

Construction of group norms in a radical acceptance online forum for heavy alcohol users: A corpus-based discourse analysis

Abstract

Alcohol use is a major source of morbidity and mortality globally. Numerous adverse health outcomes have been linked to alcohol use, including liver disease, road injuries, violence, cancer, cardiovascular disease, suicide, domestic violence and family breakdown. Alcohol use is responsible for approximately three million deaths per year across the globe. Different paradigms have been employed in the treatment of alcohol use disorder, including abstinence-based and harm-reduction models. Radical acceptance, which has been successfully applied elsewhere in mental health treatment, has not gained purchase in the treatment of addictions. We used a set of corpus linguistics techniques to analyze a dataset of approximately 10,000 posts in an online forum for self-identified severe alcoholics. The forum we studied explicitly claims a radical acceptance approach to alcohol use disorder. The forum is “for people who accept their lifestyle choice and don't want to be interrupted . . .” We combined quantitative methods (keyword and collocation analysis) and qualitative methods (concordancing) to conduct a discourse analysis of the linguistic and rhetorical practices employed in the forum. We found that, although the forum purports to embrace acceptance and eschew change, in fact, the discursive practices in the forum reveal a highly ambivalent relation with both acceptance and change. We found that acceptance and change are in dialectical tension that mirrors the structure agency dialectic described in critical realism. We suggest there may be merit in considering employing a radical acceptance paradigm in addictions treatment.

Introduction

Alcohol use is a major source of morbidity and mortality. [1] Numerous adverse health outcomes have been linked to alcohol use, including liver disease [2], road injuries [3], violence [4], cancer [5], cardiovascular disease [6,7] and suicide. [8, 9] Alcohol use is responsible for approximately 3 million deaths per year across the globe. [1] There is also a body of evidence supporting the link between alcohol and violence [10], domestic violence [11] and the negative impact of alcohol misuse on families [12]. Yet despite these risks, alcohol use is common, and 43% of the global population (2.3 billion people) are current alcohol users. Research suggests that people use alcohol because of its perceived benefits, which

include strengthening group cohesion [13], enhancing sociability [14], increasing positive mood, helping to cope with negative emotions [15], and helping to affiliate with others.

Conceptualizations of problematic alcohol use have changed historically. Although various paradigms have dominated alcohol treatment, it remains unclear whether any approach can claim superiority. Similarly, paradigms regarding the etiology and treatment of problematic alcohol use have varied across time and place. Abstinence-based treatment paradigms were dominant until the 1990s and there is a substantial body of evidence supporting abstinence based treatments such as Alcoholic Anonymous and other 12-Step Facilitation interventions. [16] However, current evidence-based treatment of alcohol use disorders favors a harm-reduction model. [17] In this model, alcohol users are encouraged to modify their use by, for example, drinking less potent beverages, drinking less frequently, or drinking in safer environments.

Behaviour change relating to heavy alcohol use often occurs without treatment [18]. In fact, externally imposed attempts to reduce alcohol consumption may mobilize psychological reactance [19] and paradoxically increase use. [20, 21] Motivational interviewing emphasizes acceptance as an important part of the therapeutic relationship. Radical acceptance is an approach to treatment from dialectical behavior therapy (DBT), the treatment of choice in borderline personality disorder. [22, 23] Linehan, the founder of DBT, states that “change may be facilitated by emphasizing acceptance, and acceptance by emphasizing change.” [24] This therapy incorporates a dialectic that reconciles the apparently contradictory goals of change and acceptance. However, even DBT-informed therapy for substance abusers ultimately strives for abstinence while accepting that relapses and substance use are inevitable parts of recovery. [25] To-date, there has not been a widely accepted approach that employs radical acceptance in the treatment of problematic alcohol use. While harm reduction has been positioned as an accepting, client-centered and radical alternative to abstinence based or use-reduction models, it still seeks to modify clients’ addictive behavior and to impose an agenda upon alcohol users. [26, 27] Some have suggested that harm reduction constitutes efforts to control marginal populations and to elicit compliance through self-regulation [28].

Employing a corpus-based approach to discourse analysis, this study examines the discursive practices in an internet support forum for people who self-identify as alcoholics and who participate in a support forum that approaches alcoholism with radical acceptance. In particular, we are interested in examining how such discursive practices contribute to the construction of group norms within this context. Before introducing our data and analytical approach, the next section provides background to the study by

reviewing cultural constructions of alcohol use, with a particular focus on the potential role of online communicative contexts in such constructions.

Background

The terms *alcoholism* and *alcoholic* date back to the mid-nineteenth century [29] but are not included in current diagnostic classifications. Rather, the technical terms *alcohol use disorder* [30] and *alcohol dependence* [31] are preferred by professionals and are intended to reduce stigma. [32] However, the vernacular terms remain in widespread general use even though their meanings are vague, contested, and subject to interpretation. There is no single technical definition of these contested terms but a body of folk wisdom and idiomatic expressions attempt to capture the salient features of alcoholism. [33]

A substantial body of research has investigated the role of culture in shaping drinking behavior.

However, much of this research has been directed at characterizing drinking cultures at the national level of various countries or societies [34]. There has been relatively limited investigation of drinking culture in virtual communities that traverse geographical and political boundaries. This is the first study to examine norms in an internet forum exclusively for people who self-identify as alcoholics and who embrace an approach of radical acceptance towards their alcohol use. Norms, in this sense, can be understood as cultural rules or understandings affecting behaviour, which are enforced by sanctions. [35] Prior to the widespread use of the internet, Unruh defined the concept of a *social world* as a model of understanding social organization which cannot be adequately delineated by spatial, territorial, formal, or membership boundaries. [36] This concept captures heavy drinking cultures in groups below the level of nation or society but above the level of friendship groups. Social worlds are characterized by voluntary participation, partial involvement, multiple identification, and mediated interaction. This prescient definition of social worlds captures the essence of internet fora, and in particular mediated interaction is the *sine qua non* of such groups.

Internet forum membership cuts across national, societal, ethnic, economic, age, gender and other boundaries and is open, theoretically, to anyone with access to the internet. Social worlds are loosely bounded groups that change over time. In describing the application of the social worlds concept to drinking cultures, MacLean *et al* [37] insist that collective drinking is crucial to producing a drinking culture. Further, they posit that intervening in drinking cultures at levels below the population level may provide an opportunity to address problematic drinking. The forum that we examine in this article shares some similarities with other drinking cultures. Namely, it is a group that is larger than a friendship group

but smaller than a national group, and which comprises people who identify as heavy alcohol users and who share anecdotes, norms, values, beliefs, and social practices around drinking. However, unlike other social worlds of alcohol users, the members of this group do not necessarily consume alcohol together. Internet fora are an asynchronous communication medium where participants can be separated in space and time, while still co-creating a shared culture.

For this study, we adopt the following definition of drinking cultures, proposed by Savic *et al* [34]:

Drinking cultures are generally described in terms of the norms around patterns, practices, use-values, settings and occasions in relation to alcohol and alcohol problems that operate and are enforced (to varying degrees) in a society (macro-level) or in a subgroup within society (micro-level).

Previous research has questioned whether social media use and alcohol-oriented social media posts are associated with offline alcohol use. [38] The forum we study in this article contains introductory remarks which are designed to orient contributors to the tone and intent of the forum. These remarks announce that it is a group for people who identify as severely alcoholic and who have suffered significant medical and psychological sequelae because of alcohol use. Consequently, it is understood that contributors are drinking heavily and regard their alcohol use as problematic. The purpose of this study is to characterize the discursively constructed norms in a group of self-identified heavy alcohol users and to examine the way these norms are reproduced and contested, through discourse, within the social world of the forum. This is the first study to investigate the discursive (i.e. linguistic) practices in an internet support forum for self-described alcoholics adopting an approach of radical acceptance.

Several parallel dialectical tensions are apparent both in the social practice of alcohol use, and in the practice of discursively representing alcohol use in the support forum. A structuralist approach to language and discourse supports radical acceptance, in the sense that subjects are constructed as effects of structures with no room for personal agency. In a structuralist ontology, according to which subject positions are viewed merely as effects of existing structures [39], striving to modify drinking behaviour may be regarded as futile, as alcohol users are at the mercy of existing social structures over which they have little or no control. [40] In such a system, radical acceptance seems a logical choice. In contrast, constructivist ontologies conceptualize the social world as being constructed by discourse and militate in favour of change. Such a position privileges individual agency and regards social structure as an epiphenomenon of individual action. Furthermore, the tension between acceptance and change is mirrored in the reflexive social practice of posting to an internet forum. A structural view of language holds that

discourse production is constrained by available structural resources and neglects the agency of posters in constructing their own subject positions. In contrast, constructivist theories of discourse generation privilege the agency of forum contributors and regard reality as being socially constructed.

A critical realist ontology attempts to resolve these tensions through a structure-agency dialectic. As such, this study employs a critical realist philosophy. [41] In particular, we rely on the transformational model of social activity that considers the dialectical relationship of structure and agency as it relates to the relationship of radical acceptance and change. [42] This approach recognizes structural aspects of language as being in dialectical tension with the choices made by language speakers in generating posts.

Methodology

We analysed the discursive construction and contestation of group norms, as entextualised through the forum members' language use in their posts. For this purpose, we employed corpus-based approach to discourse analysis [43, 44, 45]. Corpus linguistics is a methodology and a field of research that uses computational and statistical techniques to examine linguistic patterns in large, digitized bodies of naturally occurring language use. The data analysed in corpus linguistic studies is referred to as the 'corpus'. This constitutes a (usually large) body of naturally occurring language use which is designed to represent a language or specific context of language use. Discourse analysis is an approach to text analysis which focuses on how the linguistic choices made by text creators contribute to particular functions and representations. Corpus-based discourse analysis therefore involves identifying recurrent and statistically salient linguistic choices across a corpus of language and interpreting these choices in terms of how they contribute to particular functions and representations. As noted, in this study we undertake a corpus-based analysis of how the forum users' discursive practices – as entextualised through recurrent linguistic (i.e. lexical and grammatical) choices – function to reproduce and contest norms around alcohol use in this context.

The corpus we constructed for this study represented, as noted, interactions taking place in a forum for self-identified heavy alcohol users. To obtain source texts for our corpus, we used Google to identify support groups for people who identified as having problematic alcohol use. We focused on the largest forum in terms of number of users, threads, and posts. The forum is organized into topics, each of which has an accompanying discussion which forms a thread. We used Python 3.0 to extract all comments posted in threads created over a period of three months (January to March, 2021). This amounted to 486

complete threads of comments (483,325 words; see table 1) Threads that were posted and subsequently deleted by their authors were not available for analysis (N= 14). The forum requires posters to successfully solve a CAPTCHA before posting to prove they are human and not a bot.

Table 1. Breakdown of threads, posts and words in the corpus.

Attribute	Radical acceptance of alcoholism corpus
Total threads sampled	486
Total posts	10,209
Mean posts per thread	21.0 (SD 23.4, IQR 16.8)
Total words (tokens)	483,325
Mean words per post	46.2 (SD 77.7, IQR 44)

All of the data used in our analysis were posted in a public forum, available to any internet user without having to subscribe or log in to the forum. The forum permits users to contribute anonymously with a pseudonymous username that is not linked to their offline identities. Our examination of the forum posts constitutes what Eysenbach and Till refer to as ‘passive analysis’.[46] The institutional review board at The Centre for Addiction and Mental Health reviewed the proposed study and opined that it did not require formal approval.

At the time of sampling, the forum had approximately 59,000 members. To ensure that forum members’ identities are protected as far as possible, no usernames or references to any other personally identifying information will be reproduced in the data extracts cited in this paper.

The corpus-based approach to discourse analysis used in this study draws upon on a combination of three techniques from corpus linguistics: keyword analysis, collocation analysis, and manual examination of concordances [47, 48], all of which were accessed using *WordSmith Tools* (version 8) [47] and Sketch Engine [50, 51]. Keywords are words that occur with a (statistically) marked frequency in one corpus relative to another (i.e. a reference corpus, which represents a norm or benchmark for the type of language under study). Keyword analysis thus indicates words which can, by dint of their markedly high frequency, be viewed as characteristic of the texts under study (in our case, the forum interactions). As our reference corpus, we used the spoken component of the British National Corpus [52] – an 11-million-word corpus of conversational British English sampled between 2012 and 2016. The reference corpus was also used by Hunt and Brookes [53] and Lustig et al [54], who demonstrated its utility for identifying keywords which signal discursive practices in the context of online fora. Previous research on such online

environments has demonstrated the utility of the spoken BNC 2014 for this kind of analysis [53]. A more pressing consideration is the register of the reference corpus – where spoken language has proven to be a more fitting reference corpus for studies of computer-mediated language [53].

Keyness was measured using a combination of the log-likelihood and log ratio statistic. [56] Log ratio combines the log-likelihood test of statistical significance [57] with a measure of effect size, which quantifies the strength of the difference between the observed frequencies, independent of the sample size. Log-likelihood is a hypothesis-testing measure that assigns to each word in the corpus a score which reflects the likelihood that the word is key when the corpus is compared against the reference corpus.

The second technique, collocation analysis, involves identifying patterns of word co-occurrence which are more frequent in the corpus than would be expected by chance. Through their collocational relationships, words – including keywords – can develop meaning and exhibit particular evaluative prosodies or carry particular ideologies [58]. Collocational pairings were ranked using the cubed mutual information (MI³) statistic.

Finally, concordancing is essentially a way of viewing the corpus data that allows users to inspect all instances of a given word, word string, or collocational pairing in the corpus—in context—and, if it is desired, to access the original corpus texts in their entirety. Concordancing facilitates more qualitative analysis of the patterns in a corpus. In this study, concordancing is used to follow up the identification of statistically marked keywords and collocational pairings, with the ensuing qualitative analysis trained on identifying discursive practices which contribute to the construction and negotiation of group norms.

Results

As described in the previous section, our analysis began by identifying the keywords which characterized the language used by the forum members. For the facility of analysis, we have assigned these keywords to thematic categories, based on manual inspection of their uses, accessed through analysis of their collocational patterns and concordances.

Table 2. Forum keywords, grouped into thematic/lexical categories and ranked by log ratio score.

Thematic/lexical category	Associated keywords (raw frequencies; log ratio scores). All p values are < 0.001.
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Drinks and drinking	<i>sober</i> (556; 7.76), <i>booze</i> (446; 6.83), <i>vodka</i> (459; 5.65), <i>drinking</i> (1,331; 5.22), <i>alcohol</i> (567; 5.03), <i>drunk</i> (820; 4.72), <i>beer</i> (445; 3.69), <i>drink</i> (1,181; 3.64), <i>bottle</i> (334; 3.26)
Forum-related	<i>LOL</i> (387, 6.02), <i>chairs</i> (282; 5.00), <i>post</i> (291; 3.31)
Swearing	<i>fucked</i> (294; 4.34), <i>fuck</i> (873; 3.39), <i>shit</i> (1,124; 3.09), <i>fucking</i> (673; 2.18)
Concepts of self	<i>myself</i> (563; 2.92), <i>hope</i> (361; 2.51), <i>life</i> (779; 2.35), <i>feel</i> (840; 1.95), <i>my</i> (6,134; 1.82)
Concepts of time	<i>since</i> (362; 2.23), <i>while</i> (548; 2.19), <i>days</i> (612; 2.10), <i>until</i> (335; 1.81), <i>times</i> (350; 1.70), <i>after</i> (728; 1.60)
Interpersonal	<i>Help</i> (350; 1.91), <i>friend</i> (333; 1.90), <i>yourself</i> (6,676)
Other grammatical	<i>its</i> (449; 3.34), <i>least</i> (390; 2.19), <i>am</i> (639; 2.20), <i>also</i> (663; 1.74), <i>best</i> (332; 1.58), <i>few</i> (536; 1.63)

The keyword with the highest relative frequency is *sober*, occurring 556 times (1,124 times per million words (PMW)) in the corpus. This is an interesting keyword, as although this forum explicitly and unconditionally rejects sobriety, the keyness of this item suggests that sobriety is, in fact, a significant focus of the interactions taking place within it. The top five collocates of this word, ranked using the MI³ statistic, are given in Table 3.

Table 3: Collocates of *sober*, ranked by MI³.

Rank	Collocate	Collocation frequency	MI ³
1	<i>and</i>	143	17.74
2	<i>days</i>	48	17.22
3	<i>months</i>	35	17.08
4	<i>been</i>	51	16.50
5	<i>when</i>	56	16.45

The most frequent collocate of *sober* is *and*. This coordinating conjunction is used to construct a positive semantic prosody around the concept of sobriety by equating it with other, positively loaded states and

practices. Note that in these extracts and those hereafter, keywords are shown in bold, collocates are underlined, and longer phrases (i.e. words clusters/n-grams) are italicized.

All in all, I'd just rather be **sober** and clear minded, not stuck in bed with a headache feeling like I need to puke.

It absolutely isn't worth it, and I love drinking, but being **sober** and getting shit done during the day is pretty fucking great.

You had 35 days, you can **sober** up again and keep the job...if you want to.

Although nominally this is a forum for people who “accept their lifestyle choice and don't want to be interrupted”, this bundling of sobriety with positive states and outcomes, such as having a clear mind, being effective, and maintaining employment, suggests that posters are prepared to acknowledge the benefits of sobriety and consider making changes in that direction.

Sober is an adjective that can be used to describe a person as in:

Dude you need to get **sober** for keeps now.

Frequently, *sober* is used in clauses where it functions as a complement to a copular verb such as *get*, *stay* or *keep*. In these instances, *sober* functions as a subject predicative and serves to characterize the participant. The verbs used in these clauses are resulting copular verbs, as opposed to current copular verbs. These verbs identify attributes that occur as a result of some process of change.

Two of the top five MI³ collocates of *sober* are units of time: *days* and *months*. These units of time are mainly used to quantify the length of periods of sobriety. For example:

Otherwise I passed the magic 7 days **sober** so I'm feeling pretty okay.

I'm 35 days **sober** in a boring rehab.

I'm 11 months **sober** and still suffering the affect alcoholism had on my brain.

Contributors manifest an intense interest in quantifying lengths of sober time. Forum contributors indicate that maintaining sobriety is difficult, but that it becomes easier with the passage of time. This belief is also supported by the literature. When posters speak of sobriety, they seek to create a boundary between periods of intoxication and periods of sobriety. The notion of time serves to construct this boundary. Temporal boundaries function to construct boundaries between different versions of the self – a sober self and an intoxicated self.

I have tried **sober** life for 5 months, 2 months, 1 month...but it's just too fucking boring.

Also, congratulations on 2 days sober! I'm sure you can make it a week but try not to be too hard on yourself if you slip up.

Made it to 35 days sober before I caved!

The practice of counting time is also a common feature in alcoholic anonymous and other 12 step groups. It has been ritualized and formalized in the tokens distributed at AA meetings to commemorate milestones of sober time. And as Skjaelaaen [59] noted, “taking breaks” is a common topic of conversation among heavy drinkers. Contributors to the forum uniformly identify that undertaking periods of sobriety is difficult and refer to being overwhelmed and compelled to drink again, thereby bringing an end to a sober spell.

Frequently, *sober* is used in attributive relational clauses, as in:

I'm **sober** now.

I've been **sober** since early January and it sucks at times but I read a quote that said sobriety gives you what drugs and alcohol promise

This use of relational processes attributes sobriety – and being *sober* – to the author. However, in doing this, the contributors also cement their identity as heavy drinkers. Sobriety exists in a dialectical tension with intoxication, wherein each concept derives relational (oppositional) meaning from the other. In an imaginary world in which intoxicants did not exist, it would be nonsensical to speak of sobriety and the notion of sobriety only becomes salient in opposition to intoxication. Thus, sobriety and intoxication exist in a dialectical tension in which each depends on the other to derive meaning.

In the examples above, posters construe sobriety as a personal choice and emphasize the role of agency. However, they also frequently refer to becoming sober due to occupational and financial obligations and, in so doing, foreground the role of social structure.

Gonna have to **sober** up a little before work tonight at 9.

I stay **sober** Monday through Friday though otherwise I wouldn't have a job.

I've been unemployed living off of a court settlement for 3 years and keep telling myself I have to get **sober** to find a stable job.

This highlights the duality of structure wherein social structures are both conditions of human agency and outcomes of human agency. In this instance, posters recognize that sobriety is an expectation of going to work and by observing this dictum they reproduce and reinforce it.

The law and financial institutions are other social structures that exist in dialectical tension with human agency to impact practices of using alcohol.

I'll be **sober** enuf to drive in a couple hours, thankfully. <3

Ended up copping a DWI, and that's what got me **sober**.

Being broke is a tough way to get **sober**.

Forum contributors also cite social or other family obligations as impacting alcohol use:

Having to stay **sober** for now as I have family stuffs later.

Im not having kids with my girlfriend till im **sober** but that's my choice.

These excerpts refer to social structures that shape the practice of drinking. They anticipate the tension between structure and agency. Sometimes, social structures are foregrounded, and the role of agency is minimized. For instance, in an excerpt above the poster attributes their sobriety to the 'DWI' – a reference to the legal charge of driving while impaired. Here, the poster disavows personal responsibility for the decision to become sober, instead attributing this to the external structural force of the law. The subsequent excerpt identifies economic necessity as a motivating factor in the decision to achieve sobriety. This formulation also minimizes the role of personal agency. In fact, examples abound of contributors attesting to drinking alcohol despite having no access to money:

My friend & I used to end up drunk & broke & wandering coney island searching trash cans for french fries & unfinished beers laughing the whole time at how gross it was.

Another exchange details tips for stealing alcoholic beverages:

The more time you spend in the store, the more likely someone is to stop you. If you need to steal alcohol, it's much more economical to steal wine. Multiple bandit juice boxes fit down the sleeves of a puffy jacket. Keep them near your biceps by keeping your elbows slightly bent. Liquor is even better, but you will run into more security issues there

These posts demonstrate that in some instances social structures are sufficiently dominant to dictate drinking behaviour and precipitate sobriety. However, in other instances human agency and ingenuity prevails and contributors use alcohol despite disincentives imposed by legal, financial and other barriers.

Types of Drinks

In describing alcohol use, posters frequently refer to *vodka* which appears 459 times (1,111 PMW) in the corpus. In contrast, *tequila*, *gin* and *rum* are mentioned only 19 (38 PMW), 47 (95 PMW) and 37 (75 PMW) times, respectively, despite their similar alcoholic composition to vodka. The terms *handle* (frequency = 165, $MI^3=16.51$) and *cheap* (frequency = 127; $MI^3=15.93$) are frequent collocates of vodka. A *handle* is an American term used to refer to a bottle of alcohol containing 1.75 L of alcohol, so named because the bottles frequently have a built in handle. A *fifth* refers to a 750 mL bottle of alcohol, so named because it contains one fifth of a US gallon.

Weekends: wake up chug left over fifth, drive to CVS buy two handles of **vodka** (titos if possible) and 24-30 beers go home drink til I pass out, do that 5-6x and now it's Monday and it all starts over.

I'm in Pennsylvania and you can get a handle of **vodka** for about 10 bucks or so.

I'm in the US, so a handle of **vodka**, at the cheapest store I can find is \$9.99.

These excerpts demonstrate the impact of economic considerations in shaping drinking behaviour. When referring to alcoholic drinks generically, posters frequently use the term *booze*. The term is strategically ambiguous in that the specific alcoholic drink it refers to is unspecified. It preferentially refers to liquor. However, it can also refer to any alcoholic beverage including wine and beer, as in:

Many of times in a panic have I searched every inch of my house hoping to find a drop of **booze** and I come across a unopened **vodka** bottle or **beer** cans.

Similarly, in the excerpt below *booze* is used to refer to any alcoholic drink:

I drink **beer** because I love it, wine because it's fucking cheap. 13 bucks for a 4 litre cask. It's the only affordable **booze** in Australia, a 30 carton of tinnies typically costs 50 bucks here, fifth of vodka is about \$30-35.

Tinnie is a term used throughout Australia, New Zealand and the United Kingdom to refer to a can of beer.

In other instances, however, *booze* is used to refer specifically to liquor and specifically excludes beer and wine, as in:

Beer is for thirst. Wine is an appetizer. **Booze** is to get properly wasted lol.

Just kind of messy and time consuming cause let's be honest, if you run out of **booze** you're not thinking "oh I'll put up some cider for 2 or 3 weeks".

Here *booze* is co-hyponymic with beer and wine as opposed to being a hypernym as in the previous examples. The term *booze* is also informal compared to other alternatives, such as *drink* or *beverage*, in keeping with the decidedly informal and irreverent tone maintained throughout the corpus.

Swearing and offensive language

In keeping with the informal tone of the forum, posters make extensive use of profane language, including *fucked* (319), *fuck* (956), *shit* (1,241), *fucking* (732). *Fuck* is used at a frequency of 1,654 PMW, almost ten times as commonly as in the spoken component of the British National Corpus. [46] The strongest collocate of *fuck* is *ups*, which occurs almost exclusively in the R1 position to form the bigram *fuck ups*.

The frequent uses of swear words appear to construct and develop the forum as a community that is set apart from polite society and may serve to build a coherent identity and promote social cohesion in the group.

You're a **fucking** legend mate.

I really don't want to see that, because you are a good **fucking** cunt.

We all **fuck** up. I just seem to avoid it long enough to where it's devastating for all parties involved.

I am stealing this and posting this, you **fucking** magnificent **fucker**.

However, in other instances, swear words are used for chastisement to reinforce the norms of the social world of the forum. Although the stated position of the group is one of unconditional acceptance, in fact there are norms and limits in the group. Those who transgress them are roundly chastised:

You're a **fucking** asshole to make drinking and driving a habit let alone mixing benzos with it.
 Before anyone says it, I know I'm a piece of **shit** for driving drunk.

Conceptions of self

The keyword list contains two reflexive pronouns: *myself* and *yourself*. Reflexive pronouns are anaphors used to indicate that a semantic argument of a predicate is co-referent with another argument of the same predicate. [60] These *self*-forms permit the same person to be cast as both the subject and object of the clause.

Table 4: Collocates of *myself*

Rank	Collocate	Frequency	MI ³
1	<i>promised</i>	2	8.52
2	<i>fool</i>	5	8.38
3	<i>drowning</i>	5	7.93
4	<i>remind</i>	5	7.47
5	<i>force</i>	7	7.09

The word *fool* is used as a collocate of *myself* in the L2 or L3 position. It is used in such constructions as:

Made a fool of **myself** at dinner in front of my family.

Yea work blunders were me making a fool out of **myself** more then anything.

This construction positions the poster as both the actor in the process and as the beneficiary of the process. They are both the ones doing the action and the ones to whom the action is performed. This mirrors the dialectical opposition inherent in addiction, wherein a person both wants to be sober yet also wants to continue to use. Similarly, posters speak of *drowning* themselves in alcoholic drinks:

Would rather be drowning myself in **vodka** right now, but maybe it's for the best I'm not.

I entertain frequent fantasies of bugging out to the nearest town and using my whopping 300 dollars to get a cheap hotel and drowning myself in **vodka** til I run out of money and get thrown out.

In these posts, contributors construe themselves simultaneously as perpetrator and victim of *drowning*. The word *force* also collocates with *myself* in the L1 position – that is, one place to the left of the node (i.e. directly preceding it):

Today I felt awful when I woke up but forced **myself** to a fat bacon sandwich.

Wait until the alarm goes off and then force **myself** out of bed.

Once again, these constructions allude to the internal battle that heavy alcohol users experience. On the one hand, wanting to engage in healthy behaviours such as eating, but also having to overcome a part of themselves that is destructive and resists.

Similarly, use of the reflexive second person pronoun *yourself* casts subject and object as co-referent.

You're allowed to feel sorry for **yourself** and be sad.

You can really hurt **yourself** or others.

Take it easy today and take good care of **yourself**!!

In these three examples, use of the reflexive pronoun captures the ambivalence around heavy alcohol use. It casts the interlocutor as both the person experiencing pity and as the object of pity, or as both the person being hurt and the one causing pain.

Hope

Contributors *hope* for a counterfactual state of affairs and use it to express a desire for change. This is in tension with the stated position of the group as one of radical acceptance and speaks to the dialectic between acceptance and change. The most common use of *hope* is in the trigram, *I hope you* which occurs 68 times in the corpus:

I hope you feel better soon buddy!

I hope you 'll find that elusive numbness at the bottom of the next bottle.

I hope you quit drinking forever and tattoo Live Laugh Love on your nutsack, but in case that doesn't work out -- try drugs!

Hope is frequently used in the simple present tense with an object clause indicating the desired state. Despite the frequent use of epithets to address other posters in the group, when invoking *hope* posters

express positive regard for other posters and express warm sentiments. However, many of the statements include an element of wry, sardonic wit in keeping with the world-weary tenor of the forum.

I **hope** you all are happy and as healthy as you can be given our lifestyle.

These declarative *hope* sentences perform both a constative and a performative function, having both locutionary and illocutionary force. The poster is, on the one hand, describing their internal state of affairs, and simultaneously instantiating the expressed wish by naming it.

Life

The keyword *life* appears 851 times (1,720 PMW) in the corpus with a log ratio score of 2.35. The most statistically marked collocate of *life* in the corpus is the possessive pronoun *your*, which was assigned an MI³ score of 18.46. *Your* appears predominantly in the L1 position to form the bigram *your life* which occurs 85 times in the corpus.

It's interesting and terrifying and a great way to fuck up *your life*.

Don't tell your folks, but understand this - If you continue as you are, the best case scenario, you will become heavily addicted and can't last 12 hours without a drink. All *your life* will be about getting that next drink.

If I were you, I would just export those people out of *your life* right now so you can drink in solace.

Sounds to me like you need to change up a lot of *your life*.

The construction *your life* allows posters to provide advice and direction, which would often be expressed in the imperative mood. However, doing so would violate the understanding that group members should accept the choices of others unconditionally. By using this construction, posters are able to offer advice in the declarative mood, thereby minimizing the face threat [61] of transgressing the norms of the group.

Conclusions

This study examined a corpus of messages posted to an internet forum committed to radically accepting the alcohol related choices of a group of people who self-identify as severe alcoholics. This orientation stands apart from existing approaches to the treatment of problematic alcohol use, which exist on a

spectrum from strict abstinence-based approaches to harm-reduction approaches. All existing approaches explicitly seek to change drinking behaviour to some degree. Although an approach of radical acceptance – by which we mean not explicitly seeking to modify drinking behaviour – has been adopted elsewhere in mental health practice, it has not found purchase in the treatment of addictions. [62]

We found that although the group claimed to be averse to any kind of change, change was in fact a central discursive theme of the group. This manifested as a focus on sobriety. Posters spoke of attempts and difficulties in achieving and maintaining sobriety, and quantifying temporal lengths of sober intervals was of central importance to the group. Although the group is nominally dedicated to bacchanalian ideals of unrestrained intoxication, in fact the struggles of achieving and maintaining sobriety were of primary importance. Moreover, although contributors subscribe to a philosophy of unconditional acceptance of their drinking practices, they in fact trade in tips on how to drink less, how to drink more safely, and how to mitigate the harmful effects of drinking on their lives.

This forum can be viewed as a social world where members discursively reflect on the social practice of alcohol use. Drinking constitutes a *social practice*, defined by Chouliaraki and Fairclough as “habitualised ways, tied to particular times and places, in which people apply resources (material or symbolic) to act together in the world.” [63] Social practices always include a reflexive element as people generate representations of what they do as part of what they do. This forum represents this reflexive element of alcohol use. The forum posts are therefore both a reflection on the social practice of drinking, and constitute a related but distinct mediated social practice in their own right.

Sobriety invokes a dialectic binary of presence and absence. Sobriety gains semantic salience only when held in contrast to intoxication. In a hypothetical universe in which intoxicants did not exist, the concept of sobriety would be meaningless. Practically, one would not normally refer to young children as *sober*, even though they typically do not use alcohol. The boundaries between periods of intoxication and periods of sobriety are highly salient to forum contributors.

Although drinking has the *prima facie* appearance of a voluntary activity that is under conscious control, succumbing to this line of reasoning is actually an instance of the epistemic fallacy and conflates epistemology with ontology. Although it may seem that drinking or not drinking is under voluntary control, there are in fact deeper generative mechanisms which control drinking behaviour. These mechanisms exist in various strata. The project of change presupposes that change is possible and that drinking behaviour is under voluntary control. In the framework of critical realism, drinking behaviour is an ‘open system’ which is governed by various generative powers, including “physical, chemical, biological, economic, social, psychological, semiological and linguistic.” [63] Each of these mechanisms

coexist in dialectical tension with other mechanisms. And each one is emergent, meaning that it has distinct properties which are not reducible to other mechanisms. Alcohol has physical, chemical, and biological properties that operate at their respective strata. However, as described by critical realist theory, the behaviour observed at higher strata are emergent and not reducible to lower strata. In this forum, posters speak of economic considerations shaping drinking behaviours, but also of drinking behaviours shaping economic realities. Drinking behaviour exists in a two-way tension with each of its mechanisms as both cause and effect.

Posting about drinking on an internet forum constitutes a discursive, reflexive social practice. Just as the dialectic of change and acceptance is enacted in alcohol use behaviours, a parallel dialectical process exists in the generation of discourse about drinking. Production of discourse is constrained by structural linguistic features, as represented by the syntagmatic axis of language description. However, within that structure the paradigmatic axis provides choice to speakers of language. As Halliday noted, “[t]he speaker of a language, like a person engaging in any kind of culturally determined behaviour, can be regarded as carrying out, simultaneously and successively, a number of distinct choices.” [64]

This study demonstrates that although some users of alcohol claim to eschew changes to their alcohol use, in fact reflecting on change is inevitable when discussing *not* changing. Clinicians have long recognized that attempts to pressure people to change their behaviour frequently elicits resistance and has the opposite effect. This study demonstrates that acceptance and change are in inevitable dialectical tension and reflecting on either one will inevitably lead to reflection on both. This realization may be helpful in engaging alcohol users who are averse to any notion of changing behaviour.

This study has several limitations. In focusing on English language interactions taking place on Reddit, our data is necessarily limited respecting the participants and groups represented. As well as being limited to speakers of English, the contributors to the online groups under study are self-selecting and anonymous. As such, we cannot reliably determine the gender, ethnicity, national or cultural identities of the contributors and thus have not been able to ensure the balance of our sample, nor draw comparisons or contrasts between the linguistic routines exhibited by these and other socio-demographic groups.

Furthermore, the discourse that constitutes understandings and experiences of alcohol and alcoholism do, of course, take place in sites other than online support groups (including ‘offline’ support groups). Future research should therefore aim to examine the discourse which characterizes alcohol-related interactions taking place in other contexts in order to determine the extent to which the trends identified here also occur in other communicative contexts. Sampling such interactions from de-anonymized contexts would

also allow cultural and other socio-demographic variables to be considered, resulting in a more comprehensive exploration of the models identified in this study.

Beyond the models that figured in this analysis there are other approaches to the treatment of alcohol use disorder including trauma informed and culturally based models [65] as well as treatment informed by traditional Indigenous healing methods.[66] Such methods were not discursively represented in the study corpus. Investigations regarding these methods and the significance of this absence may be a fruitful area of investigation in further studies.

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