Community Dental Health (2019) **36,** 46–54
Received 12 July 2018; Accepted 24 October 2018

doi:10.1922/CDH_4423Holden09

Embarrassing realities: The portrayal of dentistry in reality tv 'dentertainment'

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Background: Dentists are not common subjects within reality TV. When presented in film, the overall impression has been reported to be negative. The British reality TV show 'Embarrassing Bodies' includes within its format, cases where complex and extensive dental treatment is presented. This analysis examines how these cases frame dentistry, as a rare example of the profession and its activities upon the small screen. **Methods:** 14 dental cases from the show were located and transcribed. Semiotic and thematic analysis was used to explore the deeper and hidden meanings and signs within the cases. This developed understanding of the implications of the show upon the public presentation of dentistry, oral health and disease, patients and dental professionals. **Results:** Five distinct themes were identified within the corpus of cases; Professional Values and Portrayal of Cosmetic Dentistry; The Presentation of Oral Health and Disease; Dental Physiognomy; Dentistry as Empowerment and Unequal Professional Relationships. **Conclusions:** 'Embarrassing Bodies' portrays a presentation of dentistry that focuses disproportionately upon restorative dental interventions, especially cosmetic dental therapies, in preference to preventative treatment. Dental disease is presented in a way that associates oral health conditions with dirt and as being caused by neglect and carelessness.

Keywords: *Dentistry, Cosmetics, Media, Reality TV, Public Health*

Background

Those working within dentistry pay close interest to how the dental profession is portrayed within the media. Assessment of common depictions of dentistry on the silver screen finds dentists to be typically presented as incompetent, immoral, disturbed, sadistic or corrupt (Thibodeau and Mentasti, 2007). Dentists will frequently report feeling disappointed with the portrayal of the dentist; at best a comedic buffoon, at worst, a criminal, although some do report that improvement of this traditional image is possible (Berry, 1989). Despite this presentation, dentistry retains a position as a trusted and well-respected profession (Armfield, 2017). Lupton's work with the presentation of the medical profession demonstrated that doctors were more concerned about negative portrayals of their profession in the media, perceiving this to be more of a problem than members of the lay-community (Lupton, 1998).

Another source of portrayals of dentistry within media for public consumption is found within the format of reality TV, which has an interest in the carnographic presentation of medical and dental procedures. Programs such as 'Extreme Makeover' (2002-2004) and 'The Swan' (2004) feature depictions of cosmetic dentistry, occurring as small components of an overall transformative process. These shows devoted their focus to the development of beauty, creating a narrative on the cultivation of attractiveness. These shows have undergone analysis for their sociological and ethical relevance in relation to cosmetic medicine and surgery (Wegenstein and Ruck, 2001; Heyes, 2007; Jones, 2008). Whilst these shows did demonstrate examples of cosmetic dentistry, these have not been scrutinised from the perspective of what they might suggest about the dental profession, or dental treatment itself. A study conducted in New Zealand suggested that shows of this nature increased the demand for aesthetic dental treatment, with practitioners being more likely to receive requests for treatments such as tooth whitening. This increase in demand was also accompanied by reports of increased aesthetic expectations (Theobald, 2006).

Dentistry was presented as a much greater part of the British reality TV show, 'Embarrassing Bodies' that featured dental segments as self-contained cases, where members of the British public, embarrassed by the condition of their teeth and mouths, could undergo a course of treatment. Broadcast from 2007-2015, 'Embarrassing Bodies' was made by Maverick Television and broadcast originally by Channel 4. The show has enjoyed a keen following in the United Kingdom (Plunkett, 2013), where it was originally first-aired, and in the United States of America where it has been available on internet streaming platforms such as Netflix (Whitehead, 2017).

The main portion of the show highlighted medical conditions (typically exaggerated by extent or severity) where the afflicted participants would bear-all in front of the camera for the 'Embarrassing Bodies' physicians to access and manage their complaints. The dental cases largely follow this same format, with the resident dentist, Dr James Russell, undertaking assessment and treatment of participant patients.

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Dentistry is infrequently featured in reality TV shows. It is therefore important to analyse programs that include portrayals of the profession, dental treatments and conditions, as well as patients, to understand what messages they give to the public. This article will be the first analysis of dentistry as presented by reality TV, assessing the above elements of cases from 'Embarrassing Bodies'.

Method

Fourteen dental cases from 'Embarrassing Bodies' were located for inclusion within this analysis. Not every series or episode of the show featured dental cases, so whilst the research team is aware that there may be other cases available, the sample collected for this analysis is representative of the cases featured in the series. Some cases are available to watch on YouTube (2017). We identified other online platforms where episodes were available to stream.

Social semiotic and thematic analysis were identified as suitable qualitative methods for conducting this research as this technique would allow assessment of the portrayal of relationships between professionals and their patients, as well as the presentation of dental disease and dental treatments. Semiotics is given to be the study of signs and symbols (Grbich, 2007) and allows for the exploration of the deeper meaning of the program beyond its immediate presentation (Bryman, 2008). The social semiotic analysis of film media examines how the viewer is positioned by the tele-film being assessed, and how certain allegiances and values might be promoted over others. This provides the researcher with insight as to how the tele-cinematic text presents social reality (Iedema, 2001).

This analysis follows the method of social semiotics outlined by Kress and van Leeuwen (1996). This method of analysis recognises three types of semiotic work that are carried out simultaneously. Each of these kinds of work are referred to as 'metafunctions'. These are defined as; 1) the representational metafunction; 2) the interactive metafunction and; 3) the compositional metafunction. The specific dimensions of the three metafunctions are explored in more detail in Box 1. Each of these metafunctions requires different semiotic resources. These are the products of cultural histories and cognitive resources that might be used together to create meaning in how viewers might interpret visual messages. Box 1 provides explanation of some of the semiotic resources within each domain, although this is not an exhaustive list. Throughout this analysis, the reader will note a variety of resources being used to create meaning from the hidden elements within 'Embarrassing Bodies'.

The process of developing understanding and analysis was based upon a modified version of that described by Gibson and Brown (2008). The videos were watched and re-watched several times before being transcribed by the research team, with certain scenes and parts of the cases being watched in isolation and then in the context of the rest of the case. Analytical notes were used to enrich the textual transcription of the data, recording details such as camera angles, the positioning of the subjects with scenes and other semiotic resources not usually captured by transcription.

This allowed a deep appreciation of the relationships between the participants and clinicians, key themes and other features such as the role of the narrator, who is common to all the cases analysed. The process of transcription enabled the processes of theme development and analysis to begin at an early stage in the research. The cases and developing themes were discussed collaboratively within the research team, which consisted of a medical sociologist with expertise in oral health and two academic dentists.

Box 1

The Three Metafunctions of Social Semiotic Analysis (Kress and van Leeuwen, 1996)

1) Representational Metafunction **–** who is depicted within the text? How are the different actors portrayed and what do they represent? In this metafunction, consideration is given to how a particular actor within the analysis is presented; for example, the Dr James is presented as a professional person, wearing white, clinical clothes and embodies what society might expect of a white, male dentist practicing in the UK.

2) Interactive Metafunction – how does the program encourage the viewer to interact with the actors within the text? Considerations such as contact, distance and points of view are important in understanding how the view in intended to relate and view the different actors within the program.

3) Compositional Metafunction – how do the representations and interactions come together to create specific events? What is the overall picture given by the text? In considering this metafunction, factors such as salience (what is most eye-catching within the program?) and modality (how similar is the text to reality?) are explored.

Following transcription, the textual data from the cases were coded to identify common themes that related to important aspects of what the cases stated about the profession of dentistry, oral health, the participants receiving dental treatment and the treatment itself. The coding underwent several iterations, developing stronger and more common ties between the different themes present until key, irreducible themes were produced.

Social semiotic analysis of visual media allows the researcher to reveal hidden meanings. Whilst a useful tool in developing meaning; it is not enough in isolation. After the use of social semiotics to analyse the 'Embarrassing Bodies' texts, we made sense of the results with reference to ideas about the role of the dentist in society, through applying social contract theory, as well as considering key ethical dimensions such as shared decision making. The notion of the social contract within medicine was first pioneered by Starr (1984) and then developed by Cruess and Cruess (2000). Latterly, the theory's specific application to the dental profession has been considered (Welie, 2004; Holden, 2017). In the context of dentistry, social contract theory recognises society's need for the dental profession centres on a need for pain relief related to pain and a need for this to be delivered in a way where the profession self-regulates and is trust-worthy. In exchange, the dental profession is gifted with higher social status. We also referred to applied social theory for example. The relevance of this program to the social practice of dentistry is expansive. This analysis presented here seeks to examine the results through the theoretical lens of the nexus between the dentist and society; this involves examining such issues as how oral health is represented and managed, the status and professional priorities of dental professionals as well as the ethical dimensions of shared decision making. It is important to note that other frameworks can also be used to explore such programmes and that such applications would not be mutually exclusive.

Results

Following transcription, code development and analysis, the irreducible themes that persisted were; Professional Values and Portrayal of Cosmetic Dentistry; The Presentation of Oral Health and Disease; Dental Physiognomy; Dentistry as Empowerment and Unequal Professional Relationships. A broad overview of the cases included within this analysis is included in Table 1. Boxes 2 and 3 give more comprehensive details of two of the cases and provide insight into the narratives developed by the program.

Professional Values and Portrayal of Cosmetic Dentistry

The dental cases of 'Embarrassing Bodies' contain a predominant focus on aesthetics within the way the cases are presented to the audience, rather than any other aspect of oral health. This choice in representation is made clear the first time the viewer is introduced to Dr James; "meet our dentist Dr James Russell, he's been a dentist for 8 years and is the youngest person to be accredited by the British Academy of Cosmetic Dentistry." His worth to the show is tied intrinsically to his identity as a practitioner of cosmetic dentistry. The outcomes of the cases in the show are measured with a focus on aesthetic outcomes; holistic improvement of oral health is implied and intrinsically linked to this primary outcome. The issue within this is not that cosmetic considerations are championed within the show; the mouth is highly visible and an important part of identity, perception and culture.

Table 1. Summary of the dental conditions and treatments featured in the cases analysed

Participant (age)	Dental Complaint on Presentation	Treatment Provided
Tracy (43)	Dental caries	Whitening and porcelain veneers
Lynne (27)	Dental caries	Full clearance and Implant-retained denture
Richard (27)	Bruxism	Root canal treatment followed by posterior gold crowns and anterior veneers
Thomas (20)	Dental caries	Extractions, direct restorations and a denture
Jessica (undisclosed)	Halitosis due to mild periodontitis	Periodontal treatment with a dental hygienist
Harriet (22)	Erosion caused by bulimia	Planning for veneers, but patient declined treatment, preferring to get better first
Neil (35)	Periodontal disease	Periodontal treatment with a dental hygienist, extractions, porcelain crowns and a denture
Claire (28)	Pronounced class II division I malocclusion	Orthodontic treatment
Katie (undisclosed)	Intrinsic staining on anterior teeth	Simple hygiene treatment with the dental hygienist followed by in-surgery whitening and treatment with veneers
Kelly (30)	Dental caries	Root canal treatment followed by crowns
Robert (27)	Dental caries	Extractions followed by an implant-retained bridge
Jay (21)	Dental caries	Hygiene treatment with a dental hygienist, extractions followed by implant retained bridges
Matt (19)	Dental caries	Hygiene treatment with a dental hygienist, followed by extractions, crowns and a denture.
Zoe (40)	Dental caries due to xerostomia caused by cancer treatment	Implant retained crowns

Box 2

Tracey's Case

The audience is introduced to Tracey as she waits for her appointment. The 35-year old woman sits in the waiting room of the practice. She appears nervous, this is accentuated by her fixed gaze, which never meets the camera. The narrator reveals that Tracey suffered in the past with frequent sickness and vomiting secondary to mental illness which is attributed to her developing dental caries. In relation to her poor state of dental health, she states; "It's total neglect of myself, self-being, self-worth. I managed to sort myself out but the teeth still remain, a constant reminder of that dark time in my life." When Tracey speaks, it is clear that she has extensive caries affecting her anterior teeth.

As Dr James examines her teeth and oral tissues in the surgery, a soundbite of Tracey's voice plays, elaborating on how her teeth make her feel; "I think it's embarrassing. In business, you present yourself as a professional and there you are with rotten teeth, it doesn't really go." Dr James takes extra-oral pictures and, with these on the screen of the surgery's computer, asks Tracey; "How do you feel when you're looking at that?" Tracey replies, "That is shocking." Using software, Tracey is shown what is potentially achievable. Her response is one of excitement and enthusiasm; "That is remarkable you know, just to have a look in the mirror and have a smile come back at me; that would be amazing."

The narrator summarises Tracey's case; "Tracey has a problem; when she cracks a smile, people run a mile! 20 cups of sugary tea a day has molested her molars. No time to delay it's James our dentist's mission, to clear up this mess and give her something to grin about." The treatment that the program presents Tracey as receiving is a combination of veneers and home-whitening. Tracey is shown to be delighted with the results of her treatment; "I haven't smiled for almost a decade. It actually feels amazing to smile with confidence. I've been single 7 years so something might happen!"

Box 3

Jay's Case

Jay, a 21 year-old man with unkempt hair and a beard, feels he knows why he has developed issues with his teeth; "Over the years, I've eaten the wrong foods, drank lots of fizzy drinks and I haven't really taken care of them, brushed them or flossed or anything like that." The narrator speaks as Jay is examined by Dr James, revealing to the audience the state of his oral hygiene; "Jay's teeth are caked in tartar; hardened food debris and bacteria that's built-up over around 20 years of not brushing his teeth."

After a cleaning visit with the hygienist and some imaging, Dr James assesses that Jay is anatomically suitable for implants, based on Jay having favourable bone. The narrator states; "Dental implants are the super hi-tech alternative to wobbly dentures, but they are very expensive. So, Dr James will not give Jay this treatment unless he changes his unhealthy habits." Jay promises to give-up soda and sugary drinks and start looking after his mouth better. On the basis of this commitment, Dr James embarks on implant-based therapy for Jay.

Jay is revealed to perceive that his dental condition is preventing him from fulfilling his ambition of working in sports or as a physiotherapist, instead he is working as a refuse collector, he states; "Because of my teeth, it doesn't really feel right to do it. I feel embarrassed to tell someone how to look after themselves, when I haven't really taken care of my teeth." Jay has eleven teeth removed and is provided with temporary dentures. When we see Jay return for his fitting appointment, he has shaved off his beard and has a neater haircut. Following the provision of his new implant-retained bridge, Jay reflects on his experience expressing confidence: "Now I'm brushing twice a day, flossing every day, doing an awful lot more to keep these teeth that I have now. I'm a much more happier person I'm definitely going to be going forward to fulfil my dreams really."

Rather, the issue is that the show conflates aesthetic appearance as being the entirety of oral health, not just an important aspect of it. The show focuses upon the aesthetic transformation of dental appearance. Other key aspects of a person moving from a state of ill-health to health, such as behaviour and lifestyle modification receive little attention. Clearly, the show must contend with a temporal constraint; participants are taken from one end of the treatment process to the other in segments that typically last less than 10 minutes. In reality, the clinical journey of these cases would take several months. The semiotic resource used by the show to represent this necessary compression is termed by Metz (1974) to be 'diegesis'. What was shown in the program is much less and likely to be different to what happened in real time. Despite this, the choice is made for most of the time devoted in the cases to be the provision of extensive and expensive dental treatment; the primary function of this is framed as being to enhance aesthetics.

Many participants on the show received highly aesthetic or complex treatments, such as crowns and implants. There is little focus on simple restorative techniques such as fillings. For patients who often have severe dental disease, the show suggests that the highly aesthetic, complex and expensive treatments are the only solution. Viewers are infrequently allowed to look beyond the treatment to view the decision-making portion of the appointment. When this does occur, it is often in the context of discussing whether a participant is suitable for implant therapy or not. Dr James portrays implants to be highly successful; "the success rate when we are normally doing implants is about 99.8%, which is virtually guaranteed in healthy people" and as, "Gold standard". Where patients are refused implants, it is usually because of lifestyle. In the case of Thomas, he is denied access to implant treatment because of his smoking; "But for you, the only option that we've got is a denture because of your smoking".

Implants are given connotations of social class, being described as; "super hi-tech" and "posh". Other treatments, such as veneers, are also depicted as superior, with Dr James stating; "if it was possible, you could actually hang a grown-man off the junction between a porcelain veneer and the tooth." The narrator states; "The new porcelain teeth will not stain and are very strong." Cosmetic dentistry is sold as being a permanent solution; the distinction between, "temporary dentures or posh implants" leads the viewer to see the final transformation as being the responsibility of the patient to maintain, the narrator questioning participant Jay's commitment; "But will he look after his new hi-tech teeth properly?" The use of the term posh also highlights the possibility in the viewer's mind of how lucky the participants are because usually such treatment would be unobtainable for them. This promotes the idea that cosmetic dentistry is a symbol of affluence, conspicuous consumption and wealth. Within the cases, high-value and aesthetic treatments are compositionally associated with the luxury and high-grade finish of the surgeries used by Dr James and the other dentists featured on the show.

Through Dr James' intervention, patients are taken from a state of poor oral health, to a situation of perceived improvement. The presentation of risks, future prognosis and longevity are absent from clinical conversations that occur within the dental cases. This is not true of the medical cases within the show, where serious treatment risks are frequently presented to participants, with some deciding not to proceed on this basis. Only in one case does a participant decide not to proceed with treatment. Harriet is 22 years old and has bulimia. Dr James' response to her is to show her a computer-generated image of what he might be able to accomplish with her smile. His treatment plan is designed to manage her main complaints; "I think it will make you a lot more confident about smiling and just in general being more confident with yourself." There is no acknowledgement of Harriet's psychological illness. He correctly identifies that it is her frequent vomiting as part of her bulimia that is damaging her teeth; but makes no comment that this might need to be under control before she undergoes dental treatment. There is no reference made by Dr James to preventing further damage due to Harriet's induced-vomiting. In the end, it is Harriet herself who identifies a need to address her eating-disorder; "To fix Harriet's problem, James suggests using porcelain veneers to give her back the smile she's been missing for the past 6 years. But, before going through with treatment, Harriet has realised that she has a bigger problem. She came in to have her teeth fixed, but she leaves knowing she needs to cure her bulimia first." Dr James is presented as having very little involvement in this decision.

Presentation of Oral Health and Disease

Oral disease is described in a multitude of contexts within the Embarrassing Bodies cases. The Narrator is the main voice that describes and discusses oral health, disease and dental procedures. The language used as descriptors falls into several main categories; language of violence and abuse, puns and alliteration and the language of whiteness and oral disease as being dirty. The discussion of poor oral health is frequently given at the beginning of the dental segments, prior to the introduction of the participants. Here, viewers are presented with images of disease-afflicted mouths, often with visible pathology or debris. These images are accompanied with mournful, yet comedic music that compliments the notion that developing dental disease is relatable to elements of slapstick; the viewer can foresee the consequences of lifestyle choices on oral health, but the individual affected cannot. From the beginning of the cases, the participants are presented as being isolated from the viewer in lacking the same level of knowledge that the narrator has either imparted or reinforced.

Dental disease and treatment is frequently described in the context of violence and abuse. A caries afflicted mouth is described as; "a dental warzone". Dental treatment is described in violent terms such as; "a quick blast of local anaesthetic" and "blasts away the tartar". Molars afflicted by decay are given to have been, "molested", diseased mouths are described as "devastated" and "decimated".

There is also a jovial, almost mocking approach to describing dental disease; "when she cracks a smile, people run a mile!" Molars are alliterated with, "manky", "mouldy" and "molested" as descriptors. The dental problems of a participant with tooth wear are said to be, "wearing him down". The same patient's teeth are, "nasty gnashers", with other participants having, "terrible teeth".

When discussing a patient who is phobic, the narrator states that it is important to get to the, "root cause of his phobia". This accompanies the presentation of the use of comedy in portraying participants' isolation; they are not part of the joke.

Certain descriptors of the teeth clearly reference the concept of dental disease being associated with dirt. Aside from language norms that are commonly used within dentistry such as cleaning, the show develops this idea of caries as dirt. Diseased mouths are referred to as "mess" which needs to be cleaned, due to "hideous oral hygiene". Decay is referred to multiple times as, "rot", and teeth are stated to be "caked" in tartar. This links with the concept that oral disease is shameful and embarrassing, being caused by a lack of personal responsibility.

Linkage is made within some of the cases to the idea of whiteness being good and darkness or blackness being negative. This is done within the context of oral health, but it would seem that this links with connotations within other ideas, such as the promotion of whiteness, with anything "black" or "dark" being attributed to a disease process or dirt. The innocent comment made by one of participant Robert's children; "my dad's teeth are black and white" is loaded with value that the blackness is something that should not be, associated with the neglect he has shown himself.

Dental Physiognomy

Physiognomy is the pseudo-scientific concept that a person's morality may be determined from their appearance. There is a societal tendency to dismiss such ideas, and yet this theme is strong within the dental cases of Embarrassing Bodies. The pre-treatment participants are frequently presented to the audience as failed individuals, and the reasoning behind this failure is typically based on their less-than-ideal dental appearance, often simultaneously being presented alongside social deprivation. The example of Jay (Box 3), whilst extreme, is not unusual for the program. The presentation of a 'failed' individual who is granted a second chance through reconstruction of their dental appearance is a common theme throughout the dental cases.

When considering the interactive metafunction within the dental cases, the semiotic resources that contribute to how the viewer is related to the show's participants involve camera positioning and distance. Participants never make eye-contact with the camera. Nothing is ever demanded from the viewer by the participants; Kress and van Leeuwen (1996) describe instances where direct contact is made between a text and a viewer as being symbolically demanding. The viewer is given access to many of the participants' private lives; where frequently the camera angle is shot looking down at the participants. This encourages the viewer to see the participants from a symbolic position of power and judgement. Distance may be used as a semiotic resource to develop intimacy; where a subject is further away, the less intimacy the viewer is encouraged to feel in relation to them. The closest the viewer gets to the participants is during treatment; the camera, from a high angle, looks down into the participants' mouths, often whilst they undergo intimate dental procedures. In this way, the viewer is encouraged to know the participants most intimately as patients, lying passively in the chair undergoing treatment.

The program associates character with dental disease experience. The narrator suggests that those who have lost teeth are, "careless", with many of the participants describing themselves as having neglected their teeth; "It's total neglect of myself, self-being, self-worth" with the narrator providing validation for this position; "Matt's earned his new set of top-notch gnashers by changing his neglectful ways". Through the process of undergoing dental treatment, participants are presented as having shed these negative character traits, becoming more responsible and compliant with professional advice.

Matt's case is contrasted by Zoe's. Zoe had Non-Hodgkin's lymphoma, the treatment of which led to her developing xerostomia and dental caries. She is portrayed differently to many of the other participants. Zoe is presented to the audience as having been "attacked" and, upon completion of her treatment, Dr James exclaims; "You know you deserve it and I'm really, really happy!" Unlike many of the other cases, Zoe is not asked to change her lifestyle before treatment might be given, and she is described as a survivor who; "won her battle against cancer, but who lost most of her upper teeth due to the side effects of the aggressive chemotherapy treatment that cured her." The blame that is attributed by Dr James and narrator to the other participants for their current oral state is absent in Zoe's case. Dr James' congratulations to Matt at the end of his case demonstrates this; "The way you've changed your lifestyle is admirable, so well done." His success is contingent upon his attitude and behaviour change.

Dentistry as Empowerment

The cases all share a similar narrative relating to how the participants feel embarrassment originating from dental causes. In most cases this is due to a compromised dental appearance secondary to preventable disease. This is then rectified through the action of self-directed behaviour change and, in most cases, cosmetically focused dentistry. The participants are liberated from their negative dental appearances by Dr James and are typically shown to be grateful and 'improved'. This process is depicted by the show as transformative, dramatically improving the quality of life of the recipients of dental treatment and care. Most cases typically begin with patients detailing accounts of their embarrassment and shame; "I don't smile with my teeth, I hate seeing my teeth on photographs; they are quite embarrassing…it's a bit hurtful, I just look at them and go, "they're horrible" do you know what I mean?" It is revealed that one of the show's participants, Lynne, does not leave the house except to pick up her children from school because of the embarrassment she feels over her teeth. After treatment, Lynne states; "I'm going to need to buy a new dress, a new pair of shoes and some lipstick as well, because I haven't had lipstick on for about 10 years. It's just the start of a new me, definitely." Almost all of the cases analysed have similar trajectories where participants are shown to have undergone profound improvements to their dental appearance which they report to be greatly beneficial to their self-esteem and confidence; "To go from that, to this, is absolutely amazing. I'll be able to walk down the street with my head held high."

The participants' transformation is reinforced by interviews with participants that contrast with their initial presentation; frequently, participants' voices speak whilst the camera pans around them waiting to be examined by Dr James. The separation of the participant's physical existence and their voice highlights their separation and isolation; it is almost as if they have no voice of their own. Following their treatment, participants are interviewed again, often speaking to the camera, and whilst they do not talk directly to the viewer, they are presented as the viewer's equal. This is suggestive of the process of undergoing dental treatment facilitating social reintegration.

Dentistry is portrayed as being the vehicle for this liberation, as well as the motivation for behavioural change. The manner in which this behavioural change is presented frequently seems to trivialise the immense difficulty that many patients experience in adopting healthier behaviours. Within 'Embarrassing Bodies', participants are presented as ceasing smoking tobacco and expunging the cariogenic elements within their diets in a matter of weeks, with relatively little assistance save from their own willpower. Participant Lynne states; "I haven't had a fizzy drink for five days now, and I feel absolutely fantastic, inside. I don't feel lethargic, just, absolutely amazing actually." This diet change is also accompanied by a declaration that she is six-days into having quit smoking. The cases collectively have a relatively shallow focus upon lifestyle change, with an emphasis upon personal choice and willpower, secondary to directives from a dentist. The focus of the cases is very much on the good that dental professionals may do for their patients, rather than the good that patients might be able to do for themselves. The semiotic resource of diegesis has been introduced above; the choices made as to what is worth being represented more fully within the program is indicative of what is held to be most important about the process of improving oral health.

Unequal Professional Relationships

Within the 'Embarrassing Bodies' dental cases, the clinical relationship and the professional dynamics between the clinicians and participants is portrayed as being asymmetrical. Dr James' clinical skills and professional knowledge are seen as being special; he is described as; "working his magic" and in parallels to Conan Doyle's Sherlock Holmes; "James works his detective magic, and the answer is elementary." In the context of discussing a range of different dental diseases and their causes, the success of his abilities is clear; he is described as having "conquered them all". The surgery where Dr James holds his consultations is adorned with professional certificates and diplomas, along with a conspicuous collection of professional awards that feature behind him, in the back of the camera shot, as he delivers his professional opinions; reinforcing his authority and power within the clinical setting. How whiteness is used in the show to present oral health is discussed above. Whiteness also is used in the presentation of Dr James and his surroundings. The dental surgery is almost completely white, this often becomes overexposed by the camera, so that Dr James and the participants appear to be surrounded by shimmering light. In this situation, James' white coat leads to him almost merging into his environment, becoming the human embodiment of the health environment and surgery. The symbolism here would seem to be an overt link with Dr James' portrayal as a healer and a high-status professional. The dental practice where the consultations occur is high grade, the waiting room more similar to a hotel lobby than a traditional dentist's office. The participants appear, certainly at first presentation, in drab, unflattering clothing; it is clear to the viewer through this contrast that they do not belong.

It has been discussed above how semiotic resources are used to direct the viewer to relate to the participants with feelings of dissociation and inferiority. The show also employs some of these resources to be suggestive of how viewers might interact with Dr James. The concept of demand is not utilised with the participants; they never make eye contact with the camera. Dr James is the only clinician in the dental cases to ever look into the camera directly. He does not do this during the cases themselves, but in cut scenes used to denote the passage of time or space. In these scenes, Dr James is portrayed in a variety of clinical poses where he looks with a fixed gaze, directly down the camera lens at the viewer. In these shots the viewer is forced to look up at Dr James, in contrast to instances with the participants where the camera looks down upon them. From these uses of the camera angle, the viewer is led to believe that Dr James demands something of them. This might be deference to his clinical expertise or a representation of the superiority of the dental profession over the public. This supports the other resources used to promote Dr James' position such as the overt placement of certificates and awards and his provision of high-grade clinical care.

Another feature of the dental cases within the show that contributes to the representation of the clinical relationship as being unequal is the way that clinical decisions are presented as being under the control of Dr James; "Lynne's preference is to replace these old stumps with implants. But if Dr James is going to agree to that expensive option, she'll need to kick another addiction (referring to smoking)". Whilst Dr James may have every right to refuse to provide clinical treatments that are futile or inappropriate, this is not how the discussion is presented. Dr James' status within the cases is also promoted by how the show presents him in comparison to the participants. Participants are depicted as being disempowered, from low socio-economic backgrounds, reliant upon Dr James opening the gates of treatment for them. It is clear within the cases, that each party does not come to the clinical interaction from a position of equal status or advantage and there is little attempt to ameliorate this as the cases progress.

Discussion

Much value is placed upon advertising the positive consequences undergoing dental treatment within the program. Cosmetic and aesthetic considerations in oral health are important as core considerations within the values of clinical dentistry (Ozar and Sokol, 2002). Despite this, aesthetic and cosmetic considerations must exist in harmony with oral health and sound clinical decisions. The dentistry portrayed in 'Embarrassing Bodies' places the aesthetic results ahead

of whether the oral environment is prepared and appropriate to accommodate complex restorative treatment. The lack of preventative focus in the cases may falsely suggest that these treatments are a quick and simple solution to oral disease, rather than as the end-point of a long-term rehabilitative oral health plan. Social semiotics examines how texts are constructed to emphasise importance and value, but also what is absent, therefore being constructed to either be assumed or unimportant.

To the lay-viewer, Dr James offers an expedient solution, where cosmetic demands and results are of foremost importance. Viewers basing their own expectations upon the program would not expect to have to work collaboratively to achieve behavioural change and may believe that cosmetic dental treatments are the best, quickest and most appropriate ways of achieving oral health improvement.

Cosmetic dentistry is considered in a way that idealises the process as the answer to any deficit of oral health. The noticeable lack of discussion surrounding information about the treatment process, prognosis, risks, alternatives (including no treatment) as well as longevity means the consent process portrayed within the cases, if representative of reality, may well not constitute valid consent. One aspect of the cases that is never explored as part of the show, is when further and future treatment is needed, what this will cost and who will be responsible for this financial burden. The presentation of the show is that the treatment delivered to the participants is permanent and will never require replacement. Within Australia, the United Kingdom, Canada and the United States of America, valid consent may only be obtained if patients are made aware of the material risks that a reasonable person in that patient's circumstances would want to know. We are not party to any discussions that may or may not occur behind closed doors, but the representation of dentistry that the 'Embarrassing Bodies' cases gives to the public audience is inappropriately incomplete.

There is a noticeable silence from the dental profession surrounding reality TV depictions and presentations of dentistry. Pitts-Taylor (2007) notes that the cosmetic surgery industry refrained from criticising shows such as 'Extreme Makeover'. Instead, she suggests that surgeons used the opportunity the show created to try and reorient society's view of cosmetic intervention. The case of dentistry is more complex, a clear demarcation between health-focused and cosmetic-oriented treatments being difficult to define, although Welie (2004) explicitly excludes cosmetically-focused dentistry from the professional purpose of dentistry. Instead of distinguishing, the show merges these concepts; the improvement of dental appearance is synonymous within the show as improving health. Whilst this may fit with other analyses of the social contract in dentistry (Holden, 2017; 2018), the portrayal in the show neglects the importance of disease treatment and prevention to the dental professional. In the context of reality TV based within healthcare, the influence of health professionals is enhanced through celebrity status (Harris-Moore, 2014). Indeed, through the development of some health professionals as television personalities, their ability to act as the arbiters of normality is not only tolerated by the public, but becomes a desired role (McQuire, 2003). Through the presentation of the show, the dentist is elevated to the position of being able to selflessly gift redemption upon those who have sinned against their oral health. Symbolic relations are not real; it is this feature that makes the presentation of the participants and Dr James into semiotic resources, using camera angles. Jewitt and Oyama (2001) discuss how this may be used to fool the public into thinking they are equal to very powerful individuals such as politicians. In this analysis we see how the same strategy is applied to how the dominance of the dental profession and the implied inferiority of those afflicted with dental disease is presented. This emphasised inequality breaches the spirit of the social contract which positions the dental profession and society as equal partners within the therapeutic relationship.

Superficially, the participants regain their dental appearance. Semiotically, they are presented as gaining much more. Physiognomy is a pervasive and historically persistent concept; Aristotle and Plato developed a theory of moral goodness being linked with physical beauty. Twine (2002) notes that this is not just a Western concept, with variations of physiognomy also appearing in Chinese culture. 19th-century naturalist George Cuvier is attributed with saying; "Show me your teeth and I'll tell you who you are", presenting the mouth into the psyche. Whilst the concept of physiognomy is clearly nothing new, the TV format of the medical or dental makeover show does nothing to discourage this philosophy. The dental profession must question whether it is appropriate to promote ideals of oral health and beauty through association with moral character, responsibility or social status (Holden, 2018). This is a central part of the presentation of the dental cases within 'Embarrassing Bodies'. Despite moral character and dental appearance having no causal relationship to one another, the relationship between oral health and ability to participate in life is clear; "oral health means much more than healthy teeth...they represent the very essence of our humanity. They allow us to speak and smile; sigh and kiss; smell, taste, touch, chew, and swallow; cry out in pain; and convey a world of feelings and emotions through facial expressions" (U.S. Department of Health and Human Services, 2000; 1).

Limitations

An unavoidable criticism of this analysis is that it was both labour-intensive and time-consuming. Transcription of the television-based material into a form that may be used for the preceding analysis can neither be out-sourced, nor done as and when time is found; high levels of concentration and watching and re-watching are required. A potential criticism of semiotic analysis is that it relies upon the interpretation of the researchers involved to determine the hidden meanings of a text, leading to Liamputtong (2009) stating that researchers utilising the methodology may be accused of being self-indulgent.

The authors acknowledge that the analysis presented here of the phenomena within 'Embarrassing Bodies' may be open to alternate interpretations. It is also important to acknowledge that this analysis of the dental components of 'Embarrassing Bodies has occurred in isolation from the makers of the program. No reference has been made to the

specific social circumstances that would have inevitably surrounded the show's creation; the potential constraints or conflicts that may have arisen through this process are not part of the context of this work. Were the authors to have access to commentary on why specific angles were chosen, locations and set-ups used, as well as insight into how and why the cases were portrayed as they were, this might lead to richer or alternative interpretations (Iedema, 2001).

Conclusion

Social semiotics does not accept that texts are produced accidentally (Iedema, 2001). The presentation of dentistry, oral health, dental professionals and health consumers that is provided by the show is one that contrasts with the traditional portrayals found within films and other media. The portrayals found within 'Embarrassing Bodies' may be broadly welcomed by the dental profession due to superficially appearing to promote the profession's activities and status. However, upon further reflection, the show delivers a presentation that may be as incongruent to reality as derogatory and derisory portrayals of dentistry and the profession that have been previously described on the silver screen. The way the show presents the patient-clinician relationship is unequal, where the power lies disproportionately with the dentist. The show places disproportionate value on the promotion of aesthetic norms and suffers from an absence of preventative dentistry. In the context of social contract theory, the show portrays the dental profession to be in breach of this tacit agreement.

Reality TV may be accused of being a contradiction in terms; existing closer to fiction that real life. However, all reality TV relies upon being close enough to the viewers' lived experiences to be believable. Perhaps the enjoyment of the Hollywood depiction of the dentist is that the public know that this is unrepresentative and relish in the indulgence of caricature. The danger of the 'Embarrassing Bodies' depiction of dentistry is that the similar boundaries between reality and 'dentertainment' might be very difficult for the public to determine.

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