

Discussing illicit drugs in public internet forums: Visibility, stigma, and pseudonymity

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ABSTRACT

It has been claimed that people discuss their own illicit drug use online because anonymity allows them to avoid the legal and social risks of identifying themselves as drug users. Discourses around the risks, strategies and management of online drug discussion were produced by interviewing 26 ‘party drug’ users who reported participating in internet forums where drugs were discussed. Three factors influenced the extent to which drug forum users discussed their own drug use in public internet forums: perceived visibility, perceived legal risk and social stigma, and perceived effectiveness of pseudonymity. Implications for internet research with drug users are discussed.

Keywords

Internet forums, illicit drugs, anonymity, pseudonymity, normalisation, stigma, social identity, online interviews.

INTRODUCTION

As internet and digital media use have become normal and unremarkable aspects of everyday life, people are using the internet to seek drug-related information [4, 14, 16, 22, 48], share their drug use experiences with like-minded others [7, 33, 34, 50] and buy pharmaceutical [15, 27] and novel substances marketed as herbs or ‘legal highs’ [9, 21]. In discussions about the growing importance of the internet for understanding illicit drug use, the potential to present oneself anonymously so one can talk freely about one’s own drug use is often emphasised. Anonymity is identified as a crucial reason why web-based surveys are well suited for questioning people about their drug use [32, 36, 48]. Anonymity is considered important because it provides immunity to people who are concerned about potential social and legal ramifications of revealing illicit or stigmatised behaviours and identities [29, 30, 52, 55, 57] and enables the building of social support groups based upon stigmatised identities [13, 29, 53, 56].

The aim of this paper is to explore how illicit drug users who participate in public internet forums where drugs are discussed perceive the risks of their participation and manage anonymity and self-incrimination. First, I

introduce the concepts of anonymity in public internet forums, social identity performance and its relationship to visibility in public internet forums, and the contested notions of normalisation and stigma in the context of recreational drug use. Then, I examine the argument that drug users use the internet to communicate about drugs because anonymity enables them to remain immune to social stigma as well as the legal consequences of being identified as drug users in their everyday lives.

Anonymity in public internet forums

Internet forums or bulletin boards are websites that host asynchronous discussions. Typically, discussion ‘threads’ begin when someone posts a message that others can read and/or reply to. People use internet forums for information exchange, to receive and provide social support, friendship with like-minded others, recreation, and convenience [42, 52]. Many people who read forums do not actively contribute to the discussion but still meaningfully engage with the forums [41]. Forums are usually run by peer leaders who edit (moderate) content and may ban users who do not follow forum rules. Rules are designed to promote harmonious discussions but also to maintain the intended focus of the forum and to (re)produce collective identities [6, 17].

Anonymity is generally understood to mean the inability to identify an individual. Technical anonymity occurs when an individual is deidentified through the removal or replacement of any identifying information, whereas social anonymity refers to the perception of self or others as unidentifiable [5, 20]. This distinction is important because it is the extent to which people *perceive* their online interactions as anonymous that leads to social-psychological effects: the experience of deindividuation, and the experience of safety from shame or judgement associated with revealing embarrassing or stigmatised details when publicly identifiable [30, 52, 53]. Visual anonymity has also been linked to the higher levels of self disclosure that occur in anonymous online settings [23].

Internet forums provide an opportunity to present oneself anonymously [1, 52]. Forum users can read discussions while remaining anonymous and they can also contribute to discussion using a pseudonym while remaining visually anonymous. It is assumed that people will choose to remain deidentified when using internet forums, especially when discussing stigmatised or illegal

behaviours; however, forum users may (and often do) partially or fully perform their 'offline' identity [24, 54] or use forums specifically to meet people offline [19]. Anonymity is an *affordance*: which describes what a device or technology can do in interaction with what the user perceives that they can do with it [18]. The use of anonymity in internet forums is socially situated or context dependent [10] and is, therefore, perceived and enacted differently across different internet forum settings.

Furthermore, internet forum users who assume an identity characterised by the same username and avatar are not necessarily anonymous from other forum users. The use of a pseudonym allows forum members to identify each other while enabling members to keep their offline identities private [8, 43, 44]. The use of the term 'pseudonymity' in this paper acknowledges this distinction.

Visibility to an imagined public audience

The content of public internet forums is visible to widely varied audiences. The extent to which internet forum content is read by people who do not make their presence known varies with forum size and reach, marketing strategies and content. For example, some forums are indexed in search engines while others involve a layer of privacy by requiring the use of a username and password to access forum content. Furthermore, it cannot be assumed that forum members perceive a public audience just because the forum technically reaches a public audience [28, 49]. Therefore, it is important to determine to what extent forum users imagine a public audience if we are to understand how they perceive and manage the risks of drug discussion.

The Social Identity model of Deindividuation Effects (SIDE), from social psychology, offers a theoretical approach that can be used to understand how people perform social identities based on their perceptions of visibility and anonymity. SIDE is based on a social identity approach to understanding human behaviour and especially group behaviour [54]. Social identity is "that part of an individual's self-concept which derives from his knowledge of his [*sic*] membership of a social group (or groups) together with the value and emotional significance attached to that membership" [51, p. 63]. Social identity is distinct from personal identity, which occurs when people consider themselves as unique individuals with few or no similarities to other people. When social identity is salient in a particular situation, people define their identity in terms of their similarities to and differences from social groups relevant to that situation [26, 54].

The SIDE model is traditionally understood to have two components: cognitive and strategic. The cognitive aspect of SIDE has been applied to online communities where anonymity of interactions occurs: SIDE predicts that when social identity is salient, anonymity between

members of the community results in overestimation of similarities between community members and underestimation of differences [40]. This effect strengthens identification with the salient social identity. The strategic component refers to social identity performance, defined as "the purposeful expression (or suppression) of behaviors relevant to those norms conventionally associated with a salient social identity" [25, p. 30]. Identity performance can take many forms including verbal, visual and symbolic action and interaction. According to Klein et al. [25], identity performances serve two functions: identity consolidation and identity mobilisation. Consolidation involves individuals securing their social identity as a member of a particular group, or members of a group may move to secure their shared identity in the face of other groups. Mobilisation occurs when identity is performed to achieve group goals.

While the perception of anonymity is crucial to cognitive effects of SIDE, the extent of visibility is crucial to the strategic presentation of social identity: without an imagined audience, there is no motivation for people to perform their social identities. And what kind of audience is imagined? Anonymity and visibility are understood to have an interactive effect on the performance of social identity. Klein et al. note that "in-group norms that are punishable in terms of out-group norms are more likely to be expressed when in-group members are anonymous to the out-group. Conversely, in-group norms that are not punishable in terms of out-group norms are more likely to be expressed when in-group members are identifiable to the out-group" [25, p. 40]. The extent to which drug forum users perceive admissions of drug use to be 'punishable in terms of out-group norms' and the extent to which they perceive themselves as visible to out-groups are likely to affect their management of the risks of online drug discussion.

Drug use and normalisation

Drug use has traditionally been perceived as inherently deviant or counter to widespread social norms, yet this claim has also been problematised by accounts of non-deviant or 'recreational' drug use [3, 35, 37]. On one level, there is debate about whether drug use is normalised in particular societies [31]. For example, Parker et al.'s normalisation thesis rests upon societal markers of normalisation such as easier access, higher rates of use, greater tolerance of drug use by both users and non-users, and evidence of 'cultural accommodation' of drugs in public media and policies [37, 38]. Using these markers, it has been suggested that 'party drug' use has become normalised in the United Kingdom [37, 38] and Australia, at least within clubbing contexts [11, 12]. Others have argued that normalisation claims are exaggerated and do not reflect the diversity of young people's drug experiences [46, 47].

While the extent of drug use normalisation across societies and globally are important macro-level

questions, more relevant here is the application of normalisation within micro contexts. Rødner Sznitman noted that “Parker et al. pay no attention to the potential micro-politics that drug users might have been engaged in when trying to challenge the stigma attached to them” [45, p. 456–7]. In the Swedish context, drug users resisted stigma by presenting themselves as normal—not by hiding their drug use, but by negotiating a new framework for understanding drug use as normal and acceptable [45]. Pennay and Moore further explored the micro-politics of normalisation among a network of young Australian party drug users [39]. These drug users resisted representations of drug use as a moral threat by either emphasising the need to regulate and control their drug use (drawing on mainstream representations of drug use) or by rejecting self-control as a virtue (offering alternative representations of drug use). These examples highlight the challenges faced by people who use drugs in a context where widespread ‘cultural accommodation’ of drug use is not necessarily evident.

The argument

The commonly accepted claim is that drug users use the internet to communicate about drugs because anonymity enables them to remain immune to the social stigma of being identified as drug users in their everyday lives. The claim rests on three premises. Firstly, drug users must believe that their posts to public internet forums are visible to an imagined public audience; otherwise there would be no need to seek immunity from social stigma. Secondly, drug users must believe that there are risks associated with revealing their drug use to this public audience if they are potentially identifiable. That is, they must believe that negative legal and social consequences would or could occur. Thirdly, drug users must believe that they have the capacity to mask their identities through the use of internet forums, for instance, through use of pseudonyms and the omission of personal details about themselves. If these three premises are true, drug users who participate in public internet forums will more freely discuss their own drug use through the use of pseudonymity. However, it is not necessarily the case that all three premises apply. The analysis presented in this paper explores the extent to which this argument applies to a sample of drug users who participate in public internet forums, and problematises a straight-forward view of the relationships between internet use, anonymity and illicit drug discussion.

METHODS

The ‘Drugs on forums’ project comprised observations of and engagement with 40 internet forums where drugs were discussed by Australians; an online survey of 837 Australian residents reporting use of ‘party drugs’¹ in the

last 12 months, aged 16 and over, who had also reported participation in online drug discussion in the last 6 months; and 27 synchronous online interviews with a subset of the survey sample. Data were produced in 2007 and 2008. Forum users were recruited to the internet survey and interviews primarily through discussions hosted at internet forums where drugs were discussed, including electronic dance music, illicit drug and general lifestyle forums [see 2 for more detail]. Only the qualitative interview data are used in this paper.

At the end of the survey, participants indicated their interest in completing an online interview by providing their forum name or instant message account details. I approached 68 potential interviewees resulting in 27 completed interviews (response rate = 40%). The sample was 59% male with a median age of 21 years (range 17–37). Interviewees lived across Australia and most (85%) reported residing in a capital city. Of those who had completed school, 88% had completed their final year (Year 12). Almost all (96%) reported currently being engaged in paid work or studies. The interviewees were experienced drug users: over half (52%) had used 12 or more and only 15% had used 5 or less of 19 possible drug types in their lifetimes. The majority (59%) reported using party drugs monthly or more often. Only 7% reported having discussed their drug use with a counsellor or receiving other drug treatment in the past 6 months. The sample reported a median of 5 years since their first use of an internet forum (range 1–16) and spent a median of 12 hours using internet forums in a typical week (range 1–40).

Qualitative data produced through online interviews were coded into categories and sub-categories using NVivo 8. An iterative process where I moved between reading interview transcripts in full and coding across categories resulted in the defining and refining of categories addressing the perception of risks associated with public online drug discussion and strategies used to manage those risks. When preparing interview extracts, all identifying information was replaced or removed, and texts were edited for typographical errors while retaining their original grammatical style. This study was approved by the Curtin University Human Research Ethics Committee (Approval Number 102/2006).

RESULTS

Description

Twenty-six forum users who completed online interviews were asked to reflect upon the risks of online drug discussion, and if they believed there were risks, to describe any strategies they used to reduce those risks when they engaged in drug discussion in public internet forums.

research chemicals, ‘legal’ highs/party pills, nitrous oxide and amyl nitrate.

¹ Party drugs were defined as ecstasy or MDMA/MDEA/MDA, meth/dex/amphetamines, cocaine, GHB, ketamine, LSD, mushrooms, other psychoactive plants (excluding cannabis),

Risks associated with public online drug discussion

Most identified risks that they associated with public online drug discussion, comprising mainly of legal risks, as well as social, employment and general risks associated

with the future use of online drug discussion (Table 1). Two specific legal risks were described: police and/or other official organisations monitoring internet forums for information that could lead to drug-related arrests, and the potential for entrapment if forum users interacted with strangers through an internet forum. The potential for social sanctions should friends, family and employers find out about the forum user's drug use through monitoring their activities on internet forums was discussed, and a few forum users noted that 'posts are forever' and the risks to them from discussing drugs in the future could potentially increase.

Table 1. Risks associated with public online discussion of illicit drugs (N = 24)

Category/sub-category	N	Illustrative example
Legal	21	
Monitor and arrest	16	I know the authorities would be stupid to not monitor sites like this, and while they won't be knocking my door down I don't want to risk causing someone to be busted or investigated. (Pia, 24)
Entrapment	3	I feel the biggest risk is authorities pretending to be involved in discussion and then following it up in real life (Chris, 24)
Social	7	Your work can see it your friends and family, the government *cue paranoid conspiracy theory* its all out there to be googled. (Kat, 23)
Employment	4	People have lost jobs etc by being flippant with what they advertise on their facebook and myspaces (Lisa, 25)
Future	3	Posts are forever. The government may change; may become much more extreme. ... A more strict government may retrospectively prosecute drug use. (Adam, 34)
'Not really worried'	15	
'Small fish / big fish'	10	police are smart, they chase bigger fish than the end users (Andrew, 22) the cops arent after people like me.. theyre after the major distributors & manufacturers (Nathan, 21)
'Nothing to hide' and/or 'Don't mind if people know I use drugs'	5	im not doing or talking about anything that could get me into trouble with the law (Kyle, 21) i dont have a problem really if someone on the internet finds out its me thats saying those things. i dont mind ppl knowing about my drug experiences (Brooke, 17)

Table 2. Strategies to deal with risks (N = 24)

Category / sub-category	N	Illustrative example
Avoids drug discussion in public online	9	
Private or one-to-one online	7	msn [online chat] as long as i know the person im pretty easy going with what is discussed (Caleb, 24)
Offline	2	no its usually not online in any form. face to face or nothing on wires (Evan, 22)
Discusses drugs in public online	23	
Masking personal identifiers	19	im pretty ok with most stuff as long as it doesnt have my name attached (Nathan, 21)
Does not incriminate self	15	i never go into great detail, and i never discuss current or future usage (Georgia, 30)
Follows forum rules	4	Mods [moderators] also remove anything that would potentially put someone at risk of the law (Ben, 17)
Discusses drugs infrequently	3	I don't tend to post much (Adam, 34)

While potential risks of online drug discussion were identified by almost all forum users, around half provided rationale for why they were generally not concerned about these risks. Most of those who were ‘not really worried’ about the risks of online drug discussion believed that authorities were targeting dealers and ‘bigger fish’, not ‘users’ such as themselves. Others were not worried because they were ‘doing nothing wrong’: they were never in possession of drugs for long enough to risk being caught, and believed that legal risk only existed for people who were currently in possession of drugs. For this group, discussing past drug use posed no risk as long as they did not currently have drugs in their possession.

Strategies to deal with risks

Almost all forum users mentioned employing strategies to reduce the risks of online drug discussion, included most of those who were ‘not really worried’ about the risks (Table 2). Forum users described reducing risks by both avoiding drug discussion in public internet forums and participating in such discussion in less risky ways. Most of those who avoided drug discussion in public forums used private online communication modes to discuss drugs: including both one-to-one (instant messaging, private messaging) and one-to-many (non-public-access forums) communication modes. Two forum users said they only discussed (incriminating) drug matters face-to-face. Nevertheless, most of the sample did engage in some drug discussion in public online forums, and they attempted to reduce the risks of these discussions by masking personal identifiers, not incriminating themselves, discussing drugs infrequently and following the forum drug discussion rules.

Approaches to managing identity and anonymity

Table 3 shows the different approaches forum users used to manage their identity and anonymity when discussing drugs in public internet forums. Avoiding the sharing of identifying information—such as their full name and suburb, as well as the names and contact details of friends and dealers—was a commonly mentioned strategy. Less commonly, forum users described revealing their names and locations through public online forums. Managing the use of pseudonyms to reduce the risks of online drug discussion was also described. While some forum users described striving to keep different parts of their lives separate (‘I don’t even like my real-life friends to know what my account names are’), the opposite was also the case (‘My forum name is definitely connected with my real life’). Similarly, while some forum users employed different usernames when signing up to new forums, others used the same identity across forums. A few forum users described the use of Tor (anonymity network) and guest/anonymous accounts to prevent authorities from potentially identifying them through tracking their IP address.

Strategies to reduce self-incrimination

Strategies to reduce self-incrimination when discussing drugs in public internet forums involved limiting the scope and the specificity of discussions and images (Table 4). Drug use was described as less dangerous to discuss than dealing and supply, and discussion of past experiences was considered less dangerous than referring to present or future use. Others described limiting the specificity of drug discussion by using vague language, code words and using the third person to describe their own experiences by using

Table 3. Approaches to managing identity and anonymity (N = 19)

Category/sub-category	N	Illustrative example
Personal details	14	
Avoids sharing identifying information	13	obviously common sense comes into it, no names, no source locations (Kyle, 21)
Provides name and suburb	2	i dont mind revealing my name or my location, like the suburb i live in (Brooke, 17)
Managing pseudonyms	11	
Strives to ‘keep worlds separate’	3	I don’t use my real name or any identifying features. I don’t even like my real-life friends to know what my account names are. (Lisa, 25)
Pseudonym linked to ‘real life’	5	My forum name is definitely connected with my real life. ... If I were to feel the need to post seriously about drugs on either forums I would probably register a different name. (Pia, 24)
Uses multiple pseudonyms	2	i normally set up a new email for each new forum and make a new user name (Brooke, 17)
Same pseudonym across online settings	2	my [drug forum] username is the same as my [dance music forum] username ... someone who read both might spot it (Caleb, 24)
IP masking	4	
Tor (anonymity network)	3	use a browsing protection tool (like tor), and you should be even better off (Finn, 19)
Guest or anonymous accounts	2	if someone wanted to ask a question and they were particularly worried most forums have the ability to ask questions as a Guest (Tracey, 24)

Table 4. Strategies to reduce self-incrimination (N = 15)

Category/sub-category	N	Illustrative example
Discuss use but not supply/dealing	9	I'm generally for discussing experiences, but not for the discussing of acquisition. That would be rather ridiculous in my opinion (Richard, 22)
Discuss past but not present/future	4	I also don't mention if I'm planning on consuming certain things at events or parties (Pia, 24)
Language – vague, use of code words	8	ill talk about it, but not in a way that can easily be pieced together by anyone other than those who the comments are for (Jen, 19)
SWIM (Someone who isn't me)	3	i know even a few forums that choose to put "SWIM" in place of "I" (Kyle, 21)
Managing images	1	If im posting a picture of what i have, ill make sure im not in it and if i have like, a large sheet of acid or something ill break off just a few and take a picture of that. (Marcus, 17)

the acronym SWIM (someone who isn't me). One forum user mentioned avoiding risk when posting images of drugs by photographing small amounts and excluding any identifying information from the image.

Analysis

To better understand the relationship between the separateness of online and offline personas and self-incrimination in public online drug discussion, interview responses were analysed and the views of each forum user were categorised into groups (Figure 1). Most of the sample (20 of 26) discussed their drug use in public internet forums in a restricted way: the discussion pertained only to drug use but not supply/dealing and to past but not present/future use, or was sufficiently vague as to only be understood as drug-related by in-groups. No interviewee described discussing drug deals in public forums, although one (Steve) mentioned doing so using one-to-one online communication methods such as instant messaging or forum private messaging.

Of those who discussed their own past drug use experiences in public forums, two different approaches emerged. Ten forum users (the 'pseudonymous' group) relied on avoiding sharing identifying details about their 'real life' self, and thus used pseudonymity to protect themselves against potential risks of discussing drug use. 'Pseudonymous' forum users had met at least some people who they interacted with through online forums 'in real life', but they strived to keep the public discussions in these forums free of identifying information. 'Pseudonymous' forum users had high forum involvement, being either higher-posting forum members or moderators

In contrast, eight forum users (the 'open' group) believed that the risks of public discussion were low or nil, and they did not worry about keeping their username(s) or online persona(s) separate from their everyday 'offline' identity. Some 'open' forum users believed that being a drug user was nothing to be ashamed of (both online and offline), while others were concerned about what might happen if

people found out, and described how the experience of online communication could lead to revealing more information publicly than one would want in hindsight. 'Open' members were all intensively involved in forum use as measured through time spent using forums and high post counts. On average, 'pseudonymous' and 'open' forum users were neither novice nor experienced drug users based on the number of drug types ever used.

Unlike the forum users described so far, five forum users (the 'anonymous' group) kept their online forum persona(s) completely separate from their 'real lives'. Interestingly, keeping a strict separation between online and offline personas was *not* associated with discussing one's own personal experiences with drug use via an online persona. 'Anonymous' forum users were particularly concerned about their online privacy / security and protected themselves by striving to remain anonymous online and not admit to drug use, even avoiding 'vague' discussion. 'Anonymous' members expressed doubt in the efficacy of using pseudonyms as protection, noting that IP addresses could always be matched and that authorities could always track you if desired. 'Anonymous' members were all experienced drug users (reporting use of 12 or more drug types in their lifetimes) and were all less actively involved with forums (reporting low or nil post counts). All except one were male and they had a median age of 22 years—this group had a higher median age than 'pseudonymous' (20) and 'open' (20.5) groups.

In contrast to 'anonymous' forum users, Richard publicly discussed his past drug experiences in online forums and described making many 'online-only friends'. He was concerned about how people in his offline life would judge him if they knew about his drug use, and described how people who engage in online drug discussion 'don't fear that their real world lives will be compromised'. Unlike 'pseudonymous' forum users, Richard did not meet any of his online friends in 'real life'.

Figure 1. Use of separate personas and self-incrimination when discussing drugs (N = 26)

Extent to which online & offline personas kept separate	Merged	Odette	Pia	'Open': James, Brooke, Dave, Kyle, Isabelle, Steve, Liam, Kat
	Avoids sharing identifying details			'Pseudonymous': Chris, Georgia, Jen, Wendy, Tracey, Nathan, Ben, Caleb, Marcus, Megan
	Separate	'Anonymous': Evan, Andrew, Adam, Lisa, Finn		Richard
		No public admissions	Vague admissions	Admits use not dealing / past not present-future
Extent of self-incrimination when discussing drugs in public online forums				

Odette and Pia took a different approach. Odette described the federal police raiding her house resulting in the arrest of her partner on drug charges. She believed that this experience changed her perspective on drug-related risk: she only kept 'legal' highs and nothing else in her possession and she never admitted to any drug use when using public forums. She did not rely on pseudonyms at all: 'I don't hide my username or info. Google would show that up in the first page I'm sure. I think it's easier / better to show you have nothing to hide than make a bad attempt at trying to hide it.' Pia's pseudonym was linked with her 'real life' and she was careful to only reference her own (now very infrequent) illicit drug use using vague terms. Unlike 'open' forum users, Odette and Pia did not admit to past or present/future drug use in public online forums, but unlike 'anonymous' forum users, Odette and Pia made no attempts to separate their online and offline personas.

DISCUSSION

Admissions of drug use in public internet forums were described as risky for legal, social, and employment reasons; however, many forum users were not worried because they believed they had nothing to hide or that police would only pursue dealers, not users. Some avoided incriminating discussion in public online forums by using 'private' online settings or restricting discussion to offline communication modes. For those who did discuss drugs in public online forums, they restricted the level of detail and the content to reduce self-incrimination, employed various

methods of anonymising themselves, discussed drugs infrequently and followed forum rules.

Further analysis found that some forum users relied on pseudonymity to allow them to engage in limited discussion of their own drug use (the 'pseudonymous' group). Others were not worried about masking their identity while engaging in limited drug discussion because they judged the risk to them as 'users, not dealers' to be low or nil (the 'open' group). Yet another group never admitted to drug use publicly while also keeping their online activities completely separate from 'real life' (the 'anonymous' group). Thus, the anonymity understood to be afforded by public internet forums was *not* always associated with an increase in comfort with regard to revealing details about illicit or stigmatised behaviours: while important for 'pseudonymous' forum users and Richard, pseudonymity was seen as unnecessary for 'open' forum users and Odette/Pia, and not sufficient for 'anonymous' forum users.

Revisiting the original argument

Almost all forum users (24 of 26) cited risks of public drug discussion arising from various out-groups (police, employers, authorities, non-drug-using family or friends) reading their forum posts. At least for this sample, posting content to public internet forums was indeed considered public. However, many forum users did not believe that their posts would be monitored or targeted, because police

'chase bigger fish than the end users'. The perception that public forum content *could* be read by anyone but was *not likely to be read* by various out-groups meant that some forum users were less likely to imagine a public audience when posting drug discussion. The first premise, that drug users believe their posts are visible to an imagined public audience, only applied to some forum users in this sample.

How important was it for forum users to avoid identifying themselves as drug users when using public internet forums? Most forum users (18 of 26) either avoided sharing identifying information and/or avoided self-incrimination in an attempt to reduce the risk of being identified as a drug user by a variety of out-groups. The remaining eight forum users (the 'open' group) did not believe these precautions were necessary. These forum users challenged the idea that they were doing anything illegal (because they never kept drugs in their possession for very long) or that they were doing anything morally wrong or socially sanctioned (because they didn't mind if people knew about their past or present drug use). While most forum users attempted to manage the potential risks of being identified as a drug user, this group rejected this discourse and reframed their drug use as unproblematic or normal, and therefore did not attach the same amount of importance to pseudonymity as the rest of the sample. This finding underscores the importance of examining the micro-politics of normalisation for understanding how drug users negotiate their potentially stigmatised identities.

To what extent did forum users believe that pseudonymity in public internet forums protected them from being identified? The predictions of social identity performance theory were supported in these data: when pseudonymity and omission of personal details were perceived as sufficient to protect identity, drug users tended to admit to past drug use or possession and, thus, performed the identity of a drug user, albeit with some subtlety. However, when pseudonymity was perceived as inadequate identity protection, forum users did *not* post about their drug use and therefore, performed a non-drug-user identity. For those who were concerned about out-groups discovering their status as a drug user, their perception of the efficacy of using pseudonyms and omitting personal details determined the extent to which they were prepared to discuss drugs.

Conclusions

Three factors have been identified that shape the extent to which drug forum users discuss their own drug use in public internet forums: (1) perceived likelihood of out-groups reading discussion on public internet forums, (2) perceived legal and social risks (stigma) of being identified as a drug user, and (3) perceived effectiveness of using pseudonyms and omitting personal details in achieving anonymity when using public internet forums.

While there are limitations to the generalisability of conclusions derived from a small purposive sample, these conclusions do illustrate some of the complexities involved

in understanding the discussion of illicit drug use in public online settings. These complexities are important for researchers seeking to understand drug use through internet research methods. It would be wise to avoid making assumptions about how specific populations perceive the visibility of their online interactions, the social and legal risks, and the effectiveness of pseudonymity. It should not be assumed that drug users use the internet to communicate about drugs because pseudonymity enables them to remain immune from legal and social risk. While true of some forum users in this study; for others, pseudonymity was perceived as neither necessary nor sufficient.

These findings also have implications for the design of ethical online research using public internet forums. These findings support the claim that the *perceptions* of privacy and visibility of online discussions are critical in determining how the setting should be treated as a research space [28, 49]. This work also supports the finding that pseudonymity is only sufficient deidentification for some people and in some contexts [43, 44]. It cannot be assumed that pseudonyms automatically protect people from identification; for some forum users, they are intimately linked with offline life or are valuable identities in and of themselves.

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REFERENCES

1. Barak, A., Boniel-Nissim, M. and Suler, J. Fostering empowerment in online support groups. *Computers in Human Behavior*, 24. 1867-1883.
2. Barratt, M.J. and Lenton, S. Beyond recruitment? Participatory online research with people who use drugs. *International Journal of Internet Research Ethics*, 3. 69-86.
3. Becker, H.S. Becoming a marijuana user. *American Journal of Sociology*, 59. 235-242.
4. Boyer, E.W., Shannon, M. and Hibberd, P.L. The Internet and psychoactive substance use among innovative drug users. *Pediatrics*, 115. 302-305.
5. Christopherson, K.M. The positive and negative implications of anonymity in Internet social interactions: "On the Internet, nobody knows you're a dog". *Computers in Human Behavior*, 23. 3038-3056.
6. Chua, C.E.H. Why do virtual communities regulate speech? *Communication Monographs* 76. 234-261.

7. Davey, Z., Corazza, O., Schifano, F. and Deluca, P. Mass-information: Mephedrone, myths, and the new generation of legal highs. *Drugs and Alcohol Today*, 10 (3). 24-28.
8. De Koster, W. and Houtman, D. "Stormfront is like a second home to me". On virtual community formation by right-wing extremists. *Information, Communication and Society*, 11. 1155-1176.
9. Dennehy, C.E., Tsourounis, C. and Miller, A.E. Evaluation of herbal dietary supplements marketed on the Internet for recreational use. *Annals of Pharmacotherapy*, 39. 1634-1639.
10. DiMaggio, P., Hargittai, E., Neuman, W.R. and Robinson, J.P. Social implications of the Internet. *Annual Review of Sociology*, 27. 307-336.
11. Duff, C. Drugs and youth cultures: Is Australia experiencing the 'normalization' of adolescent drug use? *Journal of Youth Studies*, 6. 433-446.
12. Duff, C. Party drugs and party people: Examining the 'normalization' of recreational drug use in Melbourne, Australia. *International Journal of Drug Policy*, 16. 161-170.
13. Eichhorn, K.C. Soliciting and providing social support over the Internet: An investigation of online eating disorder support groups. *Journal of Computer-Mediated Communication*, 14. 67-78.
14. Falck, R.S., Carlson, R.G., Wang, J. and Siegal, H.A. Sources of information about MDMA (3,4-methylenedioxymethamphetamine): Perceived accuracy, importance, and implications for prevention among young adult users. *Drug and Alcohol Dependence*, 74. 45-54.
15. Forman, R.F., Woody, G.E., McLellan, T. and Lynch, K.G. The availability of web sites offering to sell opioid medications without prescriptions. *American Journal of Psychiatry*, 163. 1233-1238.
16. Gamma, A., Jerome, L., Liechti, M.E. and Sumnall, H.R. Is ecstasy perceived to be safe? A critical survey. *Drug and Alcohol Dependence*, 77. 185-193.
17. Gatson, S.N. Illegal behavior and legal speech: internet communities' discourse about drug use. in Murguía, E., Tackett-Gibson, M. and Lessem, A. eds. *Real Drugs in a Virtual World: Drug Discourse and Community Online*, Lexington Books, Lanham, MD, 2007, 135-159.
18. Gaver, W.W. Technology affordances. in *Proceedings of the CHI 1991*, ACM Press, New York, 1991, 79-84.
19. Hardey, M. Life beyond the screen: Embodiment and identity through the internet. *Sociological Review*, 50. 571-585.
20. Hayne, S.C. and Rice, R.E. Attribution accuracy when using anonymity in group support systems. *International Journal of Human Computer Studies*, 47. 429-452.
21. Hoover, V., Marlowe, D.B., Patapis, N.S., Festinger, D.S. and Forman, R.F. Internet access to Salvia divinorum: Implications for policy, prevention, and treatment. *Journal of Substance Abuse Treatment*, 35. 22-27.
22. Johnston, J., Barratt, M.J., Fry, C.L., Kinner, S., Stoové, M., Degenhardt, L., George, J., Jenkinson, R., Dunn, M. and Bruno, R. A survey of regular ecstasy users' knowledge and practices around determining pill content and purity: Implications for policy and practice. *International Journal of Drug Policy*, 17. 464-472.
23. Joinson, A.N. and Paine, C.B. Self-disclosure, privacy and the Internet. in Joinson, A.N., McKenna, K., Postmes, T. and Reips, U.-D. eds. *Oxford Handbook of Internet Psychology*, Oxford University Press, Oxford, 2007, 237-252.
24. Kennedy, H. Beyond anonymity, or future directions for internet identity research. *New Media and Society*, 8. 859-876.
25. Klein, O., Spears, R. and Reicher, S. Social identity performance: Extending the strategic side of SIDE. *Personality and Social Psychology Review*, 11. 28-45.
26. Lea, M., Spears, R. and de Groot, D. Knowing me, knowing you: Anonymity effects on social identity processes within groups. *Personality and Social Psychology Bulletin*, 27. 526-537.
27. Littlejohn, C., Baldacchino, A., Schifano, F. and DeLuca, P. Internet pharmacies and online prescription drug sales: A cross-sectional study. *Drugs: Education, Prevention and Policy*, 12. 75-80.
28. McKee, H.A. and Porter, J.E. The ethics of digital writing research: A rhetorical approach. *College Composition and Communication*, 59. 711-749.
29. McKenna, K.Y.A. and Bargh, J.A. Coming out in the age of the Internet: Identity demarginalisation through virtual group participation. *Journal of Personality and Social Psychology*, 75. 681-694.
30. McKenna, K.Y.A. and Bargh, J.A. Plan 9 from cyberspace: The implications of the Internet for personality and social psychology. *Personal and Social Psychology Review*, 4. 57-75.
31. Measham, F. and Shiner, M. The legacy of 'normalisation': The role of classical and contemporary criminological theory in understanding young people's drug use. *International Journal of Drug Policy*, 20. 502-508.
32. Miller, P.G. and Sønderlund, A.L. Using the Internet to research hidden populations of illicit drug users: A review. *Addiction*, 105. 1557-1567.
33. Morgan, E.M., Snelson, C. and Elison-Bowers, P. Image and video disclosure of substance use on social media websites. *Computers in Human Behavior*, 26. 1405-1411.

34. Murguía, E., Tackett-Gibson, M. and Lessem, A. (eds.). *Real Drugs in a Virtual World: Drug Discourse and Community Online*. Lexington Books, Lanham, MD, 2007.
35. Nicholson, T., Duncan, D. and White, J. Is recreational drug use normal? *Journal of Substance Use*, 7. 116-123.
36. Nicholson, T., White, J.B. and Duncan, D. DRUGNET: A pilot study of adult recreational drug use via the WWW. *Substance Abuse*, 19. 109-121.
37. Parker, H. Normalization as a barometer: Recreational drug use and the consumption of leisure by younger Britons. *Addiction Research and Theory*, 13. 205-215.
38. Parker, H., Williams, L. and Aldridge, J. The normalization of 'sensible' recreational drug use: further evidence from the North West England longitudinal study. *Sociology*, 36. 941-964.
39. Pennay, A. and Moore, D. Exploring the micro-politics of normalisation: Narratives of pleasure, self-control and desire in a sample of young Australian 'party drug' users. *Addiction Research and Theory*, 18. 557-571.
40. Postmes, T., Spears, R., Sakhel, K. and De Groot, D. Social influence in computer-mediated communication: The effects of anonymity on group behavior. *Personality and Social Psychology Bulletin*, 27. 1243-1254.
41. Preece, J., Nonnecke, B. and Andrews, D. The top 5 reasons for lurking: Improving community experiences for everyone. *Computers in Human Behavior*, 20. 201-223.
42. Ridings, C.M. and Gefen, D. Virtual community attraction: Why people hang out online. *Journal of Computer-Mediated Communication*, 10 (1). Article 4.
43. Roberts, L., Smith, L. and Pollock, C. Conducting ethical research online: Respect for individuals, identities and the ownership of words. in Buchanan, E.A. ed. *Readings in Virtual Research Ethics. Issues and Controversies*, Information Science Publishing, London, 2004, 156-173.
44. Roberts, L.D., Smith, L.M. and Pollock, C. MOOing till the cows come home: The search for sense of community in virtual environments. in Fisher, A.T., Sonn, C. and Bishop, B.J. eds. *Psychological sense of community: Research, applications and implications*, Kluwer Academic/Plenum Publishers, New York, 2002, 223-245.
45. Rødner Sznitman, S. Drug normalization and the case of Sweden. *Contemporary Drug Problems*, 35. 447-480.
46. Shildrick, T. Young people, illicit drug use and the question of normalization. *Journal of Youth Studies*, 5. 35-48.
47. Shiner, M. and Newburn, T. Definitely, maybe not? The normalization of recreational drug use amongst young people. *Sociology*, 31. 511-524.
48. Stetina, B.U., Jagsch, R., Schramel, C., Maman, T.L. and Kryspin-Exner, I. Exploring hidden populations: Recreational drug users. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 2 (1). Article 1.
49. Sveningsson Elm, M. How do various notions of privacy influence decisions in qualitative internet research? in Markham, A.N. and Baym, N.K. eds. *Internet Inquiry: Conversations About Method*, Sage, Thousand Oaks, 2008, 69-87.
50. Tackett-Gibson, M. Constructions of risk and harm online discussions of ketamine use. *Addiction Research and Theory*, 16. 245-257.
51. Tajfel, H. *Differentiation between social groups*. Academic Press, London, 1978.
52. Tanis, M. Health-related on-line forums: What's the big attraction? *Journal of Health Communication*, 13. 698-714.
53. Tanis, M. What makes the internet a place to seek social support? in Konijn, E.A., Utz, S., Tanis, M. and Barnes, S.B. eds. *Mediated Interpersonal Communication*, Routledge, New York, 2008, 290-308.
54. Utz, S. Social identification with virtual communities. in Konijn, E.A., Utz, S., Tanis, M. and Barnes, S.B. eds. *Mediated Interpersonal Communication*, Routledge, New York, 2008, 252-270.
55. Walther, J.B. and Boyd, S. Attraction to computer-mediated social support. in Lin, C.A. and Atkin, D. eds. *Communication technology and society: Audience adoption and uses*, Hampton Press, Cresskill, NJ, 2002, 153-188.
56. Whitlock, J.L., Powers, J.L. and Eckenrode, J. The virtual cutting edge: The Internet and adolescent self-injury. *Developmental Psychology*, 42. 407-417.
57. Wood, N. and Ward, S. Stigma, secrets, and the human condition: Seeking to remedy alienation in PostSecret's digitally mediated environment. *Symbolic Interaction*, 33. 578-602.