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Motivations and stake management in producing YouTube “bro-science” videos for baldness treatment

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Abstract

User-generated health videos are prevalent on video-sharing sites. Recently, “bro-science” has emerged as a sub-genre in which users test products on themselves, produce evidence and seek to persuade others of their efficacy. But what are the motivations of the producers of these videos? Using the issue of baldness, we explore the motivations of posters. 72 “bro-science” videos were taken from YouTube and analysed to see the motivations identified by posters. These included a sense of external compulsion, the desire to communicate product benefits, wanting to share careful research, and wanting to share experiences. We also discuss how these motives function rhetorically. The “bro-science” genre thus functions to incorporate the viewer into the poster’s experience so that the viewers become part of a community of people who not only share problems, but solutions. This paper points to the distinctiveness and influence of “bro-science” videos in the context of user-generated health videos.

Keywords: user-generated content; motivation; rhetoric; bro-science;
health; baldness; lay-science; persuasion; stake management

Introduction

Sharing personal accounts of health and wellbeing is now an important part of health information-seeking online. While there is an established body of literature around the use of text based peer-to-peer support, researchers are beginning to note the increasing use of online video as a way of capturing and sharing personal experiences in this domain (e.g. Kang et al., 2017; Naslund et al., 2016; Sharma et al., 2016). YouTube, founded in 2005, is the largest source of online videos allowing users to post, view, comment on and link to videos on the site. These user generated videos (UGV) can exist as stand-alone, single narratives focussing on a particular health topic, product or service or as a form of journaling video blog commonly referred to as vlogs (Burgess and Green, 2009). Vlogs typically focus on chronic or longer term health conditions and document the ongoing lives of their creators (Godwin-Jones, 2007).

Recent studies have examined the content of UGV in relation to inter alia, vaccination, multiple sclerosis treatment and organ donation (Briones et al., 2012; Freeman and Chapman, 2007; Manning, 2013; Mazanderani et al., 2013; Tian, 2010). Many of these studies have focussed on the quality of the content provided (Camm et al., 2013; Singh et al., 2012; Sood et al., 2011) highlighting the potential for misleading and inaccurate information in the public domain or the genre of vlog itself e.g. teaching, personal journal, self-documentary (Liu et al., 2013). Others have examined the social and emotional support provided in the videos (Frohlich and Zmyslinski-Seelig, 2012; Naslund et al., 2014) and finally a small number have examined the posters' motivations noting journaling, self-reflection and altruism as key drivers (Huh et al., 2014; Wotanis and McMillan, 2014). Interestingly, the motivation for people to post

their videos appears to vary in relation to the nature of the health topic. Vloggers with HIV/AIDS or diabetes report a desire to help others whilst MS patients used the videos to document their condition in response to treatment and upload their evidence-based videos as a way of persuading other patients and the wider community of a specific treatment's efficacy (Mazanderani et al., 2013).

This approach to understanding the motivation of posters is consistent with the uses and gratifications perspective (Katz et al., 1973) adopted by numerous other researchers in which the use of media is predicated on specific psychosocial needs that are satisfied through the act of recording and posting a video. User-generated content can be therefore understood in terms of how it satisfies needs such as recognition, cognition, social involvement, and entertainment (Leung, 2009). UGV are then seen as a way of alleviating boredom, having fun and connecting with others – to name only a few motives (Snelson, 2013). We agree that psychological motives underlie the desire to produce user-generated content but believe that there is more to the expression of motives than underlying psychology or social rewards. This is especially the case when posters implicitly or explicitly identify their motives in UGVs. Why do these users identify their motives? We argue that such presentation of motives is functional and works to persuade viewers of their content, and this is especially the case with UGV offering health advice in which the adoption of a specific recommendation is the desired outcome for the poster. In the vein of discursive and rhetorical psychology, we argue that all language is rhetorical (Billig, 1987) and even when video-posters are doing seemingly insignificant things like explaining their motives, they are working to persuade their viewers of something (Whittle and Mueller, 2011).

Posters want to present a credible, persuasive account of their experience with a product or service without it being perceived as owned or contrived by a third party

with a vested interest (Hohm and Snyder, 2015; Vance et al., 2009). The motivations of healthcare companies obviously differ from those of the individual keen to document and share their experiences with a product. Understanding the ways in which individual posters refute other motivational interpretations and present a credible, persuasive and authentic account of their health and wellbeing experiences in relation to specific products and service lies at the heart of the current study. We want to go beyond looking at motives as the underlying basis for producing the videos, to looking at motives as a way of defending the video and making it persuasive. In many respects, the examination of this research question is in the tradition of research which examines “stake” and the investment of a speaker in their claims (Potter, 1996; Whittle et al., 2014; Whittle and Mueller, 2010). Such research points out that in efforts to persuade or uphold the facticity of an account, people need to show how they are personally invested or distanced from an account or claim. The way the speaker positions themselves ultimately depends on the kinds of response that they anticipate and they pre-empt this by variably positioning their relationship to their claims. In our study, the motives identified by the speakers in the videos are analysed to see how they function to persuade viewers of their claims.

We take as our focus bro-science videos, a concept often portrayed in a derogatory manner to refer to the sharing of information and ideas of questionable scientific credibility among lay peers (see Hall et al., 2016 who refers to the concept as “lay expertise”). It is however, a concept that emphasises the ongoing battle between the individual as authority in relation to their own body and the medical or scientific expert. From the early years of the Internet, academics pondered the dilemma of “the struggle over expertise” (Hardey, 1999) that occurred online and evidently, this struggle has not disappeared; the term “bro-science” neatly captures the essence of co-opting of

science by laypersons on the Internet. In practice, it is often seen as the sharing of experiential and word of mouth knowledge in relation to the lay user. Although it has its origins in bodybuilding circles, male grooming and more recently male pattern baldness (MPB) are now seen as part of bro-science discussions. MPB or androgenic alopecia is the most common form of hair loss affecting up to 70% of men and 40% of women. Androgenic alopecia, or male pattern baldness, affects 6.5 million men in the UK and 35 million in the US and every year \$2bn (£1.3bn) is spent worldwide on surgical procedures for hair loss alone (International Society of Hair Restoration Surgery, 2012) with R&D expenditure on potential new treatments for MPB exceeding that of Malaria or HIV/AIDS drugs research (Chu, 2013). Hair can become an essential part of self-identity or body image (Cash, 2001) and men report psycho-social benefits from having sought treatment for MPB (Alfonso et al., 2005).

This paper then, focuses on the issue of how stated motives function as persuasive devices in UGV. More specifically, we focus on this relatively new genre of UGV, “bro-science” videos, and explore how lay experts promote treatments for androgenic alopecia through carefully articulating their motives. Understanding how such videos are persuasive shows how online video sharing has transformed the traditional physician-patient relationship in which the doctor is the authority with no vested interests who prescribes a treatment, to one in which peers can provide evidence for treatment while they carefully show that they too, have no vested interests that would make viewers distrust them.

Method

Data Collection

To explore the issue of ‘bro-science’ and baldness, we used the YouTube API to search for videos containing the keywords, ‘male pattern baldness treatment’. These keywords were chosen since we initially intended to focus on the issue of male baldness. We also wanted to focus on videos that advocated a treatment rather than simply shared information. The videos returned by the search were sorted by view count and the first 100 were selected for analysis.

Data were coded into categories to identify the videos that had a ‘bro-science’ feel. We developed a schema of categorisation based on factors such as the apparent expertise of the person talking to the camera, the number of people in the video, and whether a form of treatment was mentioned or not. The videos fell into the separate categories identified in Table 1 and these categories enabled us to clearly demarcate bro-science videos. The videos were categorised by both authors and there was substantial agreement about classification. Some videos were more ambiguous (e.g. videos where an interview is implied due to the subject of the video apparently answering questions they had been given) but after discussion between the authors, discrepancies were resolved.

Of these different categories, the ‘product user talking directly to camera’ corresponded to bro-science videos. These videos contained single lay users talking to the camera while they shared information and advice about baldness. When categorising the videos, we became aware that there were numerous videos returned from our search query involving female users who talked about female pattern baldness (androgenic alopecia also affects females). Furthermore, the characteristic features of these videos did not differ from those dealing with male pattern baldness. Consequently, we

broadened our criteria to include videos where female pattern baldness was being discussed.

Having identified this type of video (‘product user talking directly to camera’), we then used the ‘related videos’ feature of YouTube to find similar videos to the ones already identified. We selected videos that matched the ‘product user talking directly to camera’ category and this led to the selection of 58 more videos to give a total of 72 videos.

While data of this kind is publicly viewable via YouTube, we have chosen to blur faces in images we have reproduced in the paper. Sometimes users choose to remove content for various reasons, and it seems in keeping with ethical principles to ensure that none of the content-creators can be identified from this paper considering potential embarrassment that could be caused.

Table 1. Categories of videos.

Category	Description	Number of videos
Expert interview	“Expert” user talking with interviewer about baldness or product	8
Expert talking directly to camera	“Expert” talking to camera but not as a user	15
Miscellaneous	Uncategorised	7
Product advertisement (inc. home remedies)	Images and description of product with a view to encouraging sales	15

Product demonstration	User demonstrating the application or use of the product	7
Product user interview	User being interviewed about baldness or about the treatment	13
Product user talking directly to camera	User talking to camera about product or treatment	14
Slideshow	Images with accompanying text and audio about baldness or a treatment option	10
TV Show	Clips from TV shows	11

Analytic approach

Data were thematically analysed (Braun and Clarke, 2006) by viewing each video in the bro-science category and asking, ‘What motive is explicitly identified or implied for the production of the video and advocacy of the treatment option?’ While this question addresses two specific motives (i.e. reasons for production and reasons for advocating a treatment), in practice the two were often combined since the reason for advocating a product was often the reason for producing the video. In our analysis therefore, we combine the two. Relevant sections of the video were then transcribed and labelled with a code (motive). These codes were collated and the authors collaboratively grouped them into themes. Any difficulties in grouping the codes were resolved by discussing them at this stage.

Analysis

72 'bro-science' videos were analysed and a thematic structure was generated to answer the question, 'What reasons do people give for sharing videos and advice about hair loss?' The themes are identified and described in Table 2.

Table 2. Themes and definitions.

Theme	Definition
A sense of external compulsion	The video was created due to an external request or the product/treatment was recommended by someone else.
A sense of internal compulsion	Internal forces, such as emotions, drove a person to create a video.
Wanting to communicate product benefits	A desire to communicate the benefits of the product/treatment.
Caring for others	A concern for others (rather than self-interest) drives the video-creator.
Wanting others to <i>see</i>	A desire to present visual evidence for the product/treatment.
Wanting to share careful research	A desire to report careful research.
Wanting to share experiences	A desire to share the process and progress of treatment.

A sense of external compulsion

The sense of external compulsion that appears in some videos operates on two levels: people show that the product they are recommending has been identified through external forces and people explain that the reason for the *video* has been external. Both explain one's motivation for sharing a video. When a poster stresses external compulsion this shows that the motive for the video does not come primarily from the person making the video and that there is no vested interest. There were several examples of this in the videos. Sometimes posters said that someone had got them to try a product. By identifying others as the reason behind the product choice, the user does not have to defend choosing this product over another product, nor do they have to defend themselves against the charge that they are personally motivated to promote it. One poster says:

My girlfriend coaxed me into using it [...] so I decided to give it a try (17)

By saying that his girlfriend 'coaxed' him into using it, he emphasises his own reluctance to use the product and thus the viewer cannot argue that he was motivated to review this particular item. Similarly, this kind of stake management has been noted in other YouTube videos where men "need" to wear cosmetics and are thus compelled by some external constraint, thus justifying their use (Hall et al., 2013). In our case, the decision to review the product is justified by the external constraint. At other times, the motive behind the video itself is in view when external constraints are mentioned. When posters explain that their audience want to know certain information they can say:

I need to make this video because I get asked this a lot [about side-effects of minoxidil] and I just want to bring some clarity to the situation. (7)

The motive for the video is placed in the hands of the viewers. The viewers cannot argue that the poster has a preoccupation with the subject or has a vested interest in the treatment. Rather, he is making the video to answer the viewers' common question. The point is not to question the posters' motives but to show that by identifying motives we can start to explain how such videos are persuasive. For the viewer, knowing that the poster is listening to viewer concerns, responding to viewer demand, and avoiding vested interests is undoubtedly persuasive.

A sense of internal compulsion

Not only do users create a sense of external compulsion, but they also point to internal compulsion. These are not antithetical because sometimes it may be advantageous to avoiding showing a vested interest in a product/treatment, while at other times it is advantageous to show personal enthusiasm about the topic. So, while one user (17) refers to the external compulsion of being 'coaxed' into trying a product, later he can say,

Normally I'm not one to give product reviews but I've been so happy with the results of this I felt compelled to share my two cents with the YouTube community on this product (17)

The 'compulsion' is internal and derives from being 'so happy' with the results. Thus positive emotions are a persuasive motivation for sharing a product review. Furthermore, this user does not 'normally... give product reviews' and the reference to his happiness positions the video as an out-of-character action. This draws attention to the apparent effectiveness of the product by showing that it led to an exceptional act of public recommendation. While a cynical viewer might have been tempted to say that the recommendation stemmed from regular product reviews (and there are many serial-

reviewers on YouTube), this explanation is precluded by his emphasis on his motivation (happiness) prompting this review. Besides happiness there are other emotions that function as motivations:

I am so excited to tell you about a new natural hair loss treatment (14)

I've just been so grateful that I found this treatment (23)

Happiness, excitement, gratefulness - these emotions function as motivations for sharing information about hair loss treatments. While such emotions draw attention to the *internal* state of the user, they do so in a persuasive way. Not all users emphasise the motivating function of internal emotions, however. One user explains that they found it challenging to make the video:

I'm getting up the nerve to do this video but it's something that I've been thinking about for a long long time I thought it was about time I did something (10)

Having to get 'up the nerve' to make a video suggests that there were internal obstacles to making it - fear or nervousness. This is similar to the quotation above (17) which emphasised the obstacle of not being 'one to give product reviews'. But the emphasis on these obstacles shows that the user is doing something out of the ordinary to help others and enthusiasm with the product is overriding other concerns. So whether used positively (to show how internal forces compel the video) or negatively (to show how internal forces were overcome to make the video), internal forces are constructed in ways that persuade the viewer of the authenticity and care of the poster.

Wanting to communicate product benefits

Perhaps the most obvious motive for sharing videos about treatment is to communicate product benefits. The key feature of user reviews is that the users have tested the product on themselves, which gives them authority to talk about the product. Posters talk about the product efficacy, its ease of use and their happiness with the results. Even more persuasively, some posters refer to results that have exceeded expectations. Talking about efficacy often draws on the personal experience of the user as they recount how the product has helped them:

I tried this system and it actually works really great (32)

I've been using the dermaroller for hair loss for around five months and I've had very good results so far. (15)

Grounding these claims in personal experience means that they are hard to contest since it is not a claim about what the product *must* do, but simply about what it did for *me*. As others have pointed out, subjective assessments differ from objective evaluations in that they do not require evidence and are not directly open to dispute (Wiggins and Potter, 2003). Other posters refer to how easy the product is to use:

This one thankfully does the same thing - you put it on, rub it in and, basically five or ten minutes and it's dry (56)

By emphasising that there are little costs to using the product and great benefits, the posters aim to persuade viewers by talking about how painless the product is or how quick and easy it is to apply. While these strategies are persuasive, perhaps the most effective way is to show surprise at how effective the product has been. This positions the poster as someone who had moderate expectations of the product but when these are

exceeded, it shows that they are not subject to a confirmation bias. Rather, the product's benefits have compelled them to recognise that it is better than what they had expected.

The most surprising, really the most unexpected benefit of it is that I've actually started getting some hair growth (17)

I mean it's just something you have to try for yourself. It's amazing - you see results within 2 weeks. Most people see results within ten days; I saw results within nine days. (23)

Surprising, unexpected, actually, amazing - all these terms impress upon the viewer that the poster was not setting out to prove something for the sake of making a video - the test was a genuine test. While communicating product benefits is a standard part of most product reviews, it is important to note *how* the benefits are communicated. Here they are communicated by appealing to personal experience, by weighing costs and benefits and by expressing surprise at the results.

Caring for others

One motive required for effective persuasion when there is potential for stake accusations is altruism - or at least genuine care (e.g. Rifon et al., 2004). In the videos, because the posters are recommending products, some of which may be relatively expensive, they need to guard against accusations of being motivated by anything other than the best interests of the viewers. To do this, the posters regularly portray themselves as caring for viewers. One of the most important ways of caring is by showing that they are protecting viewers' financial interests; their reviews save others time and money:

[I] have blown way too much money on stuff that didn't work and you don't need to do that - because the stuff I use today works pretty good for just about everybody, including myself. That's why I recommend the stuff today (31)

He recommends it because he does not want others to 'blow too much money' on ineffective products. This emphasis on helping people save money also comes out when posters explain that their suggested products are excellent value for money:

For sixty bucks for three months it's not even, it's a very small cost. (1)

Not only is product value important to emphasise, but to avoid claims that the posters are gaining from the sales, they often disavow any financial stake:

You can get it everywhere - there's probably fifty brands so I'm not selling you anything - I'm just telling you what happened you can buy Biotin anywhere. I'm not selling Biotin. (24)

Of course, this only works if the user is not financially gaining from the product. But how does a user manage the complication of gaining financially from the recommendation? In such a case, it would appear that the caring, disinterested impression has been jeopardised. However, it can still be maintained through *stake confession* in which the financial interest is expressly admitted so that there is no appearance of deceit:

I get about a 5% commission which adds up to be a little less than a dollar - so I'm not getting super rich off this. But I want to let you know that the

stuff I recommend, I get commissions off of it, but the reason I recommend it is because it really works. (68)

In this case, the financial interest is admitted so that any suspicions of financial gain are countered by the admission, the estimation of a small profit ('less than a dollar') and by the identification of the true motive ('it really works'). Aside from dealing with issues of finance, posters display their caring motives in other ways. For many, the act of posting about baldness arises out of empathy:

I'm twenty years old, I'm losing my hair, it's the most stressful thing and all my friends say I haven't been the same since I found out about it, em, so I'm just trying to help all you guys that are in the same boat as me. (71)

The common experience of balding provides the motivation for making the video and persuades the viewer that the poster is motivated by concern. Other expressions of concern appear when users explain that they are making the video to 'highlight' a new advance in treatment or because they understand the cultural pressures that men are under. Others show concern by pointing out that they will not promote harmful products. The deliberate selectivity in what they promote demonstrates this:

There are a lot of hair loss treatments out there - but I never wanted to promote them or talk about them too much because they have side effects and I really don't want to promote anything that is unhealthy (14)

The desire to promote only healthy products and products that have no side effects is a persuasive way of portraying the poster's motives as caring. This emphasis on care is one that features heavily in the videos, so much so that when the 'genre' is parodied, this is a key feature. In our sample of videos, there were 4 videos that were

parodies of the ‘bro-science for baldness’ format. One user points to the stress of baldness and alerts viewers to be aware. He dramatically portrays the trauma of male pattern baldness:

MPB is responsible for 348 deaths, and we each die a little inside every day.
[...] Male pattern baldness affects nearly every man in some way [...] Show
a loved one that you care about their cause. (53)

In the video the effects of male pattern baldness are dramatically overemphasised and the motive of *caring* for others is being parodied. While parodies are not exemplars of the genre, the fact that they include such a strong emphasis on caring shows that it is a distinctive feature of the genre.

Wanting others to see

Another distinctive feature of the ‘bro-science’ genre is that it presents visual evidence for claims in a way that other genres do not. This is more of an implied motive than one that is explicitly stated, but nevertheless, is an essential feature of the genre and is thus a reason why a UGV has been created. Typically, this takes two forms: before and after shots, and showing how to use a product. The ‘before and after’ presentation of evidence can be produced in several ways. Some users refer back to previous videos for comparison:

This is my hair now [bends head down to show camera]. My hair is quite short at the moment, but let me know, can you see any improvement from my previous videos? You tell me. Can you see any results? (2)

As the user refers the viewer to previous videos, the responsibility is placed on them to evaluate the evidence. ‘You tell me’, says the poster, as he firmly resists trying to force his own opinion on the viewer. The appeal of the genre is in the peer-assessed standard of evidence in which the poster allows the viewers to judge the evidence (e.g. Fig. 1).

[INSERT FIGURE 1 HERE]

Figure 1: Poster shows hairline to viewers

While posters appeal to the viewer to make their own assessment, they usually offer commentary on the efficacy of the treatment as they show their heads:

This little part right here is starting to thicken up its responding well to the Minoxidil and the needles I’m using (12)

This side is growing faster than this side [shows head] (13)

The commentary is always in conjunction with a visual display so that again, the evidence is transparent and available for the viewer to assess for themselves. Others use before-and-after photographs placed beside each other to demonstrate their progress (Fig. 2).

[INSERT FIGURE 2 HERE]

Figure 2: Before and after comparison images

This practice of before and after photographs is widely used in academic research to illustrate the effectiveness of some procedure and the photographs themselves count as evidence that the procedure has worked. The rhetorical nature of such images is obvious insofar as they attempt to persuade the viewer of the effectiveness of the procedure. In the 'bro-science' videos, photographs of the head before and after treatment has an equally rhetorical force and is used to persuade viewers of the efficacy of the treatment. Of course, not all bro-science videos aim to convince the viewer that the treatment *is* effective. Some want to show that the treatment has produced little results:

This is it, that's what I got from ten months of use pretty much... So you can really see, it's not really that thick (70)

It is clear therefore, that the bro-science videos are not simply marketing videos and this establishes the credibility of posters who do not merely post positive reviews. The reviews are transparent and products are held up to the scrutiny of the viewer who can then make their own judgement. The other form of wanting viewers to 'see' is through videos showing the application of the product. The poster typically displays the product and then outlines how to use it:

Basically, what you do, is you pull off this cap, the applicator looks like that, it's like a squirty thing you squirt it with this into here, and basically like a foam comes out... (2)

This is all part of presenting, not only the outcome, but also the process to the 'peer-review' of the viewer. The posters are motivated to display this to the viewers so that they are fully aware of the entire process and so that they can make their own

judgement. Posters are motivated in the videos to present their findings in a transparent way - so that others can 'see' what they are doing and the results they have obtained. In many ways, this matches the process of writing a scientific paper in which the 'method' is presented along with the 'results'. Thus the 'bro-science' videos are motivated by a desire to do 'science' in the context of a community of YouTube users.

Wanting to share careful research

Not only do users mimic scientific procedures in producing a method and results for viewers to replicate, but they regularly emphasise the care they take in their research. Posters use medical terminology, explicitly talk about their careful research, and issue numerous qualifications that serve to manage stake issues. In their medical discourse, posters regularly use biological explanations and clinical terminology to emphasise that their treatment suggestions are reliable. Sometimes these claims are sweeping generalisations such as, 'It has been proven scientifically to regrow hair' (4). But more often the claims are detailed and may be accompanied by numerical evidence:

It has been proven to block 90% of the DHT production (14)

[The GP] said not only was it real in clinical trials, it had an 88% success rate. (14)

The use of statistics accompanied by biological explanations (block[ing]... DHT production) make the claims difficult to contest because the empirical discourse surrounding medical research gives rise to a sense of the strength of the evidence. Not only do posters draw on the research of others, but they also mention their own research. This research can either be primary (where they do testing themselves) or secondary (where they review other research). Secondary evidence is used extensively

because this invokes the support of a third party and thus the poster's stake in the claims is reduced:

Up until recently there's been very scant amounts of science behind it - a lot of hearsay, a lot of that sort of stuff. Recently however, there was a study conducted that I want to talk about. It was conducted by the Department of Dermatology at the LTM Medical Hospital in Sion in Mumbai, India (15)

By exploring the evidence from other people, a broad support for the treatment is provided and the poster is not personally responsible for the claims. This kind of deferral to other sources of evidence is also apparent when posters encourage their viewers to speak to their doctor about using the products. One advocate of 'derma-rolling' (using a roller with small needles on the scalp) says:

So, like anything, I would certainly talk to your doctor before getting into any sort of treatment that involves derma rolling (15)

This deferral to the authority of medical practitioners provides implicit support for the claims of the poster because he is not working against them, but rather, working within the same framework of 'doing careful research'.

As already mentioned, posters use a range of qualifications when they talk about their careful research. Such qualified claims mean that they do not have to rigidly support their product - and it also prevents the poster from being seen as having an agenda to drive. Posters refer to their initial scepticism, caution about the results, acknowledge alternatives, point out that they are not medical practitioners, and acknowledge that some things are merely their personal opinion. These work together to present the claims about products as evidence-based and this is so even when personal

opinions are identified because the distinction between personal opinions and facts means that the poster is making a distinction between the two. For example, one poster says,

I'm not a doctor - I'm just this kid on the Internet that happens to have a lot of information on this (31)

Shortly after he emphasises a similar point:

I am not a doctor - this is an opinion based on my experience with the medication (31)

In both quotations, the disclaimer that he is not a doctor might be seen as weakening his case. Nevertheless, the disclaimers are followed by a positive case for why he should be listened to: he has 'a lot of information' and he has his 'experience with the medication'. The disclaimers then do not function to weaken the case but to highlight the point at which it is strongest, namely, his careful research. Even when he talks about his 'opinion', rather than weakening his case, this should be seen as safeguarding it from criticism. Later in the video he acknowledges some criticisms of the product because of side-effects. While such criticisms might be damning, by positioning his own claims as 'opinion' based on extensive 'experience', he protects them from being directly contested (cf. Wiggins & Potter, 2003). Thus the disclaimers and qualifications in the videos should not be seen as mitigating the force of the video as 'careful research' but form part of the way in which posters can carefully present their claims without appearing forceful or unaware of potential criticisms.

Wanting to share experiences

Another core motivation expressed by posters is that they want to share their experiences over time as they use the product. This is often presented as a normative expectation of the genre and is demonstrated by the casual way in which videos are sometimes introduced. For example, the use of the word ‘just’ presents sharing experiences as ordinary and unremarkable (*italics added*):

I *just* wanted to give you a video update on the new product I purchased.

(47)

Ok today I *just* kinda wanted to give you a little background... (61)

The same point is made in other ways. One poster says, ‘I wanted to do a quick video about how I stopped my hair loss’ (49). In this case, the use of the word ‘quick’ marks the video as something not overly significant. The ordinariness of sharing experiences emphasised by these quotes suggests that this is such a core feature of the ‘bro-science’ genre that it is unremarkable and expected by the viewers.

The point of this experience-sharing is explicitly identified by one poster:

‘I am starting all this today so you really are going through this with me - living vicariously through me rather’ (29)

The idea of the experience-sharing as living vicariously is interesting because it indicates why the genre may be so attractive. Viewers who may not want to test a particular product can watch the effects of the product on the poster. And the entire process is elaborately detailed in many videos. Posters share the precise methods they use:

So what I do is, I get up in the morning, and I put a little sorta dot there, and a dot there, twice on both sides and then I'll put a line down the top of my head. You just rub it in and leave it in. You use it once morning and night and then go to bed. (1)

Then as viewers follow the progress of the poster, they get regular updates on how the product is helping:

Ok, this is a quick update on my hair regrowth. It's about 10, 11 weeks now I started a journey regrowing my hair (43)

And as the above quote illustrates, the experience being shared with viewers is a 'journey'. Other posters use similar language and refer to the 'hair journey' (64) or 'my whole hair story' (61). The 'bro-science' genre then should not be only seen as individual one-off videos, but rather as including the sharing of experiences over time so that the testing of products is experienced 'vicariously' and so that the efficacy of the treatments is visible to the viewers so they can make their own assessment of the product or treatment.

Overall discussion

The findings of this study illustrate two underlying themes in relation to the stated motivations of those creating and sharing hair loss treatment videos. Firstly, we note the adoption, by many posters, of a scientific approach to their understanding and accounts of their experience with male pattern baldness. Posters often used scientific and medical terminology when referring to their problems and presented a step-by-step account of the investigations they had undertaken. Here, the before and after shots provided a visual record of the 'evidence'. Consistent with other findings, there was a sense that

the online medium and video in particular provides a platform for people to act as researchers- allowing them to document and journal their visual evidence, the embodiment of proof (Mazanderani et al., 2013). A key feature here is the creation of a new form of hybrid knowledge, the poster taking what is known of the product/service and then re-interpreting it, making sense of it in terms of their lived experience of both hair loss and the product itself. This finding resonates with work around patient knowledge in which Pols (2014) describes the way in which patients use and develop this practical knowledge to translate knowledge from different sources and advice they get into usable techniques, relevant to their aims and situations. Here our posters use the scientific approach in combination with the proof that video allows to find a way to present themselves as people with credible knowledge (Epstein, 1995) in a domain populated with so-called experts. Thus, the “doing science” motivation that emerges in these videos is not to be conceived of merely as a desire for posters to do science for its own sake, but the posters are seen to be doing science as a way of bolstering their claims and providing persuasive support for their advocated treatments.

Secondly, we found support for the idea that YouTube acts as a content community (Burgess and Green, 2009) with a strong focus on sharing and collective knowledge. This was reflected in the stated motivations around caring for others, communicating product benefits and responding to calls to share. For those posters creating and sharing multiple experiences over a prolonged period of time, videos came to incorporate more personal information about life events, family, thoughts and opinions. There was an explicit invitation for viewers to join posters on their journeys and many responded to viewer’s comments, questions or concerns. This increasing sense of interactivity reflects the development of sharing communities online (Rafaeli and Sudweeks, 1997) and has been instrumental in fostering online activism around

particular health concerns and treatments (Liu et al., 2013; Mazanderani et al., 2013). In terms of persuasive function, this motive to “share” reconfigures what would historically have been the physician-patient relationship and invites participation in the testing and production of knowledge so that the viewer/respondent is seen as having as much authority as the content-producer. Investing viewers with this authority to follow the content-producer’s narrative and to test their claims is a rhetorical way of enhancing the persuasiveness of their messages.

Finally, we note there are distinctions to be made between these ‘bro-science’ videos and other kinds of testimonials and reviews as categorised in Table 1. People were keen to distance themselves from possible ulterior motives that could be assumed by viewers watching their videos. The posters in our sample guarded against accusations of stake by rejecting claims that they are invested in the product for financial reasons or that they simply review products because that is ‘what they do’. Instead, these bro-science videos placed their motivations centre stage making explicit not only the reasons why hair loss treatment was sought in the first place but also why the video itself has been created and shared. This level of transparency speaks to findings from other e-health studies highlighting the importance of website motivations in generating trust in particular the negative association between commercialisation elements and the perceived trustworthiness of online personal experiences (Sillence et al., 2013). An interesting final point here is that the videos of female users discussing their experiences of female pattern baldness do not differ substantively in terms of their characteristic features from male authors suggesting that the gendered concept of ‘bro-science’ warrants further investigation.

As people increasingly turn to online peer resources for their health and wellbeing needs, user generated videos provide a powerful, vivid and interactive

medium through which to convey information, advice and experiential proof. The importance of dealing with stated motivation in these videos highlights its valuable role in the presentation of credible and persuasive information.

References

- Alfonso M, Richter-Appelt H, Tosti A, et al. (2005) The psychosocial impact of hair loss among men: a multinational European study. *Current medical research and opinion* 21(11): 1829–1836.
- Billig M (1987) *Arguing and thinking: A rhetorical approach to social psychology*. Cambridge, England: Cambridge University Press.
- Braun V and Clarke V (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology* 3(2): 77–101. Available from: <http://www.tandfonline.com/doi/abs/10.1191/1478088706qp063oa>.
- Briones R, Nan X, Madden K, et al. (2012) When vaccines go viral: an analysis of HPV vaccine coverage on YouTube. *Health communication* 27(5): 478–485.
- Burgess J and Green J (2009) YouTube: Digital media and society series. *Cambridge: Polity*.
- Camm CF, Sunderland N and Camm AJ (2013) A quality assessment of cardiac auscultation material on YouTube. *Clinical cardiology* 36(2): 77–81.
- Cash TF (2001) The psychology of hair loss and its implications for patient care. *Clinics in dermatology* 19(2): 161–166.
- Chu B (2013) Bill Gates: Why do we care more about baldness than malaria? *The Independent*, March.
- Epstein S (1995) The construction of lay expertise: AIDS activism and the forging of credibility in the reform of clinical trials. *Science, Technology & Human Values* 20(4): 408–437.

- Freeman B and Chapman S (2007) Is 'YouTube' telling or selling you something? Tobacco content on the YouTube video-sharing website. *Tobacco Control* 16(3): 207–210.
- Frohlich DO and Zmyslinski-Seelig A (2012) The presence of social support messages on YouTube videos about inflammatory bowel disease and ostomies. *Health communication* 27(5): 421–428.
- Godwin-Jones R (2007) Digital video update: YouTube, flash, high-definition. *Language, Learning & Technology* 11(1): 16–21.
- Hall M, Gough B and Seymour-Smith S (2013) Stake Management in Men's Online Cosmetics Testimonials. *Psychology & Marketing* 30(3): 227–235. Available from: <http://eprints.lancs.ac.uk/23431/>.
- Hall M, Grogan S and Gough B (2016) Bodybuilders accounts of synthol use: The construction of lay expertise online. *Journal of Health Psychology* 21(9): 1939–1948. Available from: <http://hpq.sagepub.com/cgi/doi/10.1177/1359105314568579>.
- Hardey M (1999) Doctor in the house: the Internet as a source of lay health knowledge and the challenge to expertise. *Sociology of Health and Illness* 21(6): 820–835. Available from: <http://doi.wiley.com/10.1111/1467-9566.00185>.
- Hohm C and Snyder J (2015) 'It Was the Best Decision of My Life': a thematic content analysis of former medical tourists' patient testimonials. *BMC medical ethics* 16(1): 1.
- Huh J, Liu LS, Neogi T, et al. (2014) Health vlogs as social support for chronic illness management. *ACM Transactions on Computer-Human Interaction (TOCHI)* 21(4): 23.
- International Society of Hair Restoration Surgery (2012) Male hair loss and pattern

- baldness in men. Available from: <http://www.ishrs.org/hairloss-hair-loss-male.htm>.
- Kang S, Ha JS and Velasco T (2017) Attention Deficit Hyperactivity Disorder on YouTube: Framing, Anchoring, and Objectification in Social Media. *Community Mental Health Journal*, Springer US 53(4): 445–451. Available from: <http://dx.doi.org/10.1007/s10597-016-0015-5>.
- Katz E, Blumler JG and Gurevitch M (1973) Uses and Gratifications Research. *Public Opinion Quarterly* 37(4): 509–523.
- Leung L (2009) User-generated content on the internet: An examination of gratifications, civic engagement and psychological empowerment. *New Media & Society* 11(8): 1327–1347.
- Liu LS, Huh J, Neogi T, et al. (2013) Health vlogger-viewer interaction in chronic illness management. In: *Proceedings of the SIGCHI conference on Human factors in computing systems*, ACM, pp. 49–58.
- Manning P (2013) YouTube, ‘drug videos’ and drugs education. *Drugs: education, prevention and policy* 20(2): 120–130.
- Mazanderani F, O’Neill B and Powell J (2013) ‘People power’ or ‘pester power’? YouTube as a forum for the generation of evidence and patient advocacy. *Patient education and counseling* 93(3): 420–425.
- Naslund JA, Grande SW, Aschbrenner KA, et al. (2014) Naturally occurring peer support through social media: the experiences of individuals with severe mental illness using YouTube. *PloS one* 9(10): e110171.
- Naslund JA, Aschbrenner KA, Marsch LA, et al. (2016) The Future of Mental Health Care: Peer-to-Peer Support and Social Media. *Epidemiology Psyciatric Science* 25(2): 113–122.
- Pols J (2014) Knowing patients: Turning patient knowledge into science. *Science*,

Technology & Human Values 39(1): 73–97.

Potter J (1996) *Representing reality: Discourse, rhetoric and social construction*.

London: Sage.

Rafaeli S and Sudweeks F (1997) Networked interactivity. *Journal of Computer-Mediated Communication* 2(4).

Rifon NJ, Choi SM, Trimble CS, et al. (2004) Congruence effects in sponsorship: The mediating role of sponsor credibility and consumer attributions of sponsor motive. *Journal of Advertising* 33(1): 30–42.

Sharma R, Lucas M, Ford P, et al. (2016) YouTube as a source of quit smoking information for people living with mental illness: Table 1. *Tobacco Control* 25(6): 634–637. Available from:

<http://tobaccocontrol.bmj.com/lookup/doi/10.1136/tobaccocontrol-2015-052713>.

Sillence E, Hardy C and Briggs P (2013) Why don't we trust health websites that help us help each other?: an analysis of online peer-to-peer healthcare. In: *Proceedings of the 5th Annual ACM Web Science Conference*, ACM, pp. 396–404.

Singh AG, Singh S and Singh PP (2012) YouTube for information on rheumatoid arthritis—a wakeup call? *The Journal of rheumatology* 39(5): 899–903.

Snelson C (2013) Vlogging about school on YouTube: An exploratory study. *New Media & Society* 17(3): 321–339. Available from:

<http://www.scopus.com/inward/record.url?eid=2-s2.0-84922901393&partnerID=tZOtx3y1>.

Sood A, Sarangi S, Pandey A, et al. (2011) YouTube as a source of information on kidney stone disease. *Urology* 77(3): 558–562.

Tian Y (2010) Organ donation on Web 2.0: content and audience analysis of organ donation videos on YouTube. *Health communication* 25(3): 238–246.

- Vance K, Howe W and Dellavalle RP (2009) Social internet sites as a source of public health information. *Dermatologic clinics* 27(2): 133–136.
- Whittle A and Mueller F (2010) The language of interests: The contribution of discursive psychology. *Human Relations* 64(3): 415–435.
- Whittle A and Mueller F (2011) The language of interests: The contribution of discursive psychology. *Human Relations* 64(3): 415–435. Available from: <http://hum.sagepub.com/cgi/doi/10.1177/0018726710386395>.
- Whittle A, Mueller F, Lenney P, et al. (2014) Interest-Talk as Access-Talk: How Interests are Displayed, Made and Down-played in Management Research. *British Journal of Management* 25(3): 607–628.
- Wiggins S and Potter J (2003) Attitudes and evaluative practices: Category vs. item and subjective vs. objective constructions in everyday food assessments. *British Journal of Social Psychology* 42(4): 513–531. Available from: <http://doi.wiley.com/10.1348/014466603322595257>.
- Wotanis L and McMillan L (2014) Performing Gender on YouTube: How Jenna Marbles negotiates a hostile online environment. *Feminist Media Studies* 14(6): 912–928.

Figure 1:



Figure 2:

