to the enhancement substance use field. It illuminates how participants cognitively mediate their enhancement substance use and negotiate social and cultural understandings of it. Participants articulate their individual circumstances and experiences within a broader social and cultural context, for example, stimulant substance use is positioned as improving poor personal focus and concentration within the demands of neo-liberal society. Supporting critical drug studies research (Fraser et al. 2014; Keane, 2011; Pienaar et al, 2017), the discourses produced are complex and dynamic involving an interplay of individual, social and cultural representations. They incorporate varying (and often contradictory) descriptions of drug effects, frequency and intensity of use, contexts of use, pleasure, as well as motivations for and meanings of use. The complexity of the discourses is further evidenced by interdiscursivity (Sandberg, 2012), participants drew on more than one discursive repertoire when accounting for their enhancement substance use, demonstrating the multiple meanings and motivations for it.

The aim of this paper has been to rethink enhancement substance. To this end, we contribute to the work of critical drugs studies scholars who contest commonly held assumptions about substance use and the binaries which revolve around it. We adopt the concept of diffraction from Pienaar et al. (2017) and argue that by framing all substance use through the lens of enhancement, we can diffract and contest over-simplistic binaries, such as, recreational versus problematic use or controlled versus uncontrolled use. Some participants discussed how they consumed specific substances for the purpose of enhancement daily. They could easily be categorised as dependent substance users, yet they positioned their substance use as leading to self-improvement. Others spoke about significant one-time experiences or periodic use of substances for the purpose of enhancement. Consumption frequency is often used to distinguish between recreational and dependent substance use. The latter is associated with frequent and intensive consumption that is stigmatised within neoliberal ideology, emphasising rationality and control. We argue that adopting an enhancement lens allows us to focus on the meaning and motivation for substance use, rather than the frequency or intensity of consumption Furthermore, placing emphasis on the benefits of their substance use, participants also discussed bodily pleasures associated with the perceived physiological effects of a substance, but also pleasures in more implicit forms, such as, the pleasure of not being in physical pain or the joys of self-discovery that might have been preceded by a period of turmoil, followed by acceptance. In addition, participants spoke about the pleasures of being able to complete different tasks or conceive new ideas. Pleasure is typically associated with recreational substance use. However, these narratives suggest it is a dynamic concept and offer support for expanding our understanding of 'drugged pleasures', to consider it in its varied and more subtle forms (see Dennis, 2017).

The narratives presented support the emphasis within critical drugs studies scholarship that the subjective meanings of substance use are framed around neo-liberal discourses (Fomiatti et al., 2019; Latham et al., 2019). They illuminate what Fomiatti et al. (2019) term the 'practice of the self' in contemporary society. In many ways, participants position themselves as the idealised neo-liberal subjects who make decisions to achieve a particular goal or state that, in turn, facilitates their economic and social citizenship - albeit their decisions involve the consumption of illicit substances to achieve their aims. This is most explicit in the discourse of productivity, but it is also evident in the discourses of transformation and healing where participants outline the functionality associated with their consumption, for example how substance use can improve social relationships. This offers support for research that finds enhancement substance use has instrumental as well as incidental benefits (see Fomiatti et al., 2019; Latham et al., 2019; Monaghan, 2001, 2002; Rowe, Berger, & Copeland, 2017; Underwood, 2017). Furthermore, the use of personal pronouns and articulation of deficiencies or personal circumstances feeds into the notion that individuals must take responsibility for their own health and well-being and be committed to self-improvement and development (see Fomiatti et al., 2019; Latham et al., 2019). This was demonstrated through participants discussion of choices and access to

substances, as well as specialised knowledge about subterranean illicit substance use for enhancement purposes, for example, microdosing. However, as previous discourse analysis research has found (Askew, 2016; Mannson and Ekendahl, 2013; Riley et al. 2008, 2010; Rødner, 2005), the narratives can also be understood as resisting dominant discourses. They describe the use of controlled or unlicensed substances and affirm personal autonomy over the body mind and soul within prohibitionist ideology. The term 'drug' was resisted by many of the participants, rejecting the stigmatising associations it conveys. In addition, participants challenged mainstream health provision, through their choices to self-medicate particular conditions, as well as, discussing how licensed medicines (or access to them) was inadequate. Participants often advocated for alternatives to mainstream health care, for example psychedelic assisted therapy. The discourse of healing presents enhancement substance use as empowering, reflecting what Duff (2015: 93) conceptualizes as the 'ethics of care': *'Drug use must be constructed as a method of promoting health and restoring well-being rather than threatening or diminishing it…drug use provides many individuals with an effective means of caring for the self.'*

Taking a reflexive approach, we acknowledge that the discourses produced have been impacted by the context in which they were generated. Participants' narratives were co-constructed in a research interview about the meanings and motivations for substance use and therefore there was underlying intent and purpose which guided their construction. In addition, there were varying levels of social and personal knowledge between interviewer and interviewee, which will have affected what information was shared and discussed. From a critical discourse studies perspective (Wodak and Meyer, 2015; van Dijk, 2014, 2015), there is no 'truth', but versions created through specific situational and contextual circumstances, making these discourses produced in action. It is impossible to determine exactly the effects the interview and the interviewer had on the data generated, except, as (Rødner, 2005) has argued, participants might have been encouraged or desired to present themselves in a manner more connected to substance use, offering positive self-presentations, and, in doing so, choosing what information to share, all of which could vary across interviews and in different interview contexts. In line with our SCA conceptual framework, we view our participants' talk as interpretative rather than descriptive (see Riley et al., 2008; Sandberg, 2012), providing an insight into how the meanings of and motivations for enhancement substance use are constructed and constituted. As Askew and Bone (2019) have argued, voices like these are absent in drug policy, or as Rodner (2005: 344) reminds us: '*the dominant discourse of drugs … [denies socially integrated drug users] any meaningful subject-positions.*' Shedding light on the meanings and motivations for the consumption of substances through the lens of enhancement allows us to take steps towards rethinking the enhancement concept. Moreover, it contests the dominant ontology of drugs, deconstructing the 'drugs' concept, and its associated binaries, as well as destigmatising it. Such a step can lead to future drug policy reform, addressing the appeal from Seddon (2016) to abandon the 'drugs' concept and escape the prohibition paradigm.

Declaration and Ethics

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Declaration of Competing Interest

The authors declare no conflicts of interest

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